UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 20-F

(Mark One)

☐ **REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) or (g) OF THE SECURITIES EXCHANGE ACT OF 1934**

OR

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2016

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

OR

☐ **SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission file number: 001-37668

Ferroglobe PLC

(Exact name of Registrant as specified in its charter)

England and Wales
(Jurisdiction of incorporation or organization)

2nd Floor West Wing, Lansdowne House
57 Berkeley Square
London W1J 6ER, United Kingdom
+44-(0)203-129-2420
(Address of principal executive offices)

Nicholas Deeming, Chief Legal Officer and Corporate Secretary
2nd Floor West Wing, Lansdowne House
57 Berkeley Square
London W1J 6ER, United Kingdom
+44-(0)203-129-2420
(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act

Title of each class	Name of each exchange on which registered
Ordinary Shares (nominal value of $0.01)	**NASDAQ Global Select Market**

Securities registered or to be registered pursuant to Section 12(g) of the Act.
None
Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act.
None

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.

Ordinary Shares (nominal value of $0.01)	171,838,153

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes ☐ No ☒

Note—Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).* Yes ☐ No ☐

* This requirement does not apply to the registrant in respect of this filing.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of "accelerated filer and large accelerated filer" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☒	Accelerated filer ☐	Non-accelerated filer ☐

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP ☐	International Financial Reporting Standards as issued by the International Accounting Standards Board ☒	Other ☐

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow.

Item 17 ☐ Item 18 ☐

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

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CAUTIONARY STATEMENTS REGARDING FORWARD-LOOKING STATEMENTS

This annual report includes statements that are, or may be deemed to be, forward-looking statements within the meaning of the securities laws of certain applicable jurisdictions. These forward-looking statements include, but are not limited to, all statements other than statements of historical facts contained in this annual report, including, without limitation, those regarding our future financial position and results of operations, our strategy, plans, objectives, goals and targets, future developments in the markets in which we operate or are seeking to operate or anticipated regulatory changes in the markets in which we operate or intend to operate. These statements are often, but not always, made through the use of words or phrases such as “believe,” “anticipate,” “could,” “may,” “would,” “should,” “intend,” “plan,” “potential,” “predict(s),” “will,” “expect(s),” “estimate(s),” “project(s),” “positioned,” “strategy,” “outlook,” “aim,” “assume,” “continue,” “forecast,” “guidance,” “projected,” “risk” and similar expressions.

By their nature, forward-looking statements involve risks and uncertainties because they relate to events and depend on circumstances that may or may not occur in the future. Forward-looking statements are not guarantees of future performance and are based on numerous assumptions. Our actual results of operations, financial condition and the development of events may differ materially from (and be more negative than) those made in, or suggested by, the forward-looking statements. Investors should read the section entitled “Item 3.D.—Key Information—Risk Factors” and the description of our segments in the section entitled “Item 4.B.—Information on the Company—Business Overview” for a more complete discussion of the factors that could affect us. All such forward-looking statements involve estimates and assumptions that are subject to risks, uncertainties and other factors that could cause actual results to differ materially from the results expressed in the statements. Among the key factors that could cause actual results to differ materially from those projected in the forward-looking statements are the following:

- the ability to realize anticipated benefits of the Business Combination;
- the outcome of pending or potential litigation;
- the possibility that we may be unable to successfully integrate Globe’s and FerroAtlántica’s operations, and that such integration may be more difficult, time-consuming or costly than expected;
- operating costs, customer loss and business disruption (including, without limitation, difficulties in maintaining relationships with employees, customers, clients or suppliers) may be greater than expected following the Business Combination;
- the retention of certain key employees may be difficult;
- the intense competition and expected increased competition in the future;
- the ability to adapt services to changes in technology or the marketplace;
- the ability to maintain and grow relationships with customers and clients;
- the historic cyclicality of the metals industry and the attendant swings in market price and demand;
- increases in energy costs and the effect on costs of production;
- disruptions in the supply of power;
- availability of raw materials or transportation;
- our inability to consummate the potential Hydroelectric Sale;
- cost of raw material inputs and the ability to pass along those costs to customers;
- costs associated with labor disputes and stoppages;
- the ability to generate sufficient cash to service indebtedness;

- integration and development of prior and future acquisitions;
- our ability to effectively implement strategic initiatives and actions taken to increase sales growth;
- our ability to compete successfully;
- availability and cost of maintaining adequate levels of insurance;
- the ability to protect trade secrets or maintain their trademarks and other intellectual property;
- equipment failures, delays in deliveries or catastrophic loss at any of our manufacturing facilities;
- exchange rate fluctuations;
- changes in laws protecting U.S., Canadian and European Union companies from unfair foreign competition or the measures currently in place or expected to be imposed under those laws;
- compliance with, potential liability under, and risks related to environmental, health and safety laws and regulations (and changes in such laws and regulations, including their enforcement or interpretation);
- risks from international operations, such as foreign exchange, tariff, tax, inflation, increased costs, political risks and their ability to expand in certain international markets;
- risks associated with mining operations, metals manufacturing and smelting activities;
- the ability to manage price and operational risks including industrial accidents and natural disasters;
- the ability to acquire or renew permits and approvals;
- the potential loss due to immediate cancellations of service contracts;
- risks associated with potential unionization of employees or work stoppages that could adversely affect our operations;
- changes in tax laws (including under applicable tax treaties) and regulations or to the interpretation of such tax laws or regulations by the governmental authorities;
- changes in general economic, business and political conditions, including changes in the financial markets;
- risks related to our capital structure; and
- risks related to our ordinary shares.

These and other factors are more fully discussed in the "Item 3.D.—Key Information—Risk Factors" and "Item 4.B.—Information on the Company—Business Overview" sections and elsewhere in this annual report. These risks could cause actual results to differ materially from those implied by forward-looking statements in this annual report.

The risks set forth in the "Item 3.D.—Key Information—Risk Factors" section are not exhaustive. Other sections of this annual report describe additional factors that could adversely affect our business, financial condition or results of operations. Moreover, we operate in a very competitive and rapidly changing environment. New risk factors emerge from time to time and it is not possible for us to predict all such risks, nor can we assess the impact of all such risks on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

The forward-looking statements made in this annual report relate only to events or information as of the date on which the statements are made in this annual report. Except as required by law, we undertake no obligation to update or revise publicly any forward-looking statements, whether as a result of new information, future events or otherwise, after the date on which the statements are made or to reflect the occurrence of unanticipated events. You should read this annual report and the documents that we reference in this annual report and have filed as exhibits to this annual report, completely and with the understanding that our actual future results or performance may be materially different from what we expect.

CURRENCY PRESENTATION AND DEFINITIONS

In this annual report, references to "$," "US$" and "U.S. Dollars" are to the lawful currency of the United States of America, references to "Euro" and "€" are to the single currency adopted by participating member states of the European Union relating to Economic and Monetary Union and references to "Pound Sterling" and "£" are to the lawful currency of the United Kingdom.

Unless otherwise specified or the context requires otherwise, all financial information for the Company, FerroAtlántica and Globe provided in this annual report is denominated in U.S. Dollars.

Definitions

Unless otherwise specified or the context requires otherwise in this annual report:

- the term(s) (1) "we," "us," "our," "Company," "Ferroglobe," and "our business" refer to Ferroglobe PLC and its subsidiaries, Globe Specialty Metals, Inc. ("Globe") and its consolidated subsidiaries and Grupo FerroAtlántica, S.A.U. ("FerroAtlántica") and its consolidated subsidiaries, (2) "Globe" refers solely to Globe Specialty Metals, Inc. and its consolidated subsidiaries and (3) "FerroAtlántica" or the "FerroAtlántica Group" refers solely to FerroAtlántica and its consolidated subsidiaries;

- "Amended Revolving Credit Facility" refers to the revolving credit facility available pursuant to the Amended Revolving Credit Facility Agreement;

- "Amended Revolving Credit Facility Agreement" refers to the Existing Revolving Credit Facility Agreement as amended on or about the Issue Date by the Revolving Credit Facility Amendment;

- "Borrowers" refers to Ferroglobe and Globe as borrowers, together with certain subsidiaries of Ferroglobe party to the Amended Revolving Credit Facility from time to time as co-borrowers, under the Amended Revolving Credit Facility;

- "Business Combination" refers to the business combination of Globe and FerroAtlántica as our wholly-owned subsidiaries on December 23, 2015;

- "Class A Ordinary Shares" refers to share capital issued in connection with the Business Combination, which has subsequently been converted into ordinary shares of Ferroglobe PLC as a result of the distribution of beneficial interest units in the Ferroglobe Representation and Warranty Insurance Trust to certain Ferroglobe PLC shareholders on November 18, 2016;

- "Consolidated Financial Statements" refers to the audited consolidated financial statements of Ferroglobe and its subsidiaries as of December 31, 2016 and 2015 and for each of the years ended

  December 31, 2016, 2015 and 2014, including the related notes thereto, prepared in accordance with IFRS as issued by the IASB (as such terms are defined herein);

- "Existing Revolving Credit Facility Agreement" refers to the credit agreement, dated as of August 20, 2013, among Globe, certain Subsidiaries of Globe from time to time as co-borrowers thereunder, the financial institutions from time to time party thereto as lenders, PNC Bank National Association and Wells Fargo Bank, National Association, as syndication agents for lenders, BBVA Compass Bank, as documentation agent, and Citizens Bank of Pennsylvania, as administrative agent for lenders, as amended from time to time, other than pursuant to the Revolving Credit Facility Amendment;

- "French Hydroelectric Sale" refers to the strategic disposition of our French hydroelectric operations;
- "hectares" refers to a land area of 10,000 square meters or approximately 2.47 acres;
- "Hydroelectric Sale" refers to the Spanish Hydroelectric Sale and the French Hydroelectric Sale;
- "IFRS as issued by the IASB" refers to International Financial Reporting Standards as issued by the International Accounting Standards Board;
- "Indenture" refers to the indenture, dated as of February 15, 2017, among Ferroglobe and Globe as co-issuers, certain subsidiaries of Ferroglobe as guarantors, and Wilmington Trust, National Association as trustee, registrar, transfer agent and paying agent;
- "Notes" refer to the $350,000,000 aggregate principal amount of Senior Notes due 2022;
- "Predecessor" refers to FerroAtlántica for all periods prior to the Business Combination;
- "Refinancing" refers collectively to the following transactions: (i) the issuance of the Notes and the use of proceeds therefrom to repay certain existing indebtedness and pay certain compensation expenses, (ii) the entering into the Revolving Credit Facility Amendment and (iii) the payment of certain fees and expenses in connection with the foregoing;
- "Revolving Credit Facility Amendment" refers to the Third Amendment to the Existing Revolving Credit Facility Agreement, among, *inter alios*, Ferroglobe and Globe as co-borrowers, the subsidiary guarantors party thereto, the financial institutions party thereto as lenders and Citizens Bank of Pennsylvania as administrative agent;
- "REINDUS Loan" refers to the loans obtained from the Spanish Ministry of Industry and Energy relating to our upgraded metallurgical grade solar silicon project. See "Item 7.A.—Major Shareholders and Related Party Transactions—Related Party Transactions—Aurinka" and "Item 10.C.—Material Contracts—REINDUS Loan;"
- "shares" or "ordinary shares" refer to the authorized share capital of Ferroglobe PLC;
- "Spanish Hydroelectric Sale" refers to the strategic disposition of our Spanish hydroelectric operations;
- "tons" refer to metric tons (approximately 2,204.6 pounds or 1.1 short tons);
- "U.S. Exchange Act" refers to the U.S. Securities Exchange Act of 1934, as amended; and
- "U.S. Securities Act" refers to the U.S. Securities Act of 1933, as amended.

PRESENTATION OF FINANCIAL INFORMATION

The selected financial information as of December 31, 2016 and 2015 and for the years ended December 31, 2016, 2015 and 2014 is derived from our Consolidated Financial Statements, which are included elsewhere in this annual report and which are prepared in accordance with IFRS as issued by the IASB. The selected financial information as of December 31, 2014 and as of and for the years ended December 31, 2013 and 2012 is derived from FerroAtlántica's audited consolidated financial statements and related notes for the years ended December 31, 2014, 2013 and 2012, which are not included in this annual report.

Certain numerical figures set out in this annual report, including financial data presented in millions or thousands and percentages describing market shares, have been subject to rounding adjustments, and, as a result, the totals of the data in this annual report may vary slightly from the actual arithmetic totals of such information. Percentages and amounts reflecting changes over time periods relating to financial and other data set forth in "Item 5.—Operating and Financial Review and Prospects" are calculated using the numerical data in our Consolidated Financial Statements or the tabular presentation of other data (subject to rounding) contained in this annual report, as applicable, and not using the numerical data in the narrative description thereof.

PART I

ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not applicable.

ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

ITEM 3. KEY INFORMATION

A. Selected Financial Data

The following tables present selected consolidated financial and business level information for Ferroglobe as of and for the years ended December 31, 2016 and 2015 and, its predecessor, FerroAtlántica, as of and for the years ended December 31, 2014, 2013 and 2012.

The selected financial information as of December 31, 2016 and 2015 and for the years ended December 31, 2016, 2015 and 2014 is derived from our Consolidated Financial Statements, prepared in accordance with IFRS as issued by the IASB, which are included elsewhere in this annual report. The selected financial information as of December 31, 2014 and as of and for the years ended December 31, 2013 and 2012 is derived from our consolidated financial statements and related notes for the years ended December 31, 2014, 2013 and 2012, which are not included elsewhere in this annual report.

The selected consolidated financial information as of and for the years ended December 31, 2016, 2015, 2014, 2013 and 2012 is not intended to be an indicator of our financial condition or results of operations in the future. You should review such selected consolidated financial information together with our Consolidated Financial Statements, included elsewhere in this annual report.

Ferroglobe was formed with the consummation of the Business Combination on December 23, 2015. FerroAtlántica is the Company's "Predecessor" for accounting purposes. Therefore, the results of Ferroglobe for the 2015 fiscal year were composed of the results of:

- Ferroglobe PLC for the period beginning February 5, 2015 (inception of the entity) and ended December 31, 2015;
- FerroAtlántica, the Company's "Predecessor," for the year ended December 31, 2015; and
- Globe for the eight-day period ended December 31, 2015.

The data and results of fiscal years prior to 2015 correspond exclusively to the Predecessor, FerroAtlántica, unless otherwise expressly stated.

The statement of financial position reflects the balance sheet of the Company as of December 31, 2016 and 2015. The statement of financial position for fiscal years prior to 2015 corresponds exclusively to the balance sheets of the Predecessor, FerroAtlántica.

The following tables should be read in conjunction with "Item 5.A.—Operating and Financial Review and Prospects—Operating Results," and our Consolidated Financial Statements included elsewhere in this annual report.

Consolidated Income Statement Data

	Year ended December 31,				
($ thousands)	**2016**	**2015 (2)**	**2014 (1)**	**2013 (1)**	**2012 (1)**
Sales	1,555,657	1,289,886	1,417,079	1,391,682	1,412,219
Cost of sales	(1,043,000)	(817,875)	(887,772)	(906,469)	(906,435)
Other operating income	25,712	15,500	6,694	36,714	15,667
Staff costs	(293,032)	(202,585)	(213,829)	(213,355)	(208,512)
Other operating expense	(234,326)	(190,034)	(148,553)	(172,808)	(182,260)
Depreciation and amortization charges, operating allowances and write-downs	(121,346)	(62,201)	(69,131)	(73,484)	(64,422)

Operating (loss) profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	(110,335)	32, 691	104,488	62,280	66,257
Impairment losses	(267,449)	(52,042)	(399)	(1,061)	(14,378)
Net (loss) gain due to changes in the value of assets	1,891	(912)	(9,472)	6,475	(2,751)
(Loss) gain on disposal of non-current assets	340	(2,208)	555	448	(13)
Other loss	(40)	(347)	(60)	(2,802)	1,433
OPERATING (LOSS) PROFIT	**(375,593)**	**(22,818)**	**95,112**	**65,340**	**50,548**
Finance income	1,534	1,095	4,596	2,446	4,636
Finance costs	(24,585)	(23,738)	(28,415)	(37,770)	(37,614)
Exchange differences	(3,513)	35,904	7,800	(7,677)	81
(LOSS) PROFIT BEFORE TAXES	**(402,157)**	**(9,557)**	**79,093**	**22,339**	**17,651**
Income tax benefit (expense)	46,609	(48,719)	(57,652)	(15,903)	4,886
(LOSS) PROFIT FROM CONTINUING OPERATIONS	**(355,548)**	**(58,276)**	**21,441**	**6,436**	**22,537**
(Loss) Profit for discontinued operations[3]	(3,065)	(196)	10,290	15,612	12,142
(LOSS) PROFIT FOR THE YEAR	**(358,613)**	**(58,472)**	**31,731**	**22,048**	**34,679**
Loss attributable to non-controlling interests	20,186	15,204	6,706	6,400	509
(LOSS) PROFIT ATTRIBUTABLE TO THE PARENT COMPANY	**(338,427)**	**(43,268)**	**38,437**	**28,448**	**35,188**

Earnings per share

From continued and discontinued operations

	2016	2015 [2]	2014 [1]	2013 [1]	2012 [1]
(Loss) Profit attributable to the Parent Company	(338,427)	(43,268)	38,437	28,448	35,188
Average number of shares outstanding	171,838,153	99,699,262	98,078,163	98,078,163	98,078,163
Basic (loss) earnings per share	**(1.97)**	**(0.43)**	**0.39**	**0.29**	**0.36**
Weighted Average Dilutive Options and RSUs	—	—	—	—	—
Diluted (loss) earnings per share	**(1.97)**	**(0.43)**	**0.39**	**0.29**	**0.36**

From continued operations

	2016	2015 [2]	2014 [1]	2013 [1]	2012 [1]
(Loss) Profit attributable to the Parent Company	(335,362)	(43,072)	28,150	12,843	23,051
Average number of shares outstanding	171,838,153	99,699,262	98,078,163	98,078,163	98,078,163
Basic (loss) earnings per share	**(1.95)**	**(0.43)**	**0.29**	**0.13**	**0.24**
Weighted Average Dilutive Options and RSUs	—	—	—	—	—
Diluted (loss) earnings per share	**(1.95)**	**(0.43)**	**0.29**	**0.13**	**0.24**

From discontinued operations

	2016	2015 [2]	2014 [1]	2013 [1]	2012 [1]
(Loss) Profit attributable to the Parent Company	(3,065)	(196)	10,287	15,605	12,137
Average number of shares outstanding	171,838,153	99,699,262	98,078,163	98,078,163	98,078,163
Basic (loss) earnings per share	**(0.02)**	**0.00**	**0.10**	**0.16**	**0.12**
Weighted Average Dilutive Options and RSUs	—	—	—	—	—
Diluted (loss) earnings per share	**(0.02)**	**0.00**	**0.10**	**0.16**	**0.12**

Cash dividend declared

	2016	2015 [2]	2014 [1]	2013 [1]	2012 [1]
Cash dividend declared	54,988	21,479	40,116	27,498	46,100
Number of shares	171,838,153	171,838,153	98,078,163	98,078,163	98,078,163
Cash dividend declared per share	0.32	0.12	0.41	0.28	0.47

Consolidated Statement of Financial Position Data

	As of December 31,				
($ thousands)	**2016**	**2015 [2]**	**2014 [1]**	**2013 [1]**	**2012 [1]**
Cash and cash equivalents	196,931	116,666	48,651	62,246	71,631
Total assets	2,019,301	2,391,161	1,388,158	1,675,975	1,769,524
Non-current liabilities	500,503	603,500	468,585	477,125	392,393
Current liabilities	626,756	492,688	411,896	414,884	580,557
Equity	892,042	1,294,973	507,677	783,966	796,574

(1) Financial data for the Predecessor, FerroAtlántica, except for share and per share data, which has been updated to reflect the shares received by the owners of FerroAtlántica as a result of the Business Combination for the years ended December 31, 2014, 2013 and 2012.

(2) Financial data for Ferroglobe is derived from the results and financial position of: (a) Ferroglobe PLC for the period beginning February 5, 2015 (inception of the entity) and ended December 31, 2015; (b) FerroAtlántica for the year ended December 31, 2015; and (c) Globe for the eight-day period ended December 31, 2015.

(3) Our Spanish hydroelectric operations were determined to be discontinued and classified as held-for-sale in 2016. As such, the financial information for prior years has been adjusted to reflect this change in accounting treatment.

B. Capitalization and indebtedness.

Not applicable.

C. Reasons for the offer and use of proceeds.

Not applicable.

D. Risk factors.

An investment in our ordinary shares carries a significant degree of risk. You should carefully consider the following risks and other information in this annual report, including our Consolidated Financial Statements included elsewhere in this annual report. Additional risks and uncertainties of which we are not presently aware or that we currently deem immaterial could also affect our business operations and financial condition. If any of these risks actually occur, our business, financial condition, results of operations or prospects could be materially affected. As a result, the trading price of our ordinary shares could decline and you could lose part or all of your investment.

You should note that the risks described below may not be the only risks we face. We have described only those risks that we currently consider to be material and there may be additional risks and uncertainties not presently known to us, or that we currently consider immaterial, that might also have a material adverse effect on our business, financial condition or results of operations.

Risks Related to Our Business and Industry

Our operations depend on industries including the aluminum, steel, polysilicon, silicone and photovoltaic industries, which, in turn, rely on several end-markets. A downturn in these industries or end-markets could adversely affect the steel, aluminum, polysilicon and silicone industries and, consequently, our business, results of operations and financial condition.

Because we primarily sell the silicon metal, silicon-based alloys, manganese-based alloys and other specialty metals we produce to manufacturers of aluminum, steel, polysilicon, silicones, and solar photovoltaic products, our results are significantly affected by the economic trends in the steel, aluminum, polysilicon, silicone and solar photovoltaic industries. Primary end users of steel and aluminum that drive demand for steel and aluminum are construction companies, shipbuilders, electric appliance and car manufacturers, and companies operating in the rail and maritime industries. Primary end users of polysilicon and silicones that drive demand for polysilicon and silicones include the automotive, chemical, solar photovoltaic, pharmaceutical, construction and consumer products industries. Demand for steel, aluminum, polysilicon and silicones from these companies is driven primarily by gross domestic product growth and is affected by global economic conditions. Fluctuations in steel and aluminum prices may occur due to sustained price shifts reflecting underlying global economic and geopolitical factors, changes in industry demand and supply balances, the substitution of one product for another in times of scarcity and changes in national tariffs. An easing of demand for steel and aluminum can quickly cause a substantial build-up of steel and aluminum stocks, resulting in a decline in demand for silicon metal, silicon-based alloys, manganese-based alloys, and other specialty metals. Polysilicon and silicone producers are subject to fluctuations in crude oil, platinum, methanol and natural gas prices, which could adversely affect their businesses. The solar photovoltaic industry has been growing in the past years. However, changes in power regulations in different countries, fluctuations in the relative costs of different sources of energy, and supply-demand balances in the different parts of the value chain, among other factors, may significantly affect the growth prospects of the solar photovoltaic industry. A significant and prolonged downturn in the end-markets for steel, aluminum, polysilicon, silicone and solar photovoltaic products, could adversely affect these industries, and, in turn, our business, results of operations and financial condition.

The metals industry, including silicon-based metals, is cyclical and has been subject in the past to swings in market price and demand which could lead to volatility in our revenues.

Our business has historically been subject to fluctuations in the price of our products and market demand for them, caused by general and regional economic cycles, raw material and energy price fluctuations, competition and other factors. The timing, magnitude and duration of these cycles and the resulting price fluctuations are difficult to predict. For example, we have experienced a weakened economic environment in national and international metals markets, including a sharp decrease in silicon metal prices in all major markets since late 2014. The weakened economic environment has adversely affected our profitability for the year ended December 31, 2016, with a particularly pronounced effect on the profitability of our European business over those periods.

Historically, our subsidiary, Globe Metallurgical, Inc., has been affected by recessionary conditions in the end-markets for its products, such as automotive and construction. In April 2003, Globe Metallurgical, Inc. sought protection under Chapter 11 of the U.S. Bankruptcy Code following its inability to restructure or refinance its indebtedness in light of the confluence of several negative economic and other factors, including an influx of low-priced, dumped imports, which caused it to default on then-outstanding indebtedness. A recurrence of such economic factors could have a material adverse effect on our business prospects, condition (financial or otherwise) and results of operations.

Additionally, as a result of unfavorable conditions in the end-markets for its products, Globe Metales S.R.L. (“Globe Metales”) became subject to reorganization proceedings (*concurso preventivo*) in 1999, which are scheduled to end in 2020. While such reorganization proceedings are ongoing, Globe Metales cannot dispose of or encumber its registered assets (such as real estate properties) or perform any action outside its ordinary course of business without prior court approval from the bankruptcy court.

In calendar years 2009 and 2016, the global silicon metal, manganese- and silicon-based alloys industries suffered from unfavorable market conditions. Any decline in the global silicon metal and silicon-based alloys industries could have a material adverse effect on our business prospects, condition (financial or otherwise), and results of operations. In addition, our business is directly related to the production levels of our customers, whose businesses are dependent on highly cyclical markets, such as the automotive, residential and non-residential construction, consumer durables, polysilicon, steel, and chemical markets. In response to unfavorable market conditions, customers may request delays in contract shipment dates or other contract modifications. If we grant modifications, these could adversely affect our anticipated revenues and results of operations. Also, many of our products are internationally traded products with prices that are significantly affected by worldwide supply and demand. Consequently, our financial performance will fluctuate with the general economic cycle, which could have a material adverse effect on our business prospects, condition (financial or otherwise) and results of operations.

Our business is particularly sensitive to increases in energy costs, which could materially increase our cost of production.

The price of energy is determined in the applicable domestic jurisdiction and is influenced both by supply and demand dynamics and by domestic regulations. Changes in local energy policy, increased costs due to scarcity of energy supply, climate conditions and other factors can affect the price of energy supply to our plants and adversely affect its results of operations and financial conditions.

Electricity is one of our largest production cost components. Because electricity constitutes such a high percentage of our production costs, we are particularly vulnerable to cost fluctuations in the energy industry. For example, energy prices and supply in South Africa are not stable, and prices have increased at a rate higher than inflation in recent years. Power supply to our South African plants in Polokwane, eMalahleni and New Castle is provided by the public utility company Eskom. Our Spanish, Argentine, South African and Chinese plants have higher prices of energy, and, as such, production is regulated to reduce the cost of energy in peak hours or seasons with higher energy prices in order to maintain profitability. Venezuela depends on national hydraulic energy production (rainfall) to produce enough power to allow us to have a reliable source of supply. The electricity supply price in Venezuela has recently been affected by the currency fluctuations in the country. Additionally, though our production of energy in Spain and France through our hydroelectric power operations partially mitigates our exposure to increases in power prices in these two countries, we have entered into a definitive agreement with respect to the disposal of our hydroelectric power operations in Spain with an experienced and reputable owner and operator of renewable energy businesses and are pursuing a strategic

disposal of our hydroelectric power operations in France. These disposals, if completed, will result in our further exposure to increases in power prices in Spain and France.

The termination or non-renewal of any of our energy contracts, or an increase in the price of energy, could have a material adverse effect on our future earnings and may prevent us from effectively competing in our markets. Also, the level of power consumption of our submerged electric arc furnaces is highly dependent on which products are being produced and typically fall in the following ranges: (i) manganese-based alloys require between 2.0 and 3.8 megawatt hours to produce one ton of product, (ii) silicon-based alloys require between 3.5 and 8 megawatt hours to produce one ton of product and (iii) silicon metal requires approximately 12 megawatt hours to produce one ton of product. Accordingly, consistent access to low cost, reliable sources of electricity is essential to our business.

Electrical power to our U.S. and Canada facilities is supplied mostly by AEP, Alabama Power, Brookfield Power, Hydro Quebec, Tennessee Valley Authority and Niagara Mohawk Power Corporation through dedicated lines. Our Alloy, West Virginia facility obtains approximately 56% of its power needs under a fixed-price contract with a nearby hydroelectric facility. This facility is over 70 years old and any breakdown could result in the Alloy facility having to pay much higher rates for electric power from third parties. Our energy supply for our facilities located in Argentina is supplied through Edemsa facilities located in Mendoza, Argentina, under a month-to-month arrangement. Energy rates in Argentina have increased on average by 200% from and after February 2016. However, the increase in energy rates have been challenged in the courts (with preliminary injunctive relief having been granted) and alternative arrangements are being negotiated with the Government. We received notice from the New York Power Authority that our hydropower allocation will be reduced by 54% resulting in our need to source more power from the free market and such reduction went into effect in June 2016. Our exposure to the free market could make the Niagara facility’s costs increase and/or make it non-competitive.

Energy supply to our facilities in South Africa is provided by Eskom (State-owned power utility) through rates that are approved annually by the national power regulator (NERSA). These rates have had an upward trend in the past years, due to scarcity of available supply, and are likely to continue increasing. Also, NERSA applies certain revisions to rates based on cost variances for Eskom that are completely out of our control. Towards the end of 2016, we commenced negotiations with Eskom for a new power contract for 2017 and 2018.

In Spain, power is purchased in the competitive wholesale market. Our facilities have to pay access tariffs to the grid and get certain payments in exchange for providing services to the grid (i.e., interruptibility services). The volatile nature of the wholesale market in Spain subjects our power price to uncertainty that can be only partially offset with financial hedging contracts.

Energy prices in Spain are volatile and such volatility could have a material adverse effect on our business, financial condition and results of operations.

Almost all of the revenues from Ferroglobe’s energy segment are tied, either directly or indirectly, to the wholesale market price for electricity in Spain. Wholesale market prices for electricity are impacted by a number of factors and may decline for many reasons that are not within our control, which may impact our ability to sell electricity. Those factors include the price of fuel that is used to generate other sources of electricity, the management of generation and the amount of excess generating capacity relative to load in a particular market, the cost of controlling emissions of pollution, the structure of the electricity market, changes in demand for electricity, regulatory and governmental actions and weather conditions that impact electrical load. In addition, other power generators may develop new technologies or improvements to traditional technologies to produce power that could increase the supply of electricity and cause a sustained reduction in market prices for electricity.

We are pursuing a strategic disposal of our hydroelectric power operations in Spain and France, and have entered into a definitive agreement with respect to the disposal of our hydroelectric power operations in Spain with an experienced and reputable owner and operator of renewable energy businesses. Because our production of energy in Spain and France through our hydroelectric power operations partially mitigates our exposure to increases in power prices in these two countries, if such a disposal is completed, it will result in our further exposure to increases in power prices in France and Spain.

Our energy operations and revenues depend largely on government regulation of the power sector and our business may be adversely affected if such policies are amended or eliminated.

Our energy operations and revenues depend largely on government regulation of the power sector. For example, in 2013, Spain introduced a new regulatory regime for renewable energies, which, among other things, suspended the pre-existing feed-in tariff support scheme for renewable energy producers that had benefitted us. This had an adverse effect on the profitability of our energy operations in 2016 and 2015 as compared to previous years, as prices at which we are able to sell our energy are now substantially dependent on wholesale market prices. Though we are pursuing a strategic disposal of our hydroelectric power operations in Spain and France, and have entered into a definitive agreement with respect to the disposal of our hydroelectric power operations in Spain with an experienced and reputable owner and operator of renewable energy businesses, until such disposal has been completed, if power sector regulation is adversely amended, reduced, eliminated, or subjected to new restrictions, it could have a material adverse effect on the profitability of our energy operations.

Losses caused by disruptions in the supply of power would reduce our profitability.

Our operations are heavily dependent upon a reliable supply of electrical power. We may incur losses due to a temporary or prolonged interruption of the supply of electrical power to our facilities, which can be caused by unusually high demand, blackouts, equipment failure, natural disasters or other catastrophic events, including failure of the hydroelectric facilities that currently provide power under contract to our West Virginia, New York, Quebec and Argentina facilities. Additionally, we have, on occasion, been instructed to suspend operations for several hours by the sole energy supplier in South Africa due to a general power shortage which continues in the country. It is possible that this supplier may instruct us to suspend our operations for a similar or longer amount of time in the future. Large amounts of electricity are used to produce silicon metal, manganese- and silicon-based alloys and other specialty metals, and any interruption or reduction in the supply of electrical power would adversely affect production levels and result in reduced profitability. Our insurance coverage does not cover all events and may not be sufficient to cover any or all losses. Certain of our insurance policies may not cover any losses that may be incurred if our suppliers are unable to provide power during periods of unusually high demand.

Investments in Argentina’s electricity generation and transmission systems have been lower than the increase in demand in recent years. If this trend is not reversed, there could be electricity supply shortages as the result of inadequate generation and transmission capacity. Given the heavy dependence on electricity of our manufacturing operations, any electricity shortages could adversely affect our financial results.

Government regulations of electricity in Argentina give priority access of hydroelectric power to residential users and subject violators of these restrictions to significant penalties. This preference is particularly acute during Argentina’s winter months due to a lack of natural gas. We have previously successfully petitioned the government to exempt us from these restrictions given the demands of our business for continuous supply of electric power. If we are unsuccessful in our petitions or in any action we take to ensure a stable supply of electricity, our production levels may be adversely affected and our profitability reduced.

Any decrease in the availability, or increase in the cost, of raw materials or transportation could materially increase our costs.

Principal components in the production of silicon metal, silicon-based alloys and manganese-based alloys include metallurgical-grade coal, charcoal, carbon electrodes, manganese ore, quartzite, wood chips, steel scrap, and other metals. While we own certain sources of raw materials, we buy some raw materials on a spot or contracted basis. The availability of these raw materials and the prices at which we purchase them from third-party suppliers may be volatile, as they are dependent on market supply and demand. We are dependent on certain suppliers of these products, their labor union relationships, mining and lumbering regulations and output and general local economic conditions, in order to obtain raw materials in a cost efficient and timely manner.

We make extensive use of shipping by sea, rail and truck to obtain the raw materials used in our production and deliver our products to customers, depending on the geographic region and product or input. These raw materials and products often must be transported over long distances between the mines and other production sites where raw materials are produced and our factories where raw materials are processed and between those sites and our customers. Any severe delay, interruption or other disruption in such transportation, any material damage to raw materials utilized by us or to our products while being transported, or a sharp rise in transportation prices, could have a material adverse effect on our business, results of operations, financial

condition and productivity levels. We may not be able to obtain adequate supplies of raw materials from alternative sources on terms as favorable as our current arrangements or at all. Any increases in the price or shortfall in the production and delivery of raw materials, could materially adversely affect our business prospects, condition (financial or otherwise) or results of operations.

Cost increases in raw material inputs may not be passed on to our customers, which could negatively impact our profitability.

The availability and prices of raw material inputs may be influenced by supply and demand, changes in world politics, unstable governments in exporting nations and inflation. The market prices of our products and raw material inputs are subject to change. We may not be able to pass a significant amount of increased input costs on to our customers. If we try to pass them on, we may lose sales and thereby revenue, in addition to having the higher costs. Additionally, we may not be able to obtain lower prices from our suppliers should our sale prices decrease.

Metals manufacturing and mining are inherently dangerous activities and any accident resulting in injury or death of personnel or prolonged production shutdowns could adversely affect our business and operations.

Metals manufacturing generally, and smelting in particular, is inherently dangerous and subject to fire, explosion and sudden major equipment failure. Quartz and coal mining are inherently dangerous and subject to numerous hazards, including collisions, equipment failure, accidents arising from the operation of large open pit mining and rock transportation equipment, dust inhalation, flooding, collapse, blasting operations and operating in extreme climatic conditions. This can and has resulted in accidents resulting in the serious injury or death of production personnel and prolonged production shutdowns. In January 2015, the death of a subcontractor at our South Africa mine caused a shutdown of production for several days. We have also experienced fatal accidents and equipment malfunctions in our manufacturing facilities in recent years, including a fire at our Bridgeport, Alabama facility in November 2011 and a fatality at our Selma, Alabama facility in October 2012. We may experience fatal accidents or equipment malfunctions in the future, which could have a material adverse effect on our business and operations.

We are heavily dependent on our mining operations, which are subject to risks that are beyond our control and which could result in materially increased expenses and decreased production levels.

We mine quartz and quartzite at open pit mining operations and coal at underground and surface mining operations. We are heavily dependent on these mining operations for our quartz and coal supply. Certain factors beyond our control could disrupt our mining operations, adversely affect production and shipments and increase our operating costs, such as: a major incident at the mine site that causes all or part of the operations of the mine to cease for some period of time; mining, processing and plant equipment failures and unexpected maintenance problems; changes in reclamation costs; the inability to renew mining concessions upon their expiration; the expropriation of territory subject to a valid concession without sufficient compensation; and adverse weather and natural disasters, such as heavy rains or snow, flooding and other natural events affecting operations, transportation or customers. For example, the recent installation of additional capacity at our quartz mine in Alabama took longer and was more costly than expected.

Regulatory agencies have the authority under certain circumstances following significant health and safety incidents, such as fatalities, to order a mine to be temporarily or permanently closed. If this occurred, we may be required to incur capital expenditures to re-open the mine. Environmental regulations could impose unexpected costs on our mining operations, and future regulations could increase those costs or limit our ability to produce quartz and sell coal. A failure to obtain and renew permits necessary for our mining operations could limit our production and negatively affect our business. It is also possible that we have extracted or may in the future extract quartz from territory beyond the boundary of our mining concession or mining right, which could result in penalties or other regulatory action or liabilities.

We are subject to environmental, health and safety regulations, including laws that impose substantial costs and the risk of material liabilities.

Our operations are subject to extensive foreign, federal, national, state, provincial and local environmental, health and safety laws and regulations governing, among other things, the generation, discharge, emission, storage, handling, transportation, use, treatment and disposal of hazardous substances; land use, reclamation and remediation; waste management and pollution prevention measures; greenhouse gas emissions; and the health and safety of our employees. We are also required to obtain permits from governmental authorities for certain

operations, and to comply with related laws and regulations. We may not have been and may not be at all times in complete compliance with such permits and related laws and regulations. If we violate or fail to comply with these permits and related laws and regulations, we could be subject to penalties, restrictions on operations or other sanctions, obligations to install or upgrade pollution control equipment and legal claims, including for alleged personal injury or property or environmental damages. Such liability could adversely affect our reputation, business, results of operations and financial condition. In addition, in the context of an investigation, the government may impose technology upgrades to our facilities that could represent material capital expenses. For example, we have received two Notices and Findings of Violation ("NOV/FOV") from the federal government, alleging numerous violations of the Clean Air Act relating to Globe Metallurgical Inc.'s ("GMI") Beverly facility. Should GMI and the federal government be unable to reach a negotiated resolution of the NOV/FOVs, the government could file a formal lawsuit in federal court for injunctive relief, potentially requiring GMI to implement emission reduction measures, and for civil penalties. The statutory maximum penalty is $93,750 per day per violation, from April, 2013 to the present. See "Item 8.A.—Financial Information—Consolidated Financial Statements and Other Financial Information—Legal proceedings" for additional information.

Under certain environmental laws, we could be required to remediate or be held responsible for all of the costs relating to any contamination at our or our predecessors' past or present facilities and at third party waste disposal sites. We could also be held liable under these environmental laws for sending or arranging for hazardous substances to be sent to third party disposal or treatment facilities if such facilities are found to be contaminated. Under these laws we could be held liable even if we did not know of, or did not cause, such contamination, or even if we never owned or operated the contaminated disposal or treatment facility.

There are a variety of laws and regulations in place or being considered at the international, federal, regional, state and local levels of government that restrict or are reasonably likely to restrict emissions of carbon dioxide and other greenhouse gases. These legislative and regulatory developments may cause us to incur material costs if we are required to reduce or offset greenhouse gas emissions and may result in a material increase in our energy costs due to additional regulation of power generators. Environmental laws are complex, change frequently and are likely to become more stringent in the future. Because environmental laws and regulations are becoming more stringent and new environmental laws and regulations are continuously being enacted or proposed, such as those relating to greenhouse gas emissions and climate change, the level of expenditures required for environmental matters could increase in the future. Future legislative action and regulatory initiatives could result in changes to operating permits, additional remedial actions, material changes in operations, increased capital expenditures and operating costs, increased costs of the goods we sell, and decreased demand for our products that cannot be assessed with certainty at this time.

Therefore, our costs of complying with current and future environmental laws, and our liabilities arising from past or future releases of, or exposure to, hazardous substances may adversely affect our business, results of operations and financial condition.

Compliance with existing and proposed climate change laws and regulations, could adversely affect our performance.

Under current European Union legislation, all industrial sites are subject to cap-and-trade programs, by which every facility with carbon emissions is required to purchase in the market emission rights for volumes of emission that exceed a certain allocated level. So far, and until 2020, the allocated level of emissions is such that the potential requirements of emissions rights purchases will have a limited impact on our business. After 2020, however, new regulations may require significant purchases of emissions rights in the market. Also, several Canadian provinces have implemented cap-and-trade programs. As such, our facilities in Canada and in the European Union may be required to purchase emission credits in the future (85% of the cost which may be exempted in the European Union). The requirement to purchase emissions rights in the market could result in material increased compliance costs, additional operating restrictions for our business, and an increase in the cost of the products we produce, which could have a material adverse effect on our financial position, results of operations, and liquidity.

In the United States and South Africa, some of the proposed climate change legislation would require businesses that emit greenhouse gases to buy emission credits from the government, other businesses, or through an auction process. While no such requirements applicable to our business have been adopted or have been included in the U.S. EPA's "Clean Power Plan," if any such program were adopted in the future, we may be required to purchase emission credits for greenhouse gas emissions resulting from our operations. Although it is not possible at this time to predict what, if any, climate change laws or regulations will be adopted, any new

restrictions on greenhouse gas emissions, including a cap-and-trade program or an emissions tax, could result in material increased compliance costs, additional operating restrictions for our business, and an increase in the cost of the products we produce, which could have a material adverse effect on our financial position, results of operations and liquidity.

We make a significant portion of our sales to a limited number of customers, and the loss of a portion of the sales to these customers could have a material adverse effect on our revenues and profits.

In the year ended December 31, 2016, Ferroglobe's ten largest customers accounted for approximately 42.2% of Ferroglobe's consolidated revenue and sales corresponding to Dow Corning Corporation represented 13.7% of our sales. We expect that we will continue to derive a significant portion of our business from sales to these customers. If we were to experience a significant reduction in the amount of sales we make to some or all of these customers and could not replace these sales with sales to other customers, it could have a material adverse effect on our revenues and profits.

Some of the contracts with our customers do not provide commitments from our customers to purchase specified or minimum volumes of products for terms longer than one month to one year. Accordingly, with respect to these contracts, we do not benefit from any contractual protection mechanism in case of unexpected reduced demand for our products from such customers as a result of, for instance, downturns in the industries in which these customers operate or any other factor affecting their business, and this could have a material adverse effect on our revenues and profits. If we were to experience a significant reduction in the amount of sales it makes to some or all of these customers and could not replace these sales with sales to other customers, this could have a material adverse effect on our revenues and profits.

Our business benefits from antidumping and countervailing duty orders and laws that protect our products by imposing special duties on unfairly traded imports from certain countries. If these duties or laws change, certain foreign competitors might be able to compete more effectively.

Antidumping and countervailing duty orders are designed to provide relief from imports sold at unfairly low or subsidized prices by imposing special duties on such imports. As a result, such orders normally benefit domestic suppliers and foreign suppliers not covered by the orders. In the United States, antidumping duties are in effect covering silicon metal imports from China and Russia. In the European Union, antidumping duties are in place covering silicon metal from China and ferrosilicon imports from China and Russia. In Canada, antidumping and countervailing duties are in place covering silicon metal imports from China.

The current antidumping and countervailing duty orders may not remain in effect and continue to be enforced from year to year, the products and countries now covered by orders may no longer be covered, and duties may not continue to be assessed at the same rates. In the United States, rates of duty can change as a result of "administrative reviews" of antidumping and countervailing duty orders. These orders can also be revoked as a result of periodic "sunset reviews," which determine whether the orders will continue to apply to imports from particular countries. A sunset review of the U.S. antidumping order covering silicon metal imports from China is currently being conducted. Antidumping and countervailing duties in the European Union and Canada also are subject to periodic reviews. In the European Union, such reviews can include interim reviews, expiry reviews and other types of proceedings that may result in changes in rates of duty or termination of the duties. In Canada, orders may be rescinded as a result of periodic expiry reviews. Similarly, export duties currently in place may change. For example, duties on Chinese exports of types of ferroalloys produced by Ferroglobe could be reduced. Changes in any of these factors could adversely affect our business and profitability. Finally, at times, in filing trade actions, we find ourselves acting against the interests of our customers. Some of our customers may not continue to do business with us because we filed a trade action.

In March 2017, Globe petitioned the U.S. Department of Commerce and the U.S. International Trade Commission to provide relief from unfairly traded silicon metal imports from Australia, Brazil, Kazakhstan and Norway. If these actions are successful, antidumping orders will be issued covering silicon metal imports from Australia, Brazil and Norway and countervailing duty orders will be issued covering silicon metal imports from Australia, Brazil and Kazakhstan. In December 2016, Ferroglobe and its subsidiaries filed a complaint with the Canada Border Services Agency alleging that silicon metal from Brazil, Kazakhstan, Laos, Malaysia, Norway, Russia and Thailand is being dumped, and that silicon metal from Brazil, Kazakhstan, Malaysia, Norway and Thailand is being subsidized. If imports from these countries are found to be dumped or subsidized and to be causing injury, antidumping and countervailing duties will be imposed on such imports into Canada. If the U.S. or Canadian actions are not successful, our sales in the United States or Canada may be adversely affected.

Products we manufacture may be subject to unfair import competition that may affect our profitability.

A number of the products we manufacture, including silicon metal and ferrosilicon, are globally-traded commodities that are sold primarily on the basis of price. As a result, our sales volumes and prices may be adversely affected by influxes of imports of these products that are dumped or are subsidized by foreign governments. Our silicon metal and ferrosilicon operations have been injured by such unfair import competition in the past. The antidumping and countervailing duty laws provide a remedy for unfairly traded imports in the form of special duties imposed to offset the unfairly low pricing or subsidization. However, the process for obtaining such relief is complex and uncertain. As a result, while we have sought and obtained such relief in the past, in some cases we have not been successful. Thus, there is no assurance that such relief will be obtained, and if it is not, unfair import competition could have a material adverse effect on our business, financial condition and results of operations.

Competitive pressure from Chinese steel, aluminum, polysilicon and silicone producers may adversely affect the business of our customers, reducing demand for our products. Our customers may relocate to China, where they may not continue purchasing from us.

China's aluminum, polysilicon and steel producing capacity exceeds local demand and has made China an increasingly larger net exporter of aluminum and steel, and the Chinese silicone manufacturing industry is growing. Chinese aluminum, polysilicon, steel and silicone producers — who are unlikely to purchase silicon metal, manganese- and silicon-based alloys and other specialty metals from our plants outside of China due to the ample availability of domestic Chinese production — may gain global market share at the expense of our customers. An increase in Chinese aluminum, steel, polysilicon and silicone industry market share could adversely affect the production volumes and ultimately the business of our customers, resulting in lower sales for us, and, in turn, have a material adverse effect on our business prospects and results of operations.

Moreover, our customers might seek to relocate or refocus their operations to China or other countries with lower labor costs and higher growth rates. If they do so, these customers might choose to purchase from other suppliers of silicon metal, manganese- and silicon-based alloys and other specialty metals, and this could have a material adverse effect on our business, results of operations and financial condition.

We are subject to the risk of union disputes and work stoppages at our facilities, which could have a material adverse effect on our business.

A majority of our employees are members of labor unions. In the future, we may experience lengthy consultations with labor unions or strikes, work stoppages or other industrial actions. Strikes called by employees or unions could disrupt our operations. In 2014, there was a strike at our South African subsidiary that required us to reduce production for seven days. We have also experienced strikes by our employees in France from time to time.

New labor contracts will have to be negotiated to replace expiring contracts from time to time. It is possible that new collective bargaining agreements could contain terms less favorable than the current agreements. If we are unable to satisfactorily renegotiate those labor contracts on terms acceptable to us without a work stoppage, the effects on our business could be materially adverse. Any strike or work stoppage could disrupt production schedules and delivery times, adversely affecting sales. In addition, existing labor contracts may not prevent a strike or work stoppage, and any such work stoppage could have a material adverse effect on our business.

Many of our key customers are similarly subject to union disputes and work stoppages, which may reduce their demand for our products and impede their ability to fulfil their commitments under existing contracts. In 2016, we temporarily reduced production at one of our plants as a result of a strike affecting one of our customers which resulted in delays in contract shipment dates and led to a decrease in prices for certain of our products.

We are dependent on key personnel.

Our success depends in part upon the retention of key employees. Competition for qualified personnel can be intense. Current and prospective employees may experience uncertainty about the effect of the Business Combination, which may impair our ability to attract, retain and motivate key management, sales, technical and other personnel.

If key employees depart, achieving further integration after the Business Combination may be more difficult and our business may be harmed. Furthermore, we may have to incur significant costs in identifying, hiring and

retaining replacements for departing employees and may lose significant expertise and talent relating to our business, and our ability to further realize the anticipated benefits of the Business Combination may be adversely affected. In addition, there could be disruptions to or distractions for the workforce and management associated with activities of labor unions or works councils or integrating employees. Accordingly, no assurance can be given that we will be able to attract or retain key employees to the same extent that we were able to attract or retain our employees prior to the Business Combination.

The success of our operations following our Business Combination, which was consummated on December 23, 2015, depends to a significant degree on the continued employment of our core senior management team. It is important that we retain the other members of our core senior management team following this change. In particular, we are dependent on the skills, knowledge and experience of Javier López Madrid, our Executive Chairman, Pedro Larrea Paguaga, our Chief Executive Officer, Joseph Ragan, our Chief Financial Officer, and Nicholas Deeming, our Chief Legal Officer and Corporate Secretary. If these employees are unable to continue in their respective roles, or if we are unable to attract and retain other skilled employees, our results of operations and financial condition could be adversely affected. We currently have employment agreements with Messrs. López Madrid, Larrea Paguaga, Ragan and Deeming. The employment agreements with Messrs. López Madrid, Larrea Paguaga, Ragan and Deeming contain certain non-compete provisions, which may not be enforceable by us. Additionally, we are substantially dependent upon key personnel in our financial and information technology staff that enables us to meet our regulatory, contractual and financial reporting obligations, including reporting requirements under our credit facilities.

In certain circumstances, the members of our Board may have interests that may conflict with yours as a holder of ordinary shares.

Our directors have no duty to us with respect to any information such directors may obtain (i) otherwise than as our directors and (ii) in respect of which directors owe a duty of confidentiality to another person, provided that where a director's relationship with such other person gives rise to a conflict, such conflict has been authorized by our Board in accordance with our articles of association ("Articles"). Our Articles provide that a director shall not be in breach of the general duties directors owe to us pursuant to the UK Companies Act 2006 because such director:

- fails to disclose any such information to our Board, directors or officers; or
- fails to use or apply any such information in performing such director's duties as a director.

In such circumstances, certain interests of the members of our Board may not be aligned with your interests as a holder of ordinary shares, and the members of our Board may engage in certain business and other transactions without any accountability or obligation to us.

Shortages of skilled labor could adversely affect our operations.

We depend on skilled labor for the operation of our silicon furnaces and other facilities. Some of our facilities are located in areas where demand for skilled laborers often exceeds supply. Shortages of skilled furnace technicians and other skilled laborers could restrict our ability to maintain or increase production rates, lead to production inefficiencies and increase our labor costs.

We may not realize the cost savings, synergies and other benefits that we expect to achieve from our recent Business Combination.

The combination of two independent companies is a complex, costly and time-consuming process. As a result, we are required to devote significant management attention and resources to integrating our business practices and operations. The integration process may disrupt our business and, if implemented ineffectively, could preclude realization of the full benefits expected. Failure to meet the challenges involved in successfully integrating our operations or otherwise to realize the anticipated benefits of the Business Combination could cause an interruption of our activities and could seriously harm our results of operations. In addition, the overall integration of the two companies may result in material unanticipated problems, expenses, liabilities, competitive responses, loss of client relationships, and diversion of management's attention, and may cause our stock price to decline. The difficulties of combining the operations of the companies include, among others:

- managing a significantly larger company;

- coordinating geographically separate organizations;
- the potential diversion of management focus and resources from other strategic opportunities and from operational matters;
- retaining existing customers and attracting new customers;
- maintaining employee morale and retaining key management and other employees;
- integrating two unique business cultures, which may prove to be incompatible;
- the possibility of faulty assumptions underlying expectations regarding the integration process;
- issues in achieving anticipated operating efficiencies, business opportunities and growth prospects;
- consolidating corporate and administrative infrastructures and eliminating duplicative operations;
- issues in integrating information technology, communications and other systems;
- changes in applicable laws and regulations;
- changes in tax laws (including under applicable tax treaties) and regulations or to the interpretation of such tax laws or regulations by the governmental authorities; and
- managing tax costs or inefficiencies associated with integrating our operations.

Many of these factors are outside of our control and any one of them could result in increased costs, decreased revenues and diversion of management's time and energy, which could materially impact our businesses, financial condition and results of operations. In addition, even if the operations are integrated successfully, we may not realize the full benefits of the Business Combination, including the synergies, cost savings or sales or growth opportunities that we expect. These benefits may not be achieved within the anticipated time frame, or at all. As a result, we cannot assure our shareholders that the Business Combination will result in the realization of the full benefits anticipated.

Because the proceeds of the R&W Policy will not be sufficient to fully compensate for losses attributable to breaches of representations and warranties made by Grupo VM and FerroAtlántica in the Business Combination Agreement, and the proceeds under the R&W Policy are required to be distributed to the holders of the Trust Units, we may be required to use our existing cash on hand or draw under our credit facility to fund any actual loss incurred.

We purchased a Representations and Warranties insurance policy (the "R&W Policy") in connection with the Business Combination to insure us against breaches of certain representations and warranties made by Grupo Villar Mir S.A.U. ("Grupo VM") and FerroAtlántica in the Business Combination Agreement (as defined below). The R&W Policy has a face amount equal to $50,000,000 and is subject to an initial retention amount of $10,000,000, as well as other limitations and conditions. As a result of Grupo VM's ownership of the Company following completion of the Business Combination, the R&W Policy only provides insurance to the extent of approximately 43% of insurable losses incurred by us. Accordingly, the proceeds of the R&W Policy will not be sufficient to fully compensate for losses attributable to breaches of representations and warranties made by Grupo VM and FerroAtlántica. In addition, we will not be able to recover losses attributable to breaches of representations and warranties that are excluded from the R&W Policy (including, for example, any purchase price, net worth or similar adjustment provisions of the Business Combination Agreement (hereinafter "Business Combination Agreement" or "BCA"), transfer pricing, environmental or pollution matters, the intended tax treatment of the Business Combination, etc.), or losses that would result in payments under the R&W Policy in excess of the $50,000,000 face amount of the R&W Policy.

On November 18, 2016, Ferroglobe completed the distribution to the holders of our ordinary shares at the time of beneficial interest units (the "Trust Units") in a newly formed Delaware Statutory Trust, Ferroglobe Representation and Warranty Insurance Trust ("Ferroglobe R&W Trust"), to which Ferroglobe had assigned its

interest in the R&W Policy. Under the Articles, we are required to distribute the aggregate net proceeds under the R&W Policy, if any, to the holders of the Trust Units. We are not permitted to retain the net proceeds, if any, under the R&W Policy. Accordingly, if we suffer a loss that is otherwise recoverable under the R&W Policy, but use the net proceeds of the R&W Policy to fund the required distribution to the holders of the Trust Units, we will be required to use our existing cash on hand or draws under our credit facility to fund the actual loss incurred. Losses attributable to breaches of representations and warranties by Grupo VM or FerroAtlántica could have a material adverse effect on our business, financial condition and results of operations.

Our inability to integrate recently acquired businesses or to successfully complete future acquisitions could limit our future growth or otherwise be disruptive to our ongoing business.

From time to time, we expect to pursue acquisitions in support of our strategic goals. In connection with any such acquisitions, we could face significant challenges in managing and integrating our expanded or combined operations, including acquired assets, operations and personnel. There can be no assurance that acquisition opportunities will be available on acceptable terms or at all or that we will be able to obtain necessary financing or regulatory approvals to complete potential acquisitions. Our ability to succeed in implementing our strategy will depend to some degree upon the ability of our management to identify, complete and successfully integrate commercially viable acquisitions. Acquisition transactions may disrupt our ongoing business and distract management from other responsibilities.

Grupo VM, our principal shareholder, has significant voting power with respect to corporate matters considered by our shareholders.

Our principal shareholder, Grupo VM, owns shares representing approximately 55% of the aggregate voting power of our capital stock. By virtue of Grupo VM's voting power, as well as Grupo VM's representation on the Board, Grupo VM will have significant influence over the outcome of any corporate transaction or other matters submitted to our shareholders for approval. Grupo VM will be able to block any such matter, including ordinary resolutions, which, under English law, require approval by a majority of outstanding shares cast in the vote. Grupo VM will also be able to block any special resolutions, which, under English law, requires approval by the holders of at least 75% of the outstanding shares entitled to vote and voting on the resolution, such as an amendment of the Articles or the exclusion of preemptive rights. Our principal shareholder has, and will continue to have, directly or indirectly, the power, among other things, to affect our legal and capital structure and our day-to-day operations, as well as the ability to elect and change our management and to approve other changes to our operations.

Grupo VM, who owns approximately 55% of our outstanding shares, has pledged all of its shares to secure its obligations to Crédit Agricole Corporate and Investment Bank, Banco Santander and HSBC; if Grupo VM defaults on the underlying loan, we could experience a change in control.

Grupo VM guaranteed its obligations pursuant to a credit agreement (the "GVM Credit Agreement"), which matures in March 2018, which allows them to borrow up to €415 million ("GVM Loan"). In March 2015, Grupo VM entered into a security and pledge agreement, as amended on December 23, 2015 (the "GVM Pledge Agreement"), with Crédit Agricole Corporate and Investment Bank, Banco Santander and HSBC (the "Lenders"), pursuant to which Grupo VM agreed to pledge all of its shares to the Lenders to secure the outstanding GVM Loan. In the event Grupo VM defaults under the GVM Credit Agreement, the Lenders may foreclose on the shares subject to the pledge. In such case, we could experience a change of control. Upon a change in control, we may be required, among other things, immediately to repay the outstanding principal, any accrued interest on and any other amounts owed by us under one or more of our bank facilities or our other debt. The source of funds for these repayments would be our available cash or cash generated from other sources. If we do not have sufficient funds available upon a change of control to make these repayments, third party financing could be required to provide the necessary funds, which financing could be prohibited under our other debt agreements. In addition, certain other contracts we are party to from time to time may contain change of control provisions. Upon a change in control, such provisions may be triggered, which could cause our contracts to be terminated or give rise to other obligations, each of which could have a material adverse effect on our business, financial condition and results of operations.

We may engage in related party transactions with affiliates of Grupo VM, our principal shareholder.

Conflicts of interest may arise between our principal shareholder and your interests as a shareholder. Our principal shareholder has, and will continue to have, directly or indirectly, the power, among other things, to

affect our day-to-day operations, including the pursuit of related party transactions. We have entered, and may in the future enter, into agreements with companies who are affiliates of Grupo VM, our principal shareholder. Such agreements have been approved by, or would be subject to the approval of, the Board. The terms of such agreements may present material risks to our business and results of operations. For example, we recently entered into a series of projects and an agreement in respect of a joint venture with Aurinka, which is partly owned by Mr. Javier López Madrid, our Executive Chairman, and a Grupo VM affiliate. We have also entered into a number of other agreements with affiliates of Grupo VM with respect to the provision of information technology and data processing services and the management of certain aspects of our hydroelectric plants. See "Item 7.B.—Major Shareholders and Related Party Transactions—Related Party Transactions."

We are exposed to significant risks in relation to compliance with anti-corruption laws and regulations, economic sanctions programs and laws against human trafficking and slavery.

Doing business on a worldwide basis requires us to comply with the laws and regulations of various jurisdictions. In particular, our international operations are subject to anti-corruption laws and regulations, such as the U.S. Foreign Corrupt Practices Act of 1977 ("FCPA"), the UK Bribery Act of 2010 (the "Bribery Act"), economic sanctions programs, including those administered by the UN, EU and OFAC and regulations set forth under the Comprehensive Iran Accountability Divestment Act, and laws against human trafficking and slavery, such as the UK Modern Slavery Act 2015 ("Modern Slavery Act").

The FCPA prohibits providing anything of value to foreign officials for the purposes of obtaining or retaining business or securing any improper business advantage. We may deal with both governments and state-owned business enterprises, the employees of which are considered foreign officials for purposes of the FCPA. The provisions of the Bribery Act extend beyond bribery of foreign public officials and are more onerous than the FCPA in a number of other respects, including jurisdiction, non-exemption of facilitation payments and penalties. Economic sanctions programs restrict our business dealings with certain sanctioned countries.

As a result of doing business in foreign countries, we are exposed to a risk of violating anti-corruption laws and sanctions regulations applicable in those countries where we, our partners or our agents operate. Some of the international locations in which we operate lack a developed legal system and have high levels of corruption. Our continued expansion and worldwide operations, including in developing countries, our development of joint venture relationships worldwide and the employment of local agents in the countries in which we operate increases the risk of violations of anti-corruption laws, OFAC or similar laws. Violations of anti-corruption laws and sanctions regulations are punishable by civil penalties, including fines, denial of export privileges, injunctions, asset seizures, debarment from government contracts (and termination of existing contracts) and revocations or restrictions of licenses, as well as criminal fines and imprisonment. In addition, any major violations could have a significant impact on our reputation and consequently on our ability to win future business.

In addition, we are subject to certain disclosure obligations under the Modern Slavery Act, which was recently introduced in the United Kingdom. The Modern Slavery Act requires any commercial organization that carries on a business or part of a business in the United Kingdom which (i) supplies goods or services and (ii) has an annual global turnover of £36 million to prepare a slavery and human trafficking statement for each financial year ending on or after March 31, 2016. In this statement, the commercial organization must set out the steps it has taken to ensure there is no modern slavery in its own business and its supply chain, or provide an appropriate negative statement. The UK Secretary of State may enforce the duty to prepare a slavery and human trafficking statement by means of civil proceedings against the organization concerned. In light of the international nature of our operations and the regions in which we operate, it may be difficult for us to effectively detect instances of modern slavery in certain of our supply chains that would be subject to the disclosure requirements. To the extent that we are found to be non-compliant with the Modern Slavery Act, whether or not we have knowledge of such non-compliance, we may face governmental or other regulatory sanctions.

We seek to build and continuously improve our systems of internal controls and to remedy any weaknesses identified. There can be no assurance, however, that the policies and procedures will be followed at all times or effectively detect and prevent violations of the applicable laws by one or more of our employees, consultants, agents, partners or suppliers and, as a result, we could be subject to penalties and material adverse consequences on our business, financial condition or results of operations.

We operate in a highly competitive industry.

The silicon metal market and the silicon-based and manganese-based alloys markets are global, capital intensive and highly competitive. Our competitors may have greater financial resources, as well as other strategic advantages, to maintain, improve and possibly expand their facilities, and, as a result, they may be better positioned to adapt to changes in the industry or the global economy. The advantages that our competitors have over us could have a material adverse effect on our business. In addition, new entrants may increase competition in our industry, which could have a material adverse effect on our business. An increase in the use of substitutes for certain of our products also could have a material adverse effect on our financial condition and operations.

Though we are not currently operating at full capacity, we have historically operated at near the maximum capacity of our operating facilities. Because the cost of increasing capacity may be prohibitively expensive, we may have difficulty increasing our production and profits.

Our facilities are able to manufacture, collectively, approximately 399,200 tons of silicon metal (excluding Dow Corning's portion of the capacity of our Alloy, West Virginia and Becancour, Quebec plants), 376,500 tons of silicon-based alloys and 423,500 tons of manganese-based alloys on an annual basis. Our ability to increase production and revenues will depend on expanding existing facilities or opening new ones. Increasing capacity is difficult because:

- adding new production capacity to an existing silicon plant to produce approximately 30,000 tons of metallurgical grade silicon would cost approximately $120,000,000 and take at least 12 to 18 months to complete once permits are obtained, which could take more than a year;
- a greenfield development project would take at least three to five years to complete and would require significant capital expenditure and environmental compliance costs; and
- obtaining sufficient and dependable power at competitive rates near areas with the required natural resources is difficult to accomplish.

We may not have sufficient funds to expand existing facilities or open new ones and may be required to incur significant debt to do so, which could have a material adverse effect on our business.

Our actual financial position and results of operations may differ materially from certain of the financial data included in this annual report, and the historical financial information included in this annual report may not be representative of our results for the periods presented or future periods.

Ferroglobe was formed with the consummation of the Business Combination on December 23, 2015. FerroAtlántica is the Company's "Predecessor" for accounting purposes. Therefore, the historical data and results of Ferroglobe for the 2015 fiscal year are composed of the results of:

- Ferroglobe PLC as of December 31, 2015 and for the period beginning February 5, 2015 (inception of the entity) and ended December 31, 2015;
- FerroAtlántica, the Company's "Predecessor," for the twelve month period ended December 31, 2015; and
- Globe for the eight day period ended December 31, 2015.

The historical data and results of fiscal years before 2015 correspond exclusively to the Predecessor, unless otherwise expressly stated. This affects the comparability of our historical data and results for the year ended December 31, 2015 and any subsequent periods with our historical data and results for any previous periods.

Furthermore, the historical financial information included in this annual report may not be indicative of our future financial performance or our ability to meet our obligations.

We are subject to restrictive covenants under our credit facilities. These covenants could significantly affect the way in which we conduct our business. Our failure to comply with these covenants could lead to an acceleration of our debt.

We entered into credit facilities that contain covenants that at certain levels, among other things, restrict our ability to sell assets; incur, repay or refinance indebtedness; create liens; make investments; engage in mergers or acquisitions; pay dividends, including to us; repurchase stock; or make capital expenditures. These credit facilities also require compliance with specified financial covenants, including minimum interest coverage and maximum leverage ratios. We cannot borrow under the credit facilities if the additional borrowings would cause a breach of the financial covenants. Further, a significant portion of our assets are pledged to secure the indebtedness. For example, certain equity interests and assets are pledged to secure the Amended Revolving Credit Facility.

We may breach, and we have in the past breached, certain covenants under our credit facilities, including financial maintenance covenants under the Existing Revolving Credit Facility as of and for the three months ended September 30 and December 31, 2016. Our ability to comply with the applicable covenants may be affected by events beyond our control. The breach of any of the covenants contained in the credit facilities, unless waived, would be a default. This would permit the lenders to terminate their commitments to extend credit under, and accelerate the maturity of, the facility. The acceleration of debt could have a material adverse effect on our financial condition and liquidity. If we were unable to repay our debt to the lenders and holders or otherwise obtain a waiver from the lenders and holders, the lenders and holders could proceed against the collateral securing the credit facilities and exercise all other rights available to them. We may not have sufficient funds to make these accelerated payments and may not be able to obtain any such waiver on acceptable terms or at all.

Our insurance costs may increase, and we may experience additional exclusions and limitations on coverage in the future.

We have maintained various forms of insurance, including insurance covering claims related to our properties and risks associated with our operations. Our existing property and liability insurance coverage contains exclusions and limitations on coverage. From time to time, in connection with renewals of insurance, we have experienced additional exclusions and limitations on coverage, larger self-insured retentions and deductibles and significantly higher premiums. For example, as a result of the fire at our facility in Bridgeport, Alabama, our business interruption insurance premium has increased significantly. As a result, in the future, our insurance coverage may not cover claims to the extent that it has in the past and the costs that we incur to procure insurance may increase significantly, either of which could have an adverse effect on our results of operations.

We have operations and assets in the U.S., Spain, France, Canada, China, South Africa, Venezuela, Poland and Argentina, and may have operations and assets in other countries in the future. Our international operations and assets may be subject to various economic, social and governmental risks.

Our international operations and sales will expose us to risks that are more significant in developing markets than in developed markets and which could negatively impact our future sales or profitability. Our operations may not develop in the same way or at the same rate as might be expected in a country with an economy similar to western countries. The additional risks that we may be exposed to in these cases include, but are not limited to:

- tariffs and trade barriers;
- recessionary trends, inflation or instability of financial markets;
- currency fluctuations, which could decrease our revenues or increase our costs in U.S. Dollars;
- regulations related to customs and import/export matters;
- tax issues, such as tax law changes, changes in tax treaties and variations in tax laws;
- changes in regulations that affect our business such as more stringent environmental requirements or sudden and unexpected raises in power rates;

- limited access to qualified staff;
- inadequate infrastructure;
- cultural and language differences;
- inadequate banking systems;
- different and/or more stringent environmental laws and regulations;
- restrictions on the repatriation of profits or payment of dividends;
- crime, strikes, riots, civil disturbances, terrorist attacks or wars;
- nationalization or expropriation of property;
- law enforcement authorities and courts that are weak or inexperienced in commercial matters; and
- deterioration of political relations among countries.

Ferroglobe's competitive strength, among others, as a low-cost producer is partly tied to the value of the currency where we operate compared to other currencies. Currencies have fluctuated significantly especially in recent years.

Exchange controls and restrictions on transfers abroad and capital inflow restrictions have limited, and can be expected to continue to limit, the availability of international credit. For example, the results of our Venezuelan subsidiary have been adversely affected by changes to exchange rate policies, and while Argentina recently lifted its restrictions limiting the ability of companies to buy foreign currency and to make dividend payments abroad, it devalued the peso, which is likely to fuel inflation and increase operating costs.

The critical social, political and economic conditions in Venezuela have adversely affected, and may continue to adversely affect, our results of operations.

In recent years, the Venezuelan government has continuously devalued the Bolívar and inflation has left the local economy in a critical state. This has led to a shortage of basic materials and parts and difficulties in importing raw materials. In 2016, we idled our Venezuelan operations and, at the time, determined the recoverable amount of the long-lived assets based on the fair value of the assets less costs to dispose of the facility and concluded that the costs to dispose of the facility exceeded the fair value of the assets, primarily due to political and financial instability in Venezuela. Accordingly, we wrote down the full value of our Venezuelan operations. We are currently partially operating the facility and making products for the domestic market with the intention of operating to achieve results that are cash flow neutral. If the critical social, political and economic conditions in Venezuela continue or worsen, our business, results of operations and financial condition could be adversely affected.

We are exposed to foreign currency exchange risk and our business and results of operations may be negatively affected by the fluctuation of different currencies.

We transact business in numerous countries around the world and expect that a significant portion of our business will continue to take place in international markets. We prepare our consolidated financial statements in U.S. Dollars, while the financial statements of each of our subsidiaries will be prepared in the functional currency of that entity. Accordingly, fluctuations in the exchange rates will impact our results of operations and financial condition. As such, it is expected that our revenues and earnings will continue to be exposed to the risks that may arise from fluctuations in foreign currency exchange rates, which could have a material adverse effect on our business, results of operations or financial condition.

Our sales made in U.S. Dollars exceed the amount of our purchases made in U.S. Dollars. The appreciation of certain currencies (like the Euro or the South African Rand) against the U.S. Dollar could have an adverse effect on our margins and results of operations.

We depend on a limited number of third party suppliers for some of our required raw materials. The loss of one of these suppliers or the failure of one of these suppliers to supply raw materials in compliance with our contractual obligations could have a material adverse effect on our business.

Colombia and the United States are among the preferred sources for the coal required for the production of silicon alloys and the vast majority of the industry is supplied from these two countries. In the year ended December 31, 2016, approximately 76% of our coal was purchased from third parties. Of our third party purchases, approximately 65% came from Colombia. Additionally, in 2016, the vast majority of manganese ore purchased by us came from suppliers located in South Africa and Gabon, which supplied approximately 96% of the manganese ore purchased by us in 2016. We do not control these third party suppliers, and rely on them to provide their products and perform their services in accordance with the terms of their contracts, which increases our vulnerability to problems with the products and services they provide. If these suppliers fail to provide us with the required raw material in a timely manner or at all, or if the quantity or quality of the raw material provided is lower than that contractually agreed, we may not be successful in procuring adequate supplies of raw materials from alternative sources on terms as favorable. Such events could have a material adverse effect on our reputation, business, results of operations and financial condition. Additionally, any economic, social, political or other factor adversely affecting the economies of Colombia, South Africa and Gabon might adversely affect the ability of suppliers from those countries to provide their products to us, in which case we might not be able to procure the required raw materials from other sources in a timely manner, at comparable costs or at all, which could have a material adverse effect on our reputation, business, results of operations and financial condition.

We may be unable to successfully develop our planned investments in the construction of new capacity or in the expansion and improvement of existing facilities and this could have a material adverse effect on our business prospects, financial condition and results of operations.

We are, or may be, engaged in significant capital improvements to our existing facilities or in the addition of capacity to those facilities. We also may be engaged in development and construction of new facilities. Should any such efforts be unsuccessful or not completed in a timely manner, we could be subject to additional costs or impairments which could have a material adverse effect on our business prospects, financial condition and results of operations.

If hydrology conditions at our hydropower facilities are unfavorable or below our estimates, our electricity production, and therefore our revenue, may be substantially below our expectations.

The revenues generated by our hydroelectric operations are proportional to the amount of electricity generated, which, in turn, is entirely dependent upon available water flows. Operating results for our plants may vary significantly from period to period depending on the water flows during the periods in question. Hydrology conditions have natural variations from season to season and from year to year and may also change permanently because of climate change or other factors.

Hydroelectric power generation is dependent on the amount of rainfall and river flows in the regions in which our hydropower projects are located, which may vary considerably from quarter to quarter and from year to year. Any reduction in seasonal rainfall could cause our hydropower plants to run at a reduced capacity and therefore produce less electricity, impacting our profitability. A sustained decline in water flow or shutdown at our hydropower plants could lead to a material adverse change in the volume of electricity generated, which could have a material adverse effect on our results of operations.

Conversely, if hydrological conditions are such that too much rainfall occurs at any one time, water may flow too quickly and at volumes in excess of a particular hydropower plant’s designated flood levels, which may result in the forced dumping of reservoir water. A natural disaster or severe weather conditions, including flooding, lightning strikes, earthquakes, severe storms, wildfires, and other unfavorable weather conditions (including those from climate change), could impact water flows of the rivers on which our hydropower plants depend and require us to shut down our turbines or related equipment and facilities, impeding our ability to maintain and operate our projects and decreasing electricity production levels and revenues.

We are pursuing a strategic disposal of our hydroelectric power operations in Spain and France, and have entered into a definitive agreement with respect to the disposal of our hydroelectric power operations in Spain with an experienced and reputable owner and operator of renewable energy businesses.

Any delay or failure to procure, renew or maintain necessary governmental permits, including environmental permits, and concessions to operate our hydropower plants would adversely affect our results of operation.

The operation of our hydropower plants is highly regulated, requires various governmental permits, including environmental permits, and concessions, and may be subject to the imposition of conditions by government authorities. We cannot predict whether the conditions prescribed in the permits and concessions will be achievable. The denial of a permit essential to a hydropower plant or the imposition of impractical conditions would impair our ability to operate such plant. If we fail to satisfy the conditions or comply with the restrictions imposed by governmental permits or concessions, or the restrictions imposed by any statutory or regulatory requirements, we may become subject to regulatory enforcement action and the operation of our hydropower plants could be adversely affected or be subject to fines, penalties or additional costs or revocation of such permits or concessions. Any failure to procure, renew or maintain necessary permits and concessions would adversely affect continuing operation of our hydropower plants.

In Spain, the use and exploitation of the hydropower plants located in Aragón and Galicia are not only subject to the limitations imposed on their concession titles, but also to the limitations imposed by environmental regulation related to ecological flows. Power generation and the use of water at all hydropower plants must meet the ecological flow requirements set out in the Spanish National Hydrological Plan and the various provisions and acts of the Spanish Water Administration. Any further restrictions on our ability to use water at these plants would negatively impact our hydropower production, which would further expose us to increases in power prices in Spain.

In the United States, our hydropower supply is provided by Brookfield Renewable Power (“BRP”). BRP is currently in the process of renewing their hydropower license, which is set to expire on December 31, 2017. The Federal Energy Regulatory Commission (“FERC”) has a process of license renewal which includes public meetings and participation by interested parties. The white water rafting industry has requested that additional water be permitted to bypass the hydro facility to facilitate increased white water rafting opportunities. If the FERC ultimately grants this request and imposes this condition on BRP’s new license, this will result in a loss of water for the hydro facility which would increase the electricity and production cost for our WVA Manufacturing facility.

We are pursuing a strategic disposal of our hydroelectric power operations in Spain and France, and have entered into a definitive agreement with respect to the disposal of our hydroelectric power operations in Spain with an experienced and reputable owner and operator of renewable energy businesses.

Equipment failures may lead to production curtailments or shutdowns and repairing any failure could require us to expend significant amounts of capital and other resources, which could adversely affect our business and results of operations.

Many of our business activities are characterized by substantial investments in complex production facilities and manufacturing equipment. Because of the complex nature of our production facilities, any interruption in manufacturing resulting from fire, explosion, industrial accidents, natural disaster, equipment failures or otherwise could cause significant losses in operational capacity and could materially and adversely affect our business and operations.

Our hydropower generation assets and other equipment may not continue to perform as they have in the past or as they are expected. Any equipment failure due to wear and tear, latent defect, design error or operator error, early obsolescence, natural disaster or other force majeure event could cause significant losses in operational capacity and repairing such failures could require us to expend significant amounts of capital and other resources, which could have a material adverse effect on our business and operations. Such failures could result in damage to the environment or damages and harm to third parties or the public, which could expose us to significant liability.

We depend on proprietary manufacturing processes and software. These processes may not yield the cost savings that we anticipate and our proprietary technology may be challenged.

We rely on proprietary technologies and technical capabilities in order to compete effectively and produce high quality silicon metal and silicon-based alloys. Some of these proprietary technologies that we rely on are:

- computerized technology that monitors and controls production furnaces;

- electrode technology and operational know-how;
- metallurgical process for the production of solar-grade silicon metal;
- production software that monitors the introduction of additives to alloys, allowing the precise formulation of the chemical composition of products; and
- flowcaster equipment, which maintains certain characteristics of silicon-based alloys as they are cast.

We are subject to a risk that:

- we may not have sufficient funds to develop new technology and to implement effectively our technologies as competitors improve their processes;
- if implemented, our technologies may not work as planned; and
- our proprietary technologies may be challenged and we may not be able to protect our rights to these technologies.

Patent or other intellectual property infringement claims may be asserted against us by a competitor or others. Our intellectual property may not be enforceable, and it may not prevent others from developing and marketing competitive products or methods. An infringement action against us may require the diversion of substantial funds from our operations and may require management to expend efforts that might otherwise be devoted to operations. A successful challenge to the validity of any of our proprietary intellectual property may subject us to a significant award of damages, or we may be enjoined from using our proprietary intellectual property, which could have a material adverse effect on our operations.

We also rely on trade secrets, know-how and continuing technological advancement to maintain our competitive position. We may not be able to effectively protect our rights to unpatented trade secrets and know-how.

We are a holding company whose principal source of operating cash is the income received from our subsidiaries.

We are dependent on the income generated by our subsidiaries, in order to make distributions and dividends on our shares. The amount of distributions and dividends, if any, which may be paid to us from any operating subsidiary will depend on many factors, including such subsidiary's results of operations and financial condition, limits on dividends under applicable law, its constitutional documents, documents governing any indebtedness, applicability of tax treaties and other factors which may be outside our control. If our operating subsidiaries do not generate sufficient cash flow, we may be unable to make distributions and dividends on our shares.

The BCA Special Committee may not be able to effectively enforce our rights under the Grupo VM indemnity in the Business Combination Agreement, and the operation of the BCA Special Committee could have an adverse impact on relationships with Grupo VM if it seeks to take enforcement action.

At the closing of the Business Combination, our Board formed a three-member standing committee, composed of two independent Globe directors and one independent Grupo VM director (the "BCA Special Committee"). The BCA Special Committee takes action by majority vote. The functions of the BCA Special Committee include responsibility for, among other things, the evaluation of potential claims for losses and enforcement of the indemnification rights under the Business Combination Agreement. The BCA Special Committee performs its duties on behalf of and in the best interests of us and our shareholders but excluding Grupo VM. Grupo VM deals exclusively with the BCA Special Committee on all indemnity matters under the Business Combination Agreement. It is uncertain whether the BCA Special Committee will be able to effectively perform its duties as contemplated by the Business Combination Agreement or whether the BCA Special Committee will have the appropriate authority to implement the actions it wishes to take. Further, if the BCA Special Committee decides to pursue enforcement action against Grupo VM or under the R&W Policy, such action could negatively impact our and the BCA Special Committee members' relationships with Grupo VM and the members of our Board designated by Grupo VM, which could impact the effective functioning of our Board and have an adverse impact on our business.

Our business operations may be impacted by various types of claims, lawsuits, and other contingent obligations.

We are involved in various legal and regulatory proceedings including those that arise in the ordinary course of our business. We estimate such potential claims and contingent liabilities and, where appropriate, record provisions to address these contingent liabilities. The ultimate outcome of the legal matters pending against us is uncertain, and although such claims, lawsuits and other legal matters are not expected individually to have a material adverse effect on our financial condition or results of operations, such matters could have, in the aggregate, a material adverse effect on our financial condition or results of operations. Furthermore, we could, in the future, be subject to judgments or enter into settlements of lawsuits and claims that could have a material adverse effect on our results of operations in any particular period. While we maintain insurance coverage with respect to certain claims, we may not be able to obtain such insurance on acceptable terms in the future, if at all, and any such insurance may not provide adequate coverage against any such claims. See "Item 8.A. —Financial Information—Consolidated Statements and Other Financial Information—Legal proceedings" for additional information regarding legal proceedings to which we are subject.

We are exposed to changes in market conditions for our products and such conditions are dependent upon factors beyond our control.

Our industry is affected by economic conditions in our markets, including changes in national, regional and local unemployment levels, changes in national, regional and local economic development plans and budgets, shifts in consumer spending patterns, credit availability, and business and consumer confidence. Disruptions in the overall economy and volatility in the financial markets could reduce consumer confidence, negatively affecting consumer spending, which could be harmful to our financial position and results of operations. For example, the global economic crisis that began in 2008 increased unemployment and reduced the financial capacity of businesses and consumers in the markets in which we operate. The outlook for the global economy in the near- to medium-term remains uncertain due to several factors, including geopolitical risks and concerns around global growth and stability. Despite signs of economic recovery in certain geographic markets, global financial markets have experienced considerable volatility from uncertainty surrounding the level and sustainability of the sovereign debt of various countries. Concerns also remain regarding the sustainability of the European Monetary Union and its common currency, the Euro, in their current form, particularly following the vote in favour of the United Kingdom's exit from the European Union in June 2016 and in light of elections to be held in several European countries in 2017.

We are not able to predict the timing or rate at which economic conditions in our markets may recover, nor are we able to predict the timing or duration of any other downturn in the economy that may occur in the future.

We may be unable to complete the potential Hydroelectric Sale.

While we are pursuing a strategic disposal of our hydroelectric power operations in Spain and France, and have entered into a definitive agreement with respect to the disposal of our hydroelectric power operations in Spain with an experienced and reputable owner and operator of renewable energy businesses, any such disposal would be subject to certain conditions, including receipt of applicable governmental approvals. A failure to complete such disposal would result in an inability to repay certain existing indebtedness and thus reduce our leverage and may adversely affect our ability to maintain our liquidity and meet our financial obligations.

Cybersecurity breaches and threats could disrupt our business operations and result in the loss of critical and confidential information.

We rely on the effective functioning and availability of our information technology and communication systems and the security of such systems for the secure processing, storage and transmission of confidential information. The sophistication and magnitude of cybersecurity incidents are increasing and include, among other things, unauthorized access, computer viruses, deceptive communications and malware. Information technology security processes may not effectively detect or prevent cybersecurity breaches or threats and the measures we have taken to protect against such incidents may not be sufficient to anticipate or prevent rapidly evolving types of cyber-attacks. Breaches of the security of our information technology and communication systems could result in destruction or corruption of data, the misappropriation, corruption or loss of critical or confidential information, business disruption, reputational damage, litigation and remediation costs.

Risks Related to Our Capital Structure

We have recorded a significant amount of goodwill and we may not realize the full value thereof.

We have recorded a significant amount of goodwill. Total goodwill, which represents the excess of the cost of acquisitions over our interest in the net fair value of the assets acquired and liabilities and contingent liabilities assumed, was $230 million as of December 31, 2016, or 11% of our total assets. Goodwill is recorded on the date of acquisition and, in accordance with IFRS, is tested for impairment annually and whenever there is any indication of impairment. Impairment may result from, among other things, deterioration in our performance, a decline in expected future cash flows, adverse market conditions, adverse changes in applicable laws and regulations (including changes that restrict or otherwise affect our mining and other operating activities) and a variety of other factors. The amount of any impairment must be expensed immediately as a charge to our income statement. For example, in 2016, in connection with our annual goodwill impairment test, the Company recognized an impairment charge of $193,000,000 related to the partial impairment of goodwill in North America, which was recorded as a result of Business Combination, resulting from a sustained decline in sales prices that continued throughout 2016 and which caused the Company to revise its expected future cash flows from its North American business operations. See “Item 5.A.—Operating and Financial Review and Prospects—Operating Results—Critical Accounting Policies—Goodwill.” Our forecasts present inevitable elements of uncertainty due to the unpredictability related to the occurrence of future events and the characteristics of the relevant market; therefore, our ability to meet our directors’ forecasts may affect future evaluations, including goodwill assessment. Furthermore, any future impairment of goodwill may result in material reductions of our income and equity under IFRS.

Our significant leverage may make it difficult for us to service our debt and operate our business.

We have a substantial amount of outstanding indebtedness with significant debt service requirements. Our significant leverage could have important consequences, including:

- making it more difficult for us to satisfy our obligations with respect to our indebtedness;
- requiring us to dedicate a substantial portion of our cash flow from operations to payments on our indebtedness, thus reducing the availability of our cash flow to fund internal growth through working capital and capital expenditures and for other general corporate purposes;
- increasing our vulnerability to a downturn in our business or economic or industry conditions;
- placing us at a competitive disadvantage compared to our competitors that have less indebtedness in relation to cash flow;
- limiting our flexibility in planning for or reacting to changes in our business and our industry;
- restricting us from investing in growing our business, pursuing strategic acquisitions and exploiting certain business opportunities; and
- limiting, among other things, our and our subsidiaries’ ability to incur additional indebtedness or raise equity capital in the future and increasing the costs of such additional financings.

Our ability to service our indebtedness will depend on our future performance and liquidity, which will be affected by prevailing economic conditions and financial, business, regulatory and other factors. Many of these factors are beyond our control. We may not be able to generate enough cash flow from operations or obtain enough capital to service our indebtedness or fund our planned capital expenditures. If we cannot service our indebtedness and meet our other obligations and commitments, we might be required to refinance our indebtedness, obtain additional financing, delay planned capital expenditures or to dispose of assets to obtain funds for such purpose. We cannot assure you that any refinancing or asset dispositions could be effected on a timely basis or on satisfactory terms, if at all, or would be permitted by the terms of our debt instruments.

We are subject to restrictive covenants under our financing agreements, which could impair our ability to run our business.

Restrictive covenants under our financing agreements, including the Indenture and the Amended Revolving Credit Facility, may restrict our ability to operate our business. Our failure to comply with these covenants, including as a result of events beyond our control, could result in an event of default that could materially and adversely affect our business, results of operations and financial condition.

In particular, the Indenture and the Amended Revolving Credit Facility contain negative covenants restricting, among other things, our ability to:

- make certain advances, loans or investments;
- incur indebtedness or issue guarantees;
- create security;
- sell, lease, transfer or dispose of assets;
- merge or consolidate with other companies;
- transfer all or substantially all of our assets;
- make a substantial change to the general nature of our business;
- pay dividends and make other restricted payments;
- create or incur liens;
- agree to limitations on the ability of our subsidiaries to pay dividends or make other distributions;
- engage in sales of assets and subsidiary stock;
- enter into transactions with affiliates;
- amend organizational documents;
- enter into sale-leaseback transactions; and
- enter into agreements that contain a negative pledge.

All of these limitations are subject to significant exceptions and qualifications.

The restrictions contained in our financing agreements could affect our ability to operate our business and may limit our ability to react to market conditions or take advantage of potential business opportunities as they arise. For example, such restrictions could adversely affect our ability to finance our operations, make strategic acquisitions, investments or alliances, restructure our organization or finance our capital needs. Additionally, our ability to comply with these covenants and restrictions may be affected by events beyond our control. These include prevailing economic, financial and industry conditions. If we breach any of these covenants or restrictions, we could be in default under our financing agreements.

If there were an event of default under any of our debt instruments that is not cured or waived, the holders of the defaulted debt could terminate their commitments thereunder and cause all amounts outstanding with respect to such indebtedness to be due and payable immediately, which, in turn, could result in cross-defaults under our other debt instruments. Any such actions could force us into bankruptcy or liquidation.

We may not be able to generate sufficient cash to pay our accounts payable, meet our debt service obligations, or meet our obligations under other financing agreements, in which case our creditors could declare all amounts owed to them due and payable, leading to liquidity constraints.

Our ability to make interest payments and to meet our other debt service obligations, or to refinance our debt, depends on our future operating and financial performance, which, in turn, depends on our ability to successfully implement our business strategies and plans as well as general economic, financial, competitive, regulatory and other factors that are beyond our control. If we cannot generate sufficient cash to meet our debt service requirements, we may, among other things, need to refinance all or a portion of our debt to obtain additional financing, delay planned capital expenditures or investments or sell material assets.

If we are not able to refinance any of our debt, obtain additional financing or sell assets on commercially reasonable terms or at all, we may not be able to satisfy our debt obligations. If we are also unable to satisfy our

obligations on other financing arrangements, we could be in default under our existing financing agreements or other relevant financing agreements that we may enter into in the future. In the event of certain defaults under existing agreements, the lenders under the respective facilities or financing instruments could take certain actions, including terminating their commitments and declaring all amounts that we have borrowed under our credit facilities and other indebtedness to be due and payable, together with accrued and unpaid interest. Such a default, or a failure to make interest payments, could mean that borrowings under other debt instruments that contain cross-acceleration or cross-default provisions may, as a result, also be accelerated and become due and payable. If the debt under any of the material financing arrangements that we have entered into or will subsequently enter into were to be accelerated, our assets may be insufficient to repay the outstanding debt in full. Any such actions could force us into bankruptcy or liquidation, and we might not be able to repay our obligations under our financing agreements in such an event.

Risks Related to Our Ordinary Shares

Our share price may be volatile, and purchasers of our ordinary shares could incur substantial losses.

Our share price may be volatile. The stock market in general has experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, you may not be able to sell your ordinary shares at or above the price at which you purchase our ordinary shares. The market price for our ordinary shares may be influenced by many factors, including:

- the success of competitive products or technologies;
- regulatory developments in the United States and foreign countries;
- developments or disputes concerning patents or other proprietary rights;
- the recruitment or departure of key personnel;
- quarterly or annual variations in our financial results or those of companies that are perceived to be similar to us;
- market conditions in the industries in which we compete and issuance of new or changed securities analysts' reports or recommendations;
- the failure of securities analysts to cover our ordinary shares or changes in financial estimates by analysts;
- the inability to meet the financial estimates of analysts who follow our ordinary shares;
- investor perception of our Company and of the industry in which we compete; and
- general economic, political and market conditions.

If securities or industry analysts do not publish or cease publishing research reports about us, if they adversely change their recommendations regarding our ordinary shares or if our operating results do not meet their expectations, the price of our ordinary shares could decline.

The trading market for our ordinary shares will be influenced by the research and reports that industry or securities analysts may publish about us, our business, our market or our competitors. Securities and industry analysts currently publish limited research on us. If there is limited or no securities or industry analyst coverage of us, the market price and trading volume of our ordinary shares would likely be negatively impacted. Moreover, if any of the analysts who may cover us downgrade our ordinary shares, provide more favorable relative recommendations about our competitors or if our operating results or prospects do not meet their expectations, the market price of our ordinary shares could decline. If any of the analysts who may cover us were to cease coverage or fail to regularly publish reports on us, we could lose visibility in the financial markets, which, in turn, could cause our share price or trading volume to decline.

As a foreign private issuer and "controlled company" within the meaning of the rules of NASDAQ, we are subject to different U.S. securities laws and NASDAQ governance standards than domestic U.S. issuers. This may afford less protection to holders of our ordinary shares, and you may not receive corporate and company

information and disclosure that you are accustomed to receiving or in a manner in which you are accustomed to receiving it.

As a foreign private issuer, the rules governing the information that we disclose differ from those governing U.S. corporations pursuant to the U.S. Securities Exchange Act of 1934, as amended ("U.S. Exchange Act"). Although we intend to report periodic financial results and certain material events, we are not required to file quarterly reports on Form 10-Q or provide current reports on Form 8-K disclosing significant events within four days of their occurrence. In addition, we are exempt from the SEC's proxy rules, and proxy statements that we distribute will not be subject to review by the SEC. Our exemption from Section 16 rules regarding sales of ordinary shares by insiders means that you will have less data in this regard than shareholders of U.S. companies that are subject to this part of the U.S. Exchange Act. As a result, you may not have all the data that you are accustomed to having when making investment decisions with respect to domestic U.S. public companies.

As a "controlled company" within the meaning of the corporate governance standards of NASDAQ, we may elect not to comply with certain corporate governance requirements, including:

- the requirement that a majority of our Board consist of independent directors;
- the requirement that our Board have a compensation committee that is composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities; and
- the requirements that director nominees are selected, or recommended for selection by our Board, either by (1) independent directors constituting a majority of our Board's independent directors in a vote in which only independent directors participate, or (2) a nominations committee comprised solely of independent directors, and that a formal written charter or board resolution, as applicable, addressing the nominations process is adopted.

We may utilize these exemptions for as long as we continue to qualify as a "controlled company." While exempt, we will not be required to have a majority of independent directors, our nominating and compensation committees will not be required to consist entirely of independent directors and such committees will not be subject to annual performance evaluations.

Furthermore, NASDAQ Rule 5615(a)(3) provides that a foreign private issuer, such as us, may rely on home country corporate governance practices in lieu of certain of the rules in the NASDAQ Rule 5600 Series and Rule 5250(d), provided that we nevertheless comply with NASDAQ's Notification of Noncompliance requirement (Rule 5625), the Voting Rights requirement (Rule 5640) and that we have an audit committee that satisfies Rule 5605(c)(3), consisting of committee members that meet the independence requirements of Rule 5605(c)(2)(A)(ii). Although we are permitted to follow certain corporate governance rules that conform to U.K. requirements in lieu of many of the NASDAQ corporate governance rules, we intend to comply with the NASDAQ corporate governance rules applicable to foreign private issuers. Accordingly, our shareholders will not have the same protections afforded to stockholders of U.S. companies that are subject to all of the corporate governance requirements of NASDAQ.

We have identified material weaknesses in our internal control over financial reporting. Failure to remediate the identified material weakness or establish and maintain effective internal control over financial reporting could result in material misstatements in our financial statements or a failure to meet our reporting obligations, which could also impact the market price of our ordinary shares or our ability to remain listed on NASDAQ.

The Sarbanes-Oxley Act requires, among other things, that we maintain effective internal controls for financial reporting and disclosure controls and procedures. We are required under Section 404(a) of the Sarbanes-Oxley Act to furnish a report by management on, among other things, the effectiveness of our internal controls over financial reporting. This assessment includes disclosure of any material weaknesses identified by our management in our internal controls over financial reporting. A material weakness is a control deficiency, or combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of annual or interim financial statements will not be prevented or detected on a timely basis.

In connection with the preparation of our consolidated financial statements for the year ended December 31, 2016, we and our independent registered public accounting firm carried out an evaluation of the effectiveness of

our internal controls over financial reporting and concluded that there were material weaknesses in relation to (a) the Control Environment, Control Activities and Monitoring function and (b) Revenue recognition related to cut-off. These material weaknesses resulted from several factors as described in "Item 15.B.—Controls and Procedures—Management's annual report on internal control over financial reporting" below. As a consequence of these material weaknesses, management concluded that our internal control over financial reporting and, consequently, our disclosure controls and procedures, were not effective as of December 31, 2016. However, all identified misstatements were corrected in the financial statements as of December 31, 2016 and, notwithstanding these material weaknesses and management's assessment that internal control over financial reporting was ineffective as of December 31, 2016, our management believes that the consolidated financial statements included in this annual report fairly present in all material respects our financial condition, results of operations and cash flows for the periods presented.

We are taking, and will continue to take, measures to remediate the causes of these material weaknesses. However, failure to effectively remediate these material weaknesses or establish and maintain effective internal control over financial reporting could result in material misstatements in our financial statements or a failure to meet our reporting obligations. This, in turn, could negatively impact our business and operating results, the market price of our ordinary shares and our ability to remain listed on NASDAQ.

We may lose our foreign private issuer status in the future, which could result in significant additional costs and expenses.

We could cease to be a foreign private issuer if a majority of our outstanding voting securities are directly or indirectly held of record by U.S. residents and we fail to meet additional requirements necessary to avoid loss of foreign private issuer status. The regulatory and compliance costs to us under U.S. securities laws under such event may be significantly higher than costs we incur as a foreign private issuer, which could have a material adverse effect on our business and financial results.

If Grupo VM's share ownership falls below 50%, we may no longer be considered a "controlled company" within the meaning of the rules of NASDAQ.

In the event Grupo VM sells some or all of its shares, it could result in Grupo VM owning less than 50% of the total voting power of our shares. Accordingly, we may no longer be considered a "controlled company" within the meaning of the corporate governance standards of NASDAQ. Under NASDAQ rules, a company that ceases to be a controlled company must comply with the independent board committee requirements as they relate to the nominating and corporate governance and compensation committees on the following phase-in schedule: (1) one independent committee member at the time it ceases to be a controlled company, (2) a majority of independent committee members within 90 days of the date it ceases to be a controlled company and (3) all independent committee members within one year of the date it ceases to be a controlled company. Additionally, NASDAQ rules provide a 12-month phase-in period from the date a company ceases to be a controlled company to comply with the majority independent board requirement. If, within the phase-in periods, we are not able to recruit additional directors who would qualify as independent, or otherwise comply with NASDAQ rules, we may be subject to delisting by NASDAQ. Furthermore, a change in our board of directors and committee membership may result in a change in corporate strategy and operation philosophies, and may result in deviations from our current growth strategy, which could have a material adverse effect on our business and financial results.

As an English public limited company, certain capital structure decisions will require shareholder approval, which may limit our flexibility to manage our capital structure.

English law provides that a board of directors may only allot shares (or rights to subscribe for or convertible into shares) with the prior authorization of shareholders, such authorization being up to the aggregate nominal amount of shares and for a maximum period of five years, each as specified in the articles of association or relevant shareholder resolution. The Articles authorize the allotment of additional shares for a period of five years from December 23, 2015 (being the date of the adoption of the Articles), which authorization will need to be renewed upon expiration (i.e., at least every five years) but may be sought more frequently for additional five-year terms (or any shorter period).

English law also generally provides shareholders with preemptive rights when new shares are issued for cash. However, it is possible for the articles of association, or for shareholders acting in a general meeting, to exclude preemptive rights. Such an exclusion of preemptive rights may be for a maximum period of up to five years from the date of adoption of the articles of association, if the exclusion is contained in the articles of association,

or from the date of the shareholder resolution, if the exclusion is by shareholder resolution. In either case, this exclusion would need to be renewed by our shareholders upon its expiration (i.e., at least every five years). The Articles exclude preemptive rights for a period of five years from December 23, 2015, which exclusion will need to be renewed upon expiration (i.e., at least every five years) to remain effective, but may be sought more frequently for additional five-year terms (or any shorter period).

English law also generally prohibits a public company from repurchasing its own shares without the prior approval of shareholders by ordinary resolution, being a resolution passed by a simple majority of votes cast, and other formalities. Such approval may be for a maximum period of up to five years.

English law requires that we meet certain financial requirements before we declare dividends or repurchases.

Under English law, we may only declare dividends, make distributions or repurchase shares out of distributable reserves of the Company or distributable profits. "Distributable profits" are a company's accumulated, realized profits, so far as not previously utilized by distribution or capitalization, less its accumulated, realized losses, so far as not previously written off in a reduction or reorganization of capital duly made, as reported to the Companies House. In addition, as a public company, we may only make a distribution if the amount of our net assets is not less than the aggregate amount of our called-up share capital and undistributable reserves and if, and to the extent that, the distribution does not reduce the amount of those assets to less than that aggregate amount. The Articles permit declaration of dividends by ordinary resolution of the shareholders, provided that the directors have made a recommendation as to its amount. The dividend shall not exceed the amount recommended by the directors. The directors may also decide to pay interim dividends if it appears to them that the profits available for distribution justify the payment. When recommending or declaring the payment of a dividend, the directors will be required under English law to comply with their duties, including considering our future financial requirements.

The enforcement of shareholder judgments against us or certain of our directors may be more difficult.

Because we are a public limited company incorporated under English law, and because most of our directors and executive officers are non-residents of the United States and substantially all of the assets of our directors and executive officers are located outside of the United States, our shareholders could experience more difficulty enforcing judgments obtained against us or our directors in U.S. courts than would currently be the case for U.S. judgments obtained against a U.S. public company or U.S. directors. In addition, it may be more difficult (or impossible) to bring some types of claims against us or our directors in courts in England or against certain of our directors in courts in Spain than it would be to bring similar claims against a U.S. company or its directors in a U.S. court.

The United States is not currently bound by a treaty providing for reciprocal recognition and enforcement of judgments, other than arbitral awards, rendered in civil and commercial matters with Spain or the United Kingdom. There is, therefore, doubt as to the enforceability of civil liabilities based upon U.S. federal securities laws in an action to enforce a U.S. judgment in Spain or the United Kingdom. In addition, the enforcement in Spain or the United Kingdom of any judgment obtained in a U.S. court based on civil liabilities, whether or not predicated solely upon U.S. federal securities laws, will be subject to certain conditions. There is also doubt that a court in Spain or the United Kingdom would have the requisite power or authority to grant remedies sought in an original action brought in Spain or the United Kingdom on the basis of U.S. federal securities laws violations.

Risks Related to Tax Matters

Transfers of our ordinary shares may be subject to U.K. stamp duty or U.K. stamp duty reserve tax ("SDRT").

U.K. stamp duty and/or SDRT is imposed on certain transfers of or agreements to transfer chargeable securities (which include shares in companies incorporated in the U.K.) at a rate of 0.5% of the consideration paid for the transfer. Certain issues or transfers of shares to depositaries or into clearance services are charged at a higher rate of 1.5%.

Our ordinary shares are held in one or more clearance systems or depositary systems. Subsequent transfers of such ordinary shares within a clearance system, or between clearance systems, should not be subject to U.K. stamp duty or SDRT. Transfers of shares from a clearance system into a depositary system should also not be subject to U.K. stamp duty or SDRT.

A transfer of our ordinary shares from within a clearance system or depositary system out of that clearance system or depositary system and any subsequent transfers that occur entirely outside such systems, including the repurchase of our ordinary shares by us, will generally be subject to U.K. stamp duty or SDRT at a rate of 0.5% of any consideration, which is payable by the transferee of the ordinary shares. If such ordinary shares are redeposited into a clearance system or depositary system, the redeposit will also generally be subject to U.K. stamp duty or SDRT at the higher 1.5% rate. The repurchase of our ordinary shares by us from within a clearance system or depositary system may also be subject to U.K. stamp duty or SDRT.

The application of Section 7874 of the Code, including under recent IRS guidance, and/or changes in law could affect our status as a foreign corporation for U.S. federal income tax purposes.

We believe that, under current law, we should be treated as a foreign corporation for U.S. federal income tax purposes. However, the U.S. Internal Revenue Service (the "IRS") may assert that we should be treated as a U.S. corporation for U.S. federal income tax purposes pursuant to Section 7874 of the Internal Revenue Code of 1986, as amended (the "Code"). Under Section 7874 of the Code, we would be treated as a U.S. corporation for U.S. federal income tax purposes if, after the Business Combination, (i) at least 80% of our ordinary shares (by vote or value) were considered to be held by former holders of common stock of Globe by reason of holding such common stock, as calculated for Section 7874 purposes, and (ii) our expanded affiliated group did not have substantial business activities in the United Kingdom (the "80% Test"). (The percentage (by vote and value) of our ordinary shares considered to be held by former holders of common stock of Globe immediately after the Business Combination by reason of their holding common stock of Globe is referred to in this disclosure as the "Section 7874 Percentage.")

Determining the Section 7874 Percentage is complex and, with respect to the Business Combination, subject to legal uncertainties. In that regard, the IRS and U.S. Department of the Treasury ("U.S. Treasury") recently issued new rules (the "Temporary Regulations"), which include a rule that applies to certain transactions in which the Section 7874 Percentage is at least 60% and the parent company is organized in a jurisdiction different from that of the foreign target corporation (the "Third Country Rule"). This rule applies to transactions occurring on or after November 19, 2015, which date is prior to the closing of the Business Combination. If the Third Country Rule were to apply to the Business Combination, the 80% Test would be deemed met and we would be treated as a U.S. corporation for U.S. federal income tax purposes. While we believe the Section 7874 Percentage is less than 60% such that the Third Country Rule does not apply to us, we cannot assure you that the IRS will agree with this position and/or would not successfully challenge our status as a foreign corporation. If the IRS successfully challenged our status as a foreign corporation, significant adverse tax consequences would result for us and could apply to our shareholders.

In addition to the final rules to be promulgated with respect to the Temporary Regulations, changes to Section 7874 of the Code, the U.S. Treasury Regulations promulgated thereunder, or to other relevant tax laws (including under applicable tax treaties) could adversely affect our status or treatment as a foreign corporation, and the tax consequences to our affiliates, for U.S. federal income tax purposes, and any such changes could have prospective or retroactive application. Recent legislative proposals have aimed to expand the scope of U.S. corporate tax residence, including by potentially causing us to be treated as a U.S. corporation if the management and control of us and our affiliates were determined to be located primarily in the United States, or by reducing the Section 7874 Percentage at or above which we would be treated as a U.S. corporation such that it would be lower than the threshold imposed under the 80% Test.

Recent IRS guidance and/or changes in law could affect our ability to engage in certain acquisition strategies and certain internal restructurings.

Even if we are treated as a foreign corporation for U.S. federal income tax purposes, the Temporary Regulations materially change the manner in which the Section 7874 Percentage will be calculated in certain future acquisitions of U.S. businesses in exchange for our equity, which may affect the tax efficiencies that otherwise might be achieved in transactions with third parties. For example, the Temporary Regulations would impact certain acquisitions of U.S. companies for our Ordinary Shares (or other stock) in the 36 month period beginning December 23, 2015, by excluding from the Section 7874 Percentage the portion of Ordinary Shares that are allocable to former holders of common stock of Globe. This new rule would generally have the effect of increasing the otherwise applicable Section 7874 Percentage with respect to our future acquisition of a U.S. business. The Temporary Regulations also may more generally limit the ability to restructure the non-U.S. members of our group to achieve tax efficiencies.

Recent IRS proposed regulations and/or changes in laws or treaties could affect the expected financial synergies of the Business Combination.

The IRS and the U.S. Treasury also recently issued rules that provide that certain intercompany debt instruments issued on or after April 5, 2016, will be treated as equity for U.S. federal income tax purposes, therefore limiting U.S. tax benefits and resulting in possible U.S. withholding taxes. As a result of these rules, we may not be able to realize a portion of the financial synergies that were anticipated in connection with the Business Combination, and such rules may materially affect our future effective tax rate. While these new rules are not retroactive, they could impact our ability to engage in future restructurings if such transactions cause an existing debt instrument to be treated as reissued. Furthermore, under certain circumstances, recent treaty proposals by the U.S. Treasury, if ultimately adopted by the United States and relevant foreign jurisdictions, could reduce the potential tax benefits for us and our affiliates by imposing U.S. withholding taxes on certain payments from our U.S. affiliates to related and unrelated foreign persons.

We are subject to tax laws of numerous jurisdictions, and our interpretation of those laws is subject to challenge by the relevant governmental authorities.

We and our subsidiaries are subject to tax laws and regulations in the United Kingdom, the United States, France, Spain and the other jurisdictions in which we operate. These laws and regulations are inherently complex and we and our subsidiaries are (and have been) obligated to make judgments and interpretations about the application of these laws and regulations to us and our subsidiaries and their operations and businesses. The interpretation and application of these laws and regulations could be challenged by the relevant governmental authority, which could result in administrative or judicial procedures, actions or sanctions, which could be material.

We intend to operate so as to be treated exclusively as a resident of the United Kingdom for tax purposes, but the relevant tax authorities may treat us as also being a resident of another jurisdiction for tax purposes.

We are a company incorporated in the United Kingdom. Current U.K. tax law provides that we will be regarded as being a U.K. resident for tax purposes from incorporation and shall remain so unless (i) we were concurrently resident of another jurisdiction (applying the tax residence rules of that jurisdiction) that has a double tax treaty with the United Kingdom and (ii) there is a tiebreaker provision in that tax treaty which allocates exclusive residence to that other jurisdiction.

Based upon our anticipated management and organizational structure, we believe that we should be regarded solely as resident in the United Kingdom from our incorporation for tax purposes. However, because this analysis is highly factual and may depend on future changes in our management and organizational structure, there can be no assurance regarding the final determination of our tax residence. Should we be treated as resident in a country or jurisdiction other than the United Kingdom, we could be subject to taxation in that country or jurisdiction on our worldwide income and may be required to comply with a number of material and formal tax obligations, including withholding tax and reporting obligations provided under the relevant tax law, which could result in additional costs and expenses.

We may not qualify for benefits under the tax treaties entered into between the United Kingdom and other countries.

We intend to operate in a manner such that, when relevant, we are eligible for benefits under the tax treaties entered into between the United Kingdom and other countries. However, our ability to qualify and continue to qualify for such benefits will depend upon the requirements contained within each treaty and the applicable domestic laws, as the case may be, on the facts and circumstances surrounding our operations and management, and on the relevant interpretation of the tax authorities and courts.

Our or our subsidiaries' failure to qualify for benefits under the tax treaties entered into between the United Kingdom and other countries could result in adverse tax consequences to us and our subsidiaries and could result in certain tax consequences of owning or disposing of our ordinary shares differing from those discussed below.

Future changes to domestic or international tax laws or to the interpretation of these laws by the governmental authorities could adversely affect us and our subsidiaries.

The U.S. Congress, the U.K. Government, the Organization for Economic Co-operation and Development and other government agencies in jurisdictions where we and our affiliates do business have had an extended focus on issues related to the taxation of multinational corporations. One example is in the area of "base erosion and profit shifting," in which payments are made between affiliates from a jurisdiction with high tax rates to a jurisdiction with lower tax rates. Thus, the tax laws in the United States, the United Kingdom or other countries in which we and our affiliates do business could change on a prospective or retroactive basis, and any such changes could adversely affect us. Furthermore, the interpretation and application of domestic or international tax laws made by us and our subsidiaries could differ from that of the relevant governmental authority, which could result in administrative or judicial procedures, actions or sanctions, which could be material.

We may become subject to income or other taxes in jurisdictions which would adversely affect our financial results.

We and our subsidiaries are subject to the income tax laws of the United Kingdom, the United States, France, Spain and the other jurisdictions in which we operate. Our effective tax rate in any period is impacted by the source and the amount of earnings among our different tax jurisdictions. A change in the division of our earnings among our tax jurisdictions could have a material impact on our effective tax rate and our financial results. In addition, we or our subsidiaries may be subject to additional income or other taxes in these and other jurisdictions by reason of the management and control of our subsidiaries, our activities and operations, where our production facilities are located or changes in tax laws, regulations or accounting principles. Although we have adopted guidelines and operating procedures to ensure our subsidiaries are appropriately managed and controlled, we may be subject to such taxes in the future and such taxes may be substantial. The imposition of such taxes could have a material adverse effect on our financial results.

We may incur current tax liabilities in our primary operating jurisdictions in the future.

We expect to make current tax payments in some of the jurisdictions where we do business in the normal course of our operations. Our ability to defer the payment of some level of income taxes to future periods is dependent upon the continued benefit of accelerated tax depreciation on our plant and equipment in some jurisdictions, the continued deductibility of external and intercompany financing arrangements and the application of tax losses prior to their expiration in certain tax jurisdictions, among other factors. The level of current tax payments we make in any of our primary operating jurisdictions could adversely affect our cash flows and have a material adverse effect on our financial results.

Changes in tax laws may result in additional taxes for us.

We cannot assure you that tax laws in the jurisdictions in which we reside or in which we conduct activities or operations will not be changed in the future. Such changes in tax law could result in additional taxes for us.

ITEM 4. INFORMATION ON THE COMPANY

A. History and Development of the Company

Ferroglobe PLC

Ferroglobe was incorporated under the U.K. Companies Act 2006 as a private limited liability company in the United Kingdom on February 5, 2015, as a wholly-owned subsidiary of Grupo Villar Mir, S.A.U. ("Grupo VM"). As a result of the Business Combination, which was completed on December 23, 2015, FerroAtlántica and Globe merged through corporate transactions to create one of the largest producers worldwide of silicon metal and silicon- and manganese-based alloys. Ferroglobe acquired from Grupo VM all of the issued and outstanding ordinary shares, par value €1,000 per share, of FerroAtlántica in exchange for 98,078,161 newly issued Class A Ordinary Shares, nominal value $7.50 per share, of Ferroglobe, after which FerroAtlántica became a wholly-owned subsidiary of Ferroglobe. Immediately after, Gordon Merger Sub, Inc., a wholly-owned subsidiary of Ferroglobe, merged with and into Globe Specialty Metals, Inc., and each outstanding share of common stock, par value $0.0001 per share, was converted into the right to receive one newly-issued ordinary share, nominal value $7.50 per share, of Ferroglobe. After these steps, Ferroglobe issued, in total, 171,838,153 shares, out of which 98,078,161 shares were issued to Grupo VM and 73,759,992 were issued to the former Globe shareholders. Our ordinary shares are currently traded on the NASDAQ Global Select Market (the "NASDAQ") under the symbol "GSM."

On June 22, 2016, we completed a reduction of our share capital, as a result of which the nominal value of each share was reduced from $7.50 to $0.01, with the amount of the capital reduction being credited to a distributable reserve.

On November 18, 2016, our Class A Ordinary Shares were converted into ordinary shares of Ferroglobe as a result of the distribution of beneficial interest units in the Ferroglobe Representation and Warranty Insurance Trust to certain Ferroglobe shareholders.

Our FerroAtlántica division's history dates back to 1992, with the acquisition by Grupo VM of the ferroalloys division of Grupo Carburos Metálicos, a Spanish industrial gas and chemical products producer. Our Globe division's history dates back to 2006, with the acquisition by Globe of Globe Metallurgical, Inc., which consisted of Selma, a production plant with two furnaces for silicon metal, Niagara, a production plant with two furnaces for silicon metal and ferroalloys and Beverly, a production plant with five furnaces for silicon metal, specialty alloys and ferroalloys, all located in the United States.

Significant milestones in our history are as follows:

- **1996:** acquisition of the Spanish company Hidro Nitro Española, S.A. ("Hidro Nitro Española"), operating in the ferroalloys and hydroelectric power businesses, and start of the quartz mining operations through the acquisition of Cuarzos Industriales S.A. from Portuguese cement manufacturer Cimpor;

- **1998:** expansion of our manganese- and silicon-based alloy operations through the acquisition of 80% of the share capital of FerroAtlántica de Venezuela (currently FerroVen, S.A.) from the Government of Venezuela in a public auction;

- **2000:** acquisition of 67% of the share capital of quartz mining company Rocas, Arcillas y Minerales, S.A. from Elkem, a Norwegian silicon metal and manganese- and silicon-based alloy producer;

- **2005:** acquisition of Pechiney Électrométallurgie, currently named FerroPem, S.A.S., a silicon metal and silicon-based alloys company with operations in France which owned Silicon Smelters operating in South Africa;

- **2005:** acquisition of Alloy, Alabama Sand and Gravel and Alloy Power (U.S.);

- **2006:** acquisition of Globe Metallurgical, Inc., the largest metal manufacturer in North America and largest specialty ferroalloy manufacturer in the United States;

- **2006:** acquisition of Stein Ferroaleaciones S.A., an Argentine producer of silicon-based specialty alloys, and its Polish affiliate, Ultracore Polska;

- **2007:** creation of FerroAtlántica, the holding company of our FerroAtlántica Group;

- **2007:** acquisition of Camargo Correa Metais S.A., a major Brazilian silicon metal manufacturer,

- **2008:** acquisition of Rand Carbide PLC, a ferrosilicon plant in South Africa, from South African mining and steel company Evraz Highveld Steel and Vanadium Limited, and creation of Silicio FerroSolar, S.L., which conducts research and development activities in the solar grade silicon sector;

- **2008:** acquisition of 81% of Solsil, Inc., a producer of high-purity silicon for use in photovoltaic solar cells

- **2008:** acquisition of a majority stake in Ningxia Yonvey Coal Industry Co., Ltd., a producer of carbon electrodes (subsequently purchased the remaining stake);

- **2009:** creation of French company Photosil Industries, which conducts research and development activities in the solar grade silicon sector;

- **2009:** Sold Camargo stake in Brazil to Dow Corning and formed a joint venture with Dow Corning at Alloy, West Virginia silicon facility;
- **2010:** acquisition of Core Metals, one of North America's largest and most efficient producers and marketers of high-purity ferrosilicon and other specialty metals;
- **2010:** acquisition of Chinese silicon metal factory, MangShi Sinice Silicon Industry Company Limited;
- **2011:** acquisition of Alden Resources in the United States, North America's leading miner, processor and supplier of specialty metallurgical coal to the silicon and silicon-based alloy industries;
- **2012:** acquisition of SamQuarz (Pty) Ltd, a South African producer of silica, with quartz mining operations;
- **2012:** acquisition of a majority stake (51%) in Becancour (Canada), a silicon metal production facility with Dow Corning as the joint venture partner; and
- **2014:** acquisition of Siltech, a ferrosilicon facility in South Africa.

Corporate and Other Information

Our operating headquarters and registered office are located at 2nd Floor West Wing, Lansdowne House, 57 Berkeley Square, London W1J 6ER, United Kingdom and 5 Fleet Place, London EC4M 7RD, United Kingdom, respectively. Our telephone number is +44 (0)203 129 2420.

B. Business Overview

We are a global leader in the growing silicon and specialty metals industry with an expansive geographical reach, established through Globe's predominantly North American-centered footprint and FerroAtlántica's predominantly European-centered footprint.

Ferroglobe is one of the world's largest producers of silicon metal, silicon-based alloys and manganese-based alloys. Additionally, Ferroglobe currently has quartz mining activities in Spain, the United States, Canada and South Africa, low-ash metallurgical quality coal mining activities in the United States, and interests in hydroelectric power in Spain and France (though we are currently pursuing a strategic disposal of these interests). Ferroglobe controls a meaningful portion of most of its raw materials, and captures, recycles and sells most of the by-products generated in its production processes.

We sell our key products to a diverse base of customers worldwide. These products are important inputs to manufacture a wide range of industrial and consumer products, including aluminum, silicone compounds used in the chemical industry, ductile iron, automotive parts, photovoltaic (solar) cells, electronic semiconductors and steel.

We are able to provide our customers the broadest range of specialty metals and alloys in the industry from our production centers, which are located in North America, Europe, South America, Africa and Asia. Our broad manufacturing platform and flexible capabilities allow us to optimize production and focus on products that enhance profitability, including the production of customized solutions and high-purity metals to meet specific customer requirements. We also benefit from low operating costs, which we are able to achieve by owning critical raw materials and maintaining flexibility of alternating production of some of our furnaces among silicon metal and silicon-base alloy products.

In addition to the smelting operations, Ferroglobe currently has interests in hydroelectric power operations in Spain and France, high-purity quartz quarries in Spain, the United States and South Africa, low-ash, metallurgical quality coal mining mines in the United States and timber farms and charcoal production units in South Africa. Ferroglobe controls the supply of most of its raw materials, and captures, recycles and sells most of the by-products generated in its production processes.

In the following description of Ferroglobe's business, we include all of Ferroglobe's assets as of December 31, 2016. However, data referring to activity in 2015 and 2014 (for example, production levels, revenues or revenue breakdown) refers to FerroAtlántica as the Predecessor for Ferroglobe's past fiscal years.

Industry and Market Data

The statements and other information contained below regarding Ferroglobe's competitive position and market share are based on the reports periodically published by a leading metals industry consultant and leading metals industry publications and information centers, as well as on the estimates of Ferroglobe's management.

Competitive Strengths and Strategy of Ferroglobe

Competitive Strengths

Leading market positions in silicon metal, silicon-based alloys and manganese-based alloys

We are a leading global producer in our core products based on merchant production capacity and hold the leading market share in a majority of our products. With total global silicon metal production capacity of 399,200 metric tons (which includes 51% of our attributable joint venture capacity), we have over 80 % of the merchant production capacity market share in North America and approximately 32% of the global market share (i.e., all of the world excluding China), according to management estimates for our industry. Our scale and global presence across five continents allows us to offer a wide range of products to serve a variety of end-markets, including those which we consider to be dynamic, such as the solar, automotive, consumer electronic products, semiconductors, construction and energy industries. As a result of our market leadership and breadth of products, we possess critical insight into market demand allowing for more efficient use of our resources and operating capacity. Our ownership of critical high quality raw materials provides us with operational and financial stability and reduces the need for us to compete with our competitors for supply. We believe this also provides a competitive advantage, allowing us to deliver an enhanced product offering with consistent quality on a cost-efficient basis to our customers.

Global production footprint and reach

Our diversified production base consists of production facilities across North America, Europe, South America, South Africa and Asia. We have the capability to produce our core products at multiple facilities, providing a competitive advantage when reacting to changing global demand trends and customer requirements. Furthermore, this broad base ensures reliability to our customers that value timely delivery and consistent product quality. Our diverse production base also enables us to optimize our production plans and shift production to the lowest cost facilities. Most of our production facilities are located close to sources of principal raw materials, key customers or major transport hubs to facilitate delivery of raw materials and distribution of finished products. This enables us to service our customers globally, while optimizing our working capital, as well as enabling our customers to optimize their inventory levels.

Diverse base of high quality customers across growing industries

We sell our products to customers in over 30 countries, though our largest customer concentration is in North America and in Europe. Our products are used in end products spanning a broad range of industries, including solar, personal care and healthcare products, automobile parts, carbon and stainless steel, water pipe, solar, semiconductor, oil and gas, infrastructure and construction. Although some of our end-markets have similar growth drivers, others are less correlated and offer diversification benefits. Our wide range of products, customers and end-markets provides significant diversity and stability to our business.

Many of our customers, we believe, are leaders in their end-markets and fields. We have built long-lasting relationships with our customers based on the breadth and quality of our product offerings and our ability to produce products which meet specific customer requirements. The average length of our relationships with our top 30 customers exceeds ten years and, in some cases, such relationships go back as far as 30 years. For the year ended December 31, 2016 and 2015, Ferroglobe's ten largest customers accounted for approximately 42% and 40%, respectively, of Ferroglobe's consolidated revenue. Our customer relationships provide us with stability and visibility into our future volumes and earnings, though we are not reliant on any individual customer or end-market. Our customer relationships, together with our diversified product portfolio, often provide us with opportunities to cross-sell new products, such as silicon-based alloys and manganese-based alloys, to existing steel customers. Our largest global customer, Dow Corning, is also a 49% minority owner in our Alloy, West Virginia and Becancour, Canada facilities.

Flexible and low cost structure

We believe we have an efficient and flexible cost structure, enhanced over time by vertical integration through strategic acquisitions and by the integration of our FerroAtlántica and Globe divisions following the completion of the Business Combination in December 2015. The largest components of our cost base are raw materials and power used to operate our facilities. Our relatively low operating costs are primarily a result of our ownership of, and proximity to, raw materials, our access to attractively priced power and skilled labor, and our efficient production processes.

We believe our vertically integrated business model and ownership of raw materials provides us with a cost advantage over our competitors. We are not reliant on any single supplier for our raw materials and currently own sources of critical raw materials, which provides us with stable, long-term access to critical raw materials for our production processes and, therefore, enhances operational and financial stability. Transportation costs can be significant and, therefore, our proximity to sources of principal raw materials and customers improves logistics and represents another cost advantage. The proximity of our facilities to our customers also allows us to provide just-in-time delivery of finished goods and reduces the need to store excess inventory, resulting in lower working capital. Additionally, we believe we have competitive power supply contracts in place that provide us with reliable, long-term access to power at reasonable rates. We capture, recycle and sell most of the by-products generated in our production processes, which further reduces our costs.

We operate with a largely variable cost of production and our diversified production base allows us to shift our production and distribution across facilities and between different products in response to changes in market conditions over time. Additionally, the diversity of our currency and commodity exposures provides a partial natural hedge against volatility. Our production costs are mostly dependent on local factors while our product prices are more dependent on global factors. The depreciation of local currencies reduces the costs of our operations, allowing us to become more competitive in the international market.

We believe our scale and global presence enables us to sustain our operations throughout periods of economic downturn, volatile commodity prices and demand fluctuations.

Stable supply of critical, high quality raw materials

In order to ensure a reliable supply of critical high quality raw materials for the production of our core metals, we have invested in strategic acquisitions to control a meaningful portion of these critical inputs. In addition to our smelting facilities, we own and operate specialty, low-ash, metallurgical quality coal mines in the United States, high-purity quartz quarries in the United States, Canada, Spain and South Africa, timber farms and charcoal production units in South Africa and have our own patented electrode technology. For third-party purchases, we have qualified multiple suppliers in each operating region for each raw material to help ensure reliable access to high quality raw materials.

Efficient and environmentally friendly by-product usage

We utilize or sell most of the by-products of our manufacturing process, which reduces cost and the environmental impact from our operations. We have developed markets for the by-products generated by our production processes and have transformed our manufacturing operations so that little solid waste disposal is required. By-products not recycled in the manufacturing process are generally sold to other companies, which process the material for use in a variety of other applications. Silica fume (also known as microsilica) is used as a concrete additive, refractory material and oil well conditioner. Fines, the fine material resulting from crushing lumps, and dross, which results from the purification process during smelting, are typically recycled into our production process or are sold to customers who utilize these products in other manufacturing processes, including steel production.

Pioneer in innovation with focus on technological advances and development of next generation products

Our talented workforce has historically developed proprietary technological capabilities and next generation products in-house, which we believe give us a competitive advantage. In addition to a dedicated R&D division that coordinates all of our R&D activities, we have cooperation agreements in place with various universities and research institutes in Spain, France and other countries around the world. Our R&D achievements include:

- ELSA electrode — We have internally developed a patented technology for electrodes used in silicon metal furnaces, which we have been able to sell to several major silicon producers globally. This technology, known as the ELSA electrode, improves the energy efficiency in

the production process of silicon metal and significantly reduces iron contamination. With this technology we are able to run our furnaces with fewer stoppages, which minimizes the consumption of power, one of the largest cost components in the smelting process. The ELSA electrode technology and know-how is unique and has no proven alternative worldwide, which we believe gives us a competitive advantage. Given the operational benefits, the ELSA technology nearly halves the cost of the utilization of electrodes, relative to prebaked electrodes. Furthermore, ELSA is a key technology in running high capacity silicon furnaces (the size and capacity of silicon furnaces is limited by the size of its electrodes, and the ELSA technology allows us to reduce this bottleneck), improving our productivity and lowering our unit cost.

- Solar Grade Silicon — Our FerroSolar Project involves the production of solar grade silicon metal with a purity level above 99.9999% through a new electrometallurgical process, instead of the traditional chemical process, which tends to be costly and involves high energy consumption and potentially environmentally hazardous processes. The new technology, entirely developed by us at an earlier stage at our research and development facilities in Spain and France, aims to reduce the costs and energy consumption associated with the production of solar grade silicon. We have already started production of solar grade silicon metal through this new process in a prototype factory, and we currently sell the small amounts we produce to manufacturers of solar wafers. A pre-industrial site plant is under analysis and consideration for the production of 1,500 to 3,000 tons of solar grade silicon annually. In 2016, we entered into an agreement with Aurinka providing for the formation and operation of a joint venture with the purpose of producing upgraded metallurgical grade (UMG) solar silicon. See "—Research and Development (R&D)—Solar grade silicon" below.

Experienced management team and centralized location at global center of metals and mining industry

We have a seasoned and experienced management team with extensive knowledge of the global metals and mining industry, operational and financial expertise and a track record of developing and managing large-scale operations. Our management team is committed to responding quickly and effectively to macroeconomic and industry developments, to identifying and delivering growth opportunities and to improving our performance by way of a continuous focus on operational cost control and a disciplined, value-based approach to capital allocation. Our management team is complemented by a skilled operating team with solid technical knowledge of production processes and strong relationships with key customers. Additionally, following the Business Combination, we moved our headquarters to London, one of the global centers for the metals and specialized materials industries. We believe London offers us a central location with easy access to our international factories, customers, suppliers and financial markets, which provides us with a competitive advantage.

Business Strategy

Maintain and leverage industry leading position in core businesses and pursue long-term growth

We intend to maintain and leverage our position as a leading global producer of silicon metal and one of the leading global producers of ferroalloys based on production capacity. We believe this will be achieved through developing our existing strengths and pursuing long-term growth. We plan to accomplish organic growth by continuously expanding and enhancing our production capabilities as well as developing new generation products to further diversify our portfolio of products and expand our customer base. We intend to focus our production and sales efforts on high-margin products and end-markets that we consider to have the highest potential for profitability and growth, such as the solar industry. We will continue to capitalize on our global reach and the diversity of our production base to adapt to changes in market demands, shifting our production and distribution across facilities and between different products as necessary in order to remain competitive and maximize profitability. We aim to obtain further direct control of key raw materials to secure our long-term access to scarce reserves, which we believe will allow us to continue delivering enhanced products while maintaining our low-cost position. Additionally, we will continue to regularly review our customer contracts in an effort to improve the terms thereunder and to optimize the balance between selling production under contract and retaining some exposure to spot markets. We intend to maintain pricing that appropriately reflects the value of our products and our level of customer service and, in light of commodity prices and demand fluctuations, may decide to move away from contracts with index-based prices in favor of contracts with fixed prices, particularly at prices which ensure a profit throughout the cycle.

Maintain low cost position while controlling inputs

We believe we have an efficient cost structure and, going forward, we will seek to further reduce costs and improve operational efficiency through a number of initiatives. We plan to focus on controlling the cost of our raw material inputs through our captive sources and long-term supply contracts as well as reducing our fixed costs in order to reduce the unit costs of our silicon metal and ferroalloy production. We aim to improve our internal processes and further integrate our FerroAtlántica and Globe divisions in order to realize additional operating synergies from the Business Combination, such as benefits from value chain optimization, including enhancements in raw materials procurement and materials management, adoption of best practices and technical and operational know-how across our platform, reduced freight costs from improved logistics as well as savings through the standardization of monitoring and reporting procedures, technology, systems and controls. We intend to enhance our production process through R&D and targeted capital expenditures, and leverage our geographic footprint to shift production to the most cost-effective and appropriate facilities and regions for such products. We will continue to regularly review our power supply contracts with a view to improving the terms thereunder, such as the inclusion of interruptibility capacity, which provides us with additional profitability, and more competitive tariff structures. In addition, we will seek to maximize the value derived from the utilization and sale of by-products generated in our production processes.

Continue to focus on innovation to develop next generation products

We believe we differentiate ourselves from our competitors on the basis of our technical expertise and innovation, which allow us to deliver new high quality products to meet our customers' needs. We intend to keep using these capabilities in the future to retain existing customers and cultivate new business. We plan to leverage the expertise of our dedicated team of specialists to advance and to develop next generation products and technologies that fuel organic growth. In particular, we intend to continue investing in our FerroSolar Project, which involves the production of solar grade silicon metal with a purity level above 99.9999% through a new electrometallurgical process that may prove to be more cost-effective than the traditional chemical process. We also aim to further develop our specialized foundry products, such as value-added inoculants and customized nodularizers, which are used in the production of iron to improve its tensile strength, ductility and impact properties, and to refine the homogeneity of the cast iron structure.

Maintain financial discipline to facilitate ongoing operations and support growth

We believe maintaining financial discipline will provide us with the ability to manage the volatility in our business resulting from changes in commodity prices and demand fluctuations. We intend to preserve a strong and conservative balance sheet, with sufficient liquidity and financial flexibility to facilitate all of our ongoing operations, to support organic and strategic growth and to finance prudent capital expenditure programs aimed at placing us in a better position to generate increased revenues and cash flows by delivering a more comprehensive product mix and optimized production in response to market circumstances. We plan to become even more efficient in our working capital management through various initiatives aimed at optimizing inventory levels and accounts receivables. We will also seek to repay indebtedness from free cash flow and retain low leverage for maximum free cash flow generation.

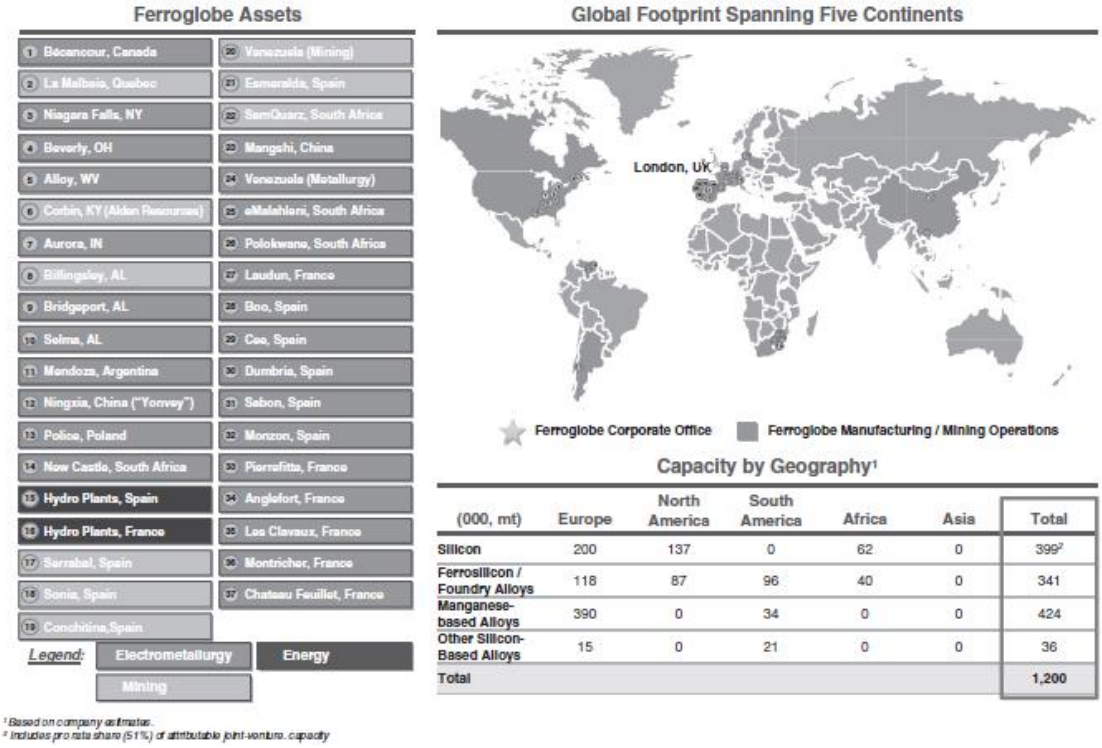
Pursue strategic opportunities

We have a proven track record of disciplined acquisitions of complementary businesses and successfully integrating them into existing operations while retaining a targeted approach through appropriate and opportunistic asset divestitures. Our past acquisitions have increased the vertical integration of our activities, allowing us to deliver an enhanced product offering on a cost-efficient basis. We regularly consider and evaluate strategic opportunities for our business and will continue to do so in the future with the objective of expanding our capabilities and leveraging our products and operations. In particular, we intend to pursue complementary acquisitions and other investments at appropriate valuations for the purpose of increasing our capacity, increasing our access to raw materials and other inputs, further refining existing products, broadening our product portfolio and entering new markets. We will consider such strategic opportunities in a disciplined fashion while maintaining a conservative leverage position and strong balance sheet. We will also seek to evaluate our core business strategy on an ongoing basis and may divest certain non-core and lower margin businesses to improve our financial and operational results. For example, we are pursuing a strategic disposal of our hydroelectric power operations in Spain and France, and have entered into a definitive agreement with respect to the disposal of our hydroelectric power operations in Spain with an experienced and reputable owner and operator of renewable energy businesses, pursuant to which we expect to receive gross proceeds of €255 million (approximately $270 million) and net cash proceeds of approximately $165 million. The closing of

the transaction remains subject to certain conditions, including receipt of applicable governmental approvals. We are pursuing a strategic disposal of our hydroelectric power operations in France, from which we expect to receive gross and net cash proceeds of $21 million. We intend to use the proceeds from any such disposals to repay certain existing indebtedness and for general corporate purposes.

Facilities and Production Capacity

The following chart shows, as of December 31, 2016, the location of our assets and our production capacity, including 51% of the capacity of our joint ventures, by geography, of silicon, silicon-based alloys (ferrosilicon/foundry alloys), manganese-based alloys and other silicon-based alloys.



Our production facilities are strategically spread worldwide across the United States, Spain, France, South Africa, Canada, Venezuela, Argentina, Poland and China. We operate quartz mines located in Spain, South Africa, Canada and the United States, and timber farms and charcoal production units in South Africa. Additionally, we operate low-ash, metallurgical quality coal mines in the United States.

From time to time, in response to market conditions and to manage operating expenses, facilities are fully or partially idled. Due to current market conditions, facilities in Alabama (United States), Argentina, Venezuela, South Africa and China are partially or fully idled.

Our energy business comprises twelve hydroelectric power plants in Spain with a combined power generation installed capacity of 192 megawatts, as of December 31, 2016. Additionally, Ferroglobe operates two hydroelectric power plants in France with a combined installed capacity of 20 megawatts, as of December 31, 2016.

Products

For the years ended December 31, 2016, 2015 and 2014, Ferroglobe's consolidated sales by product were as follows:

	Year ended December 31,		
($ millions)	**2016**	**2015**	**2014**
Silicon metal	751.5	592.5	596.2

Manganese-based alloys	223.5	260.4	316.5
Ferrosilicon	242.8	228.8	285.0
Other silicon-based alloys	173.9	105.7	103.4
Silica fume	37.5	29.7	31.6
Byproducts and other	126.5	72.9	84.4
Total Sales	**1,555.7**	**1,290.0**	**1,417.1**

Silicon metal

Ferroglobe is a leading global silicon metal producer based on production capacity, with a total production capacity of approximately 399,200 (including 51% of our attributable joint venture capacity) tons per annum in several facilities in the United States, France, South Africa, Canada, Spain and China. For the years ended December 31, 2016, 2015 and 2014, Ferroglobe's revenues generated by silicon metal sales accounted for 48.3%, 45.9% and 42.1%, respectively, of Ferroglobe's total consolidated revenues.

Silicon metal is used by primary and secondary aluminum producers, who require silicon metal with certain requirements to produce aluminum alloys. For the year ended December 31, 2016, sales to aluminum producers represented approximately 35% of silicon metal revenues. The addition of silicon metal reduces shrinkage and the hot cracking tendencies of cast aluminum and improves the castability, hardness, corrosion resistance, tensile strength, wear resistance and weldability of the aluminum end products. Aluminum is used to manufacture a variety of automotive components, including engine pistons, housings, and cast aluminum wheels and trim, as well as high tension electrical wire, aircraft parts, beverage containers and other products which require aluminum properties.

Silicon metal is also used by several major silicone chemical producers. For the year ended December 31, 2016 sales to chemical producers represented approximately 55% of silicon metal revenues. Silicone chemicals are used in a broad range of applications, including personal care items, construction-related products, health care products and electronics. In construction and equipment applications, silicone chemicals promote adhesion, act as a sealer and have insulating properties. In personal care and health care products, silicone chemicals add a smooth texture, protect against ultraviolet rays and provide moisturizing and cleansing properties. Silicon metal is an essential component of the manufacture of silicone chemicals, accounting for approximately 20% of the cost of production.

In addition, silicon metal is the core material needed for the production of polysilicon, which is most widely used to manufacture solar cells and semiconductors. For the year ended December 31, 2016 sales to polysilicon producers represented approximately 10% of silicon metal revenues. Producers of polysilicon employ processes to further purify the silicon metal and then use the material to grow ingots and then cut wafers. These wafers are the base material to produce solar cells, which are capable of converting sunlight to electricity. The individual solar cells are then soldered together to make solar modules.

Manganese-based alloys

With 229,500 tons of annual silicomanganese production capacity and 194,000 tons of annual ferromanganese production capacity in our factories in Spain and Venezuela, Ferroglobe is among the leading global manganese-based alloys producers based on production capacity. During the year ended December 31, 2016, Ferroglobe sold 271,913 tons of manganese-based alloys. For the years ended December 31, 2016, 2015, and 2014, Ferroglobe's revenues generated by manganese-based alloys sales accounted for 14.4%, 20.2% and 22.3%, respectively, of Ferroglobe's total consolidated revenues.

Over 90% of the global manganese-based alloys produced are used in steel production, and all steelmakers use manganese and manganese alloys in their production processes. Manganese alloys improve the hardness, abrasion resistance, elasticity and surface condition of steel when rolled. Manganese alloys are also used for deoxidation and desulphurization in the steel manufacturing process.

Ferroglobe produces two types of manganese alloys, silicomanganese and ferromanganese.

Silicomanganese is used as deoxidizing agent in the steel manufacturing process. Silicomanganese is also produced in the form of refined silicomanganese, or silicomanganese AF, and super-refined silicomanganese, or silicomanganese LC.

Ferromanganese is used as a deoxidizing, desulphurizing and degassing agent in steel to remove nitrogen and other harmful elements that are present in steel in the initial smelting process, and to improve the mechanical

properties, hardenability and resistance to abrasion of steel. The three types of ferromanganese that Ferroglobe produces are:

- high-carbon ferromanganese used to improve the hardenability of steel;
- medium-carbon ferromanganese, used to manufacture flat and other steel products; and
- low-carbon ferromanganese used in the production of stainless steel, steel with very low carbon levels, rolled steel plates and pipes for the oil industry.

Ferrosilicon

Ferroglobe is among the leading global ferrosilicon producers based on production output for 2015 and 2016. During the year ended December 31, 2016, Ferroglobe sold 207,173 tons of ferrosilicon and had 244,500 tons of annual ferrosilicon production capacity. For the years ended December 31, 2016, 2015 and 2014, Ferroglobe's revenues generated by ferrosilicon sales accounted for 15.6%, 17.7% and 20.1%, respectively, of Ferroglobe's total consolidated revenues.

Ferrosilicon is an alloy of iron and silicon (normally approximately 75% silicon). Ferrosilicon products are used to produce stainless steel, carbon steel, and various other steel alloys and to manufacture electrodes and, to a lesser extent, in the production of aluminum. Approximately 65% of ferrosilicon produced is used in steel production.

Ferrosilicon is generally used to remove oxygen from the steel and as alloying element to improve the quality and strength of iron and steel products. Silicon increases steel's strength and wear resistance, elasticity and scale resistance, and lowers the electrical conductivity and magnetostriction of steel.

Other silicon-based alloys

In addition to ferrosilicon, Ferroglobe produces various different silicon-based alloys, including silico calcium and foundry products, which comprise inoculants and nodularizers. Ferroglobe produces more than 20 specialized varieties of foundry products, several of which are custom made for its customers. Demand for these specialty metals is increasing and, as such, they are becoming more important components of Ferroglobe's product offering. Ferroglobe's combined annual production capacity in connection with these other silicon-based alloys is approximately 60,000 tons (excluding ferrosilicon). During the year ended December 31, 2016, Ferroglobe sold 89,430 tons of silicon-based alloys (excluding ferrosilicon). For the years ended December 31, 2016, 2015 and 2014, Ferroglobe's revenues generated by silicon-based alloys (excluding ferrosilicon) accounted for 11.2%, 8.2% and 7.3%, respectively, of Ferroglobe's total consolidated revenues.

The primary use for silico calcium is the deoxidation and desulfurization of liquid steel. In addition, silico calcium is used to control the shape, size and distribution of oxide and sulfide inclusions, improving fluidity, ductility, and the transverse mechanical and impact properties of the final product. Silico calcium is also used in the production of coatings for cast iron pipes, in the welding process of powder metal and in pyrotechnics.

The foundry products that Ferroglobe manufactures include nodularizers and inoculants, which are used in the production of iron to improve its tensile strength, ductility and impact properties, and to refine the homogeneity of the cast iron structure.

Silica fume

During the year ended December 31, 2016, Ferroglobe sold 212,512 tons of silica fume. For the years ended December 31, 2016, 2015 and 2014, Ferroglobe's revenues generated by silica fume sales accounted for 2.4%, 2.3% and 2.2%, respectively, of Ferroglobe's total consolidated sales.

Silica fume is a by-product of the electrometallurgical process of silicon metal and ferrosilicon. This dust-like material, collected through Ferroglobe factories' air filtration systems, is mainly used in the production of high-performance concrete and mortar. The controlled addition of silica fumes to these products results in increased durability, improving their impermeability from external agents, such as water. These types of concrete and mortar are used in large-scale projects such as bridges, viaducts, ports, skyscrapers and offshore platforms.

Services

Energy

Ferroglobe's held for sale Spanish energy business mainly focuses on the small hydro power sector, as most of its hydroelectric plants have an installed power capacity below 50 megawatts. Ferroglobe's total installed power capacity in Spain is 192 megawatts, with an average annual electric output of approximately 583,000 megawatt hours, and an electric output of approximately 496,500 megawatt hours in 2016. For the years ended December 31, 2016, 2015 and 2014, Ferroglobe recognized a loss from discontinued operations, which represented the Spanish hydroelectric operations, in the amounts of $3,065,000, $196,000 and a profit from discontinued operations of $10,290,000, respectively.

Hydroelectric power stations produce energy from the flow of water through channels or pipes to a turbine, causing the shaft of the turbine to rotate. An alternator or generator, which is connected to the rotating shaft of the turbine, converts the motion of the shaft into electrical energy.

In Spain, Ferroglobe sells all of the power it produces in the wholesale energy market that has been in place in Spain since 1998. Prior to 2013, Ferroglobe benefitted from a feed-in tariff support scheme, pursuant to which Ferroglobe was legally entitled to feed its electric production into the Spanish grid in exchange for a fixed applicable feed-in-tariff over a fixed period, and therefore received a higher price than the market price. However, the new regulatory regime introduced in Spain in 2013 eliminated the availability of the feed-in tariff support scheme for most of Ferroglobe's facilities. Ferroglobe has been able to partly mitigate this reduction in prices through the optimization of its power generation such that it operates in peak-price hours, as well as through participation in the "ancillary services" markets whereby Ferroglobe agrees to generate power as needed to balance the supply and demand of energy in the markets in which it operates. See "—Regulatory Matters—Energy and electricity generation," below.

Villar Mir Energía, S.L. ("VM Energía"), a Spanish company controlled by Grupo VM, advises in the day-to-day operations of Ferroglobe's hydroelectric facilities in the Spanish wholesale market under a strategic advisory services contract. Operating in the Spanish wholesale market requires specialized trading skills that VM Energía can provide because of the broad base of both generating facilities and customers that it manages. For more information on the contractual arrangements between Ferroglobe and VM Energía, see "Item 7.B.—Major Shareholders and Related Party Transactions—Related Party Transactions" below.

Ferroglobe is currently carrying out the construction of 19 megawatts of additional capacity to its hydroelectric plants in Spain, expected to become available in 2017. If fully utilized, the additional capacity would represent an increase of 42,000 megawatt hours, or 8%, in the average annual production of Ferroglobe's existing plants in Spain.

Ferroglobe also owns and operates 20 megawatts of hydroelectric power capacity in two plants in France. Given the small size of these operations and the specifics of the regulatory regime under which they operate, the results of operations and financial position with respect to these plants are included within our French operations.

Raw Materials, Logistics and Power Supply

The largest components of Ferroglobe's cost base are raw materials and power used for smelting at our facilities. In the year ended December 31, 2016, Ferroglobe's power consumption, represented approximately 28% of Ferroglobe's total consolidated cost of sales.

The primary raw materials Ferroglobe uses to produce its electrometallurgy products are carbon reductants (primarily coal, but also charcoal, metallurgical and petroleum coke, anthracite and wood) and minerals (manganese ore and quartz). Other raw materials used to produce Ferroglobe's electrometallurgy products include electrodes (consisting of graphite and electrode paste), slags and limestone, as well as certain specialty additive metals. Ferroglobe procures coal, manganese ore, quartz, petroleum and metallurgical coke, electrodes and most additive metals centrally under the responsibility of its purchasing and logistics manager, whereas responsibility for the procurement of other raw materials rests with each country's raw materials procurement manager or the individual plant managers.

Manganese ore

The global supply of manganese ore is comprised of standard- to high-grade manganese ore, with 35% to 56% manganese content, and low-grade manganese ore, with lower manganese content. Manganese ore production

comes mainly from eight countries: South Africa, Australia, China, Gabon, Brazil, Ukraine, India and Ghana. However, the production of high-grade manganese ore is concentrated in Australia, Gabon, South Africa and Brazil.

The vast majority of the manganese ore Ferroglobe purchased in 2016 came from suppliers located in South Africa (59.6% of total purchases) and Gabon (36.0% of total purchases). In 2016, key suppliers of manganese ore to Ferroglobe supplied 94.5% of the manganese ore Ferroglobe utilized while the remaining 5.5% was procured on the international spot market from other suppliers. In 2016, Ferroglobe has contractual arrangements with two main suppliers (located in South Africa and Gabon) with terms of one to three years and prices, expressed in U.S. Dollars, which depend primarily on spot prices.

Global manganese ore prices are mainly driven by manganese demand from India and China. Potential disruption of supply from South Africa, Australia, Brazil or Gabon due to logistical, labor or other reasons may have an impact on the availability and the pricing of manganese ore.

Coal

Coal is the major carbon reductant in silicon and silicon alloys production. Only washed and/or screened coal with ash content below 10% and with specific physical properties may be used for production of silicon alloys. Colombia and the United States are the best source for the required type of coal and the vast majority of the silicon alloys industry, including Ferroglobe, is dependent on supply from these two countries.

Approximately 64.6% of the coal Ferroglobe purchased in 2016 for its facilities in Europe, South Africa and Venezuela was sourced from one mining supplier in Colombia while the remaining 35.4% came from other Colombian mines, as well as from Poland, China and South Africa. Ferroglobe has a long-standing relationship with the coal washing plants that process Colombian coal in Europe, which price coal using spot, quarterly, semi-annual or annual contracts, based on market outlook. International coal prices, which are denominated in U.S. Dollars, are mainly based on API 2, the benchmark price reference for coal imported into northwest Europe. Prices reflect also currency fluctuation, labor issues and transportation situation in Colombia and South Africa, as well as sea-freights.

Ferroglobe also owns Alden Resources LLC (“Alden”) in the United States. Alden provides a stable and long-term supply of low ash metallurgical grade coal by fulfilling a substantial portion of our requirements to our North American operations.
See “—Mining Operations” below for further information.

Quartz

Quartz is required to manufacture silicon-based alloys and silicon metal.

Ferroglobe has secured access to quartz from its quartz mines in Spain, South Africa, the United States and Canada (see “—Mining Operations”). For the year ended December 31, 2016 approximately 61.7% of Ferroglobe’s total consumption of quartz was self-supplied. Ferroglobe purchases quartz from third-party suppliers on the basis of contractual arrangements with terms of up to four years. Ferroglobe’s quartz suppliers typically have operations in the same countries where Ferroglobe factories are located, or in close proximity, which minimizes logistical costs.

Ferroglobe controls quartzite mining operations located in Alabama, United States and a concession to mine quartzite in Saint-Urbain, Québec, Canada (operated by a third party miner). These mines supply our North American operations with a substantial portion of their requirements for quartzite.

Other raw materials

Wood is needed for the production of silicon-based alloys. It is used directly in furnaces as woodchips or cut to produce charcoal, which is the major source of carbon reductant for Ferroglobe’s plants in South Africa. In South Africa, charcoal is a less expensive substitute for imported coal and provides desirable qualities to the silicon-based alloys it is used to produce.

Wood from Ferroglobe’s 10,000 hectares plantation in South Africa is of good quality and is partially sold as lumber in exchange for lower quality wood to produce charcoal for Ferroglobe’s South African operations. Ferroglobe’s charcoal production in South Africa is entirely subcontracted to third parties.

In the other countries where Ferroglobe operates, Ferroglobe purchases wood chips locally or logs for on-site wood chipping operations from a variety of suppliers.

Petroleum coke, carbon electrodes, slag, limestone and additive metals are other relevant raw materials Ferroglobe utilizes to manufacture its electrometallurgy products. Procurement of these raw materials is either managed centrally or with each country's raw materials procurement manager or plant manager, and is purchased at spot prices or under contracts of a year or less.

Logistics

Logistical operations are managed centrally and at the local level. Sea-freight operations are centralized at the corporate level, while rail logistics is centralized at the country level. Vehicle transport is managed at the plant level with centralized coordination in multi-site countries. Contractual commitments in respect of transportation and logistics match, to the extent possible, Ferroglobe's contracts for raw materials and customer contracts.

Power

In Spain, Ferroglobe mainly acquires energy at the spot price through daily auction processes and is, therefore, exposed to market price volatility. Ferroglobe seeks to reduce its energy costs by stopping the production at its factories during times of peak power prices and operating its factories in the hours of the day with lower energy prices. Additionally, Ferroglobe receives a rebate on a portion of its energy costs in Spain in exchange for an agreement to interrupt production, and thus power usage, upon request by the grid operator. Ferroglobe uses derivative financial instruments to partly hedge risks related to energy price volatility in Spain.

In France, FerroPem, S.A.S. has traditionally had access to relatively low power prices, as it benefited from Electricité de France's green tariff ("Tarif Vert"), and a discount thereon. The green tariffs expired at the end of 2015 and Ferroglobe has negotiated alternative arrangements with Electricité de France for 2017, and is currently negotiating long-term supply contracts with suppliers in the market place. Additionally, new regulation enacted by the National Assembly and the Government through Laws and Decrees allows FerroPem, S.A.S. to benefit from reduced access tariffs plus rebates based on interruptibility. Furthermore, the new arrangements will allow FerroPem, S.A.S. to operate competitively on a 12-month basis, avoiding the need to stop for two months under the Tarif Vert.

Ferroglobe's production of energy in Spain and France through its hydroelectric power plants partially mitigates its exposure to increases in power prices in these two countries, as an increase in energy prices has a positive impact on Ferroglobe revenues from electricity generation.

In the United States, we enter into long-term electric power supply contracts. Our power supply contracts result in stable, favorably priced, long-term commitments of power at reasonable rates. In West Virginia, we have a contract with Brookfield Energy to provide approximately 45% of our power needs, from a dedicated hydroelectric facility, at a fixed rate through December 2021. The rest of our power needs in West Virginia, Ohio and Alabama are primarily sourced through special contracts that provide historically competitive rates and the remainder is sourced at market rates. At our Niagara Falls, New York plant, we have been granted a public-sector package including 18.4 megawatts of hydropower through to 2021, effective June 1, 2016.

In Venezuela, Ferroglobe has access to low and stable power prices through a long-term contract with the local power supplier, as its factory is located in the proximity of five hydroelectric power plants.

In South Africa, energy prices are regulated by the NERSA and price increases are publicly announced in advance.

Mining Operations

Reserves

Reserves are defined by SEC Industry Guide 7 as the part of a mineral deposit that could be economically and legally extracted and produced at the time of the reserve determination. Proven, or measured, reserves are reserves for which (a) quantity is computed from dimensions revealed in outcrops, trenches, workings or drill holes, and grade and/or quality are computed from the results of detailed sampling and (b) the sites for inspection, sampling and measurement are spaced so closely and the geologic character is so well defined that size, shape, depth and mineral content of reserves are well-established. Probable, or indicated, reserves are reserves for which quantity and grade and/or quality are computed from information similar to that used for

proven reserves, but the sites for inspection, sampling, and measurement are farther apart or are otherwise less adequately spaced. The degree of assurance for probable reserves, although lower than that for proven reserves, is high enough to assume continuity between points of observation. Reserve estimates were made by independent third party consultants, based primarily on dimensions revealed in outcrops, trenches, detailed sampling and drilling studies performed. These estimates are reviewed and reassessed from time to time. Reserve estimates are based on various assumptions, and any material changes in these assumptions could have a material impact on the accuracy of Ferroglobe's reserve estimates.

The following table sets forth summary information on Ferroglobe's mines which were in production as of December 31, 2016.

Mine	Location	Mineral	Annual capacity kt	Production in 2016 kt	Mining Recovery	Proven reserves Mt[1]	Probable reserves Mt[1]	Mining Method	Reserve grade	Btus per lb.	Life[2]	Expiry date[3]
Sonia	Spain (Mañón)	Quartz	150	150	0.4	2.17	0.8	Open-pit	Metallurgical	N/A	21	2069
Esmeralda	Spain (Val do Dubra)	Quartz	50	22	0.4	0.12	0.17	Open-pit	Metallurgical	N/A	12	2029
Serrabal.	Spain (Vedra & Boqueixón)	Quartz	330	231	0.2	3.85	1.9	Open-pit	Metallurgical	N/A	19	2038
SamQuarz	South Africa (Delmas)	Quartzite	1,000	690	0.7	8.02	19.5	Open-pit	Metallurgical & Glass	N/A	39	2039
Mahale	South Africa (Limpopo)	Quartz	New	New	0.5	—	2.4	Open-pit	Metallurgical	N/A	15	2035
Roodepoort	South Africa (Limpopo)	Quartz	50	40	0.5	—	0.05	Open-pit	Metallurgical	N/A	1	2028
Fort Klipdam	South Africa (Limpopo)	Quartz	100	10	0.6	—	0.2	Open-pit	Metallurgical	N/A	2	2017[4]
AS&G Miller Pit	United States (Alabama)	Quartzite	150	145	0.4	0.02	—	Surface	Metallurgical	N/A	1	2017
AS&G Mims Pit.	United States (Alabama)	Quartzite	120	88	0.4	0.25	—	Surface	Metallurgical	N/A	3	2020
			1,950	**1,376**		**14.43**	**25.02**					
Maple Creek	United States (Kentucky)	Coal	200	190	0.7	0.6		Surface	Metallurgical	14,000	3	2020
Colonel Hollow	United States (Kentucky)	Coal	150	7	0.7	0.8		Surface	Metallurgical	14,000	5	2022
Engle Hollow	United States (Kentucky)	Coal	24	24	0.6	0.2		Underground	Metallurgical	14,000	4	2021
Bain Branch No. 3	United States (Kentucky)	Coal	120	25	0.5	3.6	2.9	Underground	Metallurgical	14,000	25	2042
Harpes Creek 4A	United States (Kentucky)	Coal	100	92	0.6	1.2	1.3	Underground	Metallurgical	14,000	12	2029
			594	**338**		**6.40**	**4.20**					

(1) The estimated recoverable proven and probable reserves represent the tons of product that can be used internally or sold to metallurgical or glass grade customers. The mining recovery is based on historical yields at each particular site. We estimate our permitted mining life based on the number of years we can sustain average production rates under current circumstances.

(2) Current estimated mine life in years.

(3) Expiry date of Ferroglobe's mining concession.

(4) The expiry date relates to three mining permits relating to an area within Fort Klipdam, outside the area covered by the mining right. The mining right is currently subject to an administrative proceeding with the relevant mining authority. See "—South African mining rights—Fort Klipdam" below for further information on Fort Klipdam.

Ferroglobe considers its Conchitina and Conchitina Segunda mines as a single mining project and intends to merge the mining concessions for these properties. In addition, Ferroglobe currently holds all necessary permits to start production at its Conchitina and Conchitina Segunda mines. Although Ferroglobe has not received formal approval from the Spanish Mining Authority over its 2017 Annual Mining Plan, we are not legally prevented from commencing mining operations in the area based on the fully-authorized 2016 Annual Mining Plan.

Reserves for the Conchitina mine are, accordingly, considered to be probable reserves, and the following table sets forth summary information on the Conchitina and Conchitina Segunda mines:

				Recoverable Reserves			
Mine	Location	Mineralization	Mining Recovery	Proven MT[1]	Probable MT[1]	Reserve Grade	Mining Method
Conchitina and Conchitina Segunda	Spain (O Vicedo)	Quartz	0.35	0	1.25	Metallurgical	Open-pit

(1) Estimates of recoverable probable reserves represent the tons of product that can be used internally or which are of metallurgical grade and can be delivered to Ferroglobe's customers.

Ferroglobe has additional mining rights in Spain (Cristina, Trasmonte and Merlán), but none of these mines are currently producing or undergoing mine development activities as the Spanish Mining Authority started cancelling mining rights for Merlán and Trasmonte in September 2015 and February 2017, respectively. Ferroglobe does not consider certain Venezuelan mines to be mining assets (La Candelaria, El Manteco and El Merey) as the minerals are fully-depleted and because it will be difficult to obtain new mining rights at these locations given the current economic and political environment in Venezuela.

Spanish mining concessions

Sonia

The Sonia mining concession previously belonged to Cuarzos Industriales S.A.U., which acquired the mining concession in 1979. Ferroglobe acquired Cuarzos Industriales S.A.U., which is the owner of the properties currently mined at Sonia, along with the Sonia mining concession, in 1996 from the Portuguese cement manufacturer Cimpor. The surface area covered by the Sonia mining concession is 387 hectares. The concession is due to expire in 2069.

Esmeralda

The original Esmerelda mining concession was granted in 1999 to Cuarzos Industriales, S.A.U., the owner of the properties currently mined at Esmeralda, after proper mining research had been conducted and the mining potential of the area had been demonstrated to the relevant public authority. The surface area covered by the Esmeralda mining concession is 84 hectares. The concession is due to expire in 2029.

Serrabal

The Serrabal mining concession was originally granted in 1978 to Rocas, Arcillas y Minerales S.A. Ferroglobe acquired control of such company, which is the owner of the properties currently mined at Serrabal, along with the Serrabal mining concession, in 2000. Rocas, Arcillas y Minerales, S.A. has applied for the renewal of the concession. Pursuant to an interim measure approved by the applicable mining authority, Rocas Arcillas y Minerales S.A. is permitted to continue mining operations in Serrabal indefinitely until a final decision on the renewal of the concession has been made. If the renewal is granted, the concession will expire in 2038. The surface area covered by Serrabal mining concession is 861 hectares.

Conchitina and Conchitina Segunda

The Conchitina mining concession previously belonged to Cuarzos Industriales S.A.U., which acquired the mining concession in 1979. Ferroglobe acquired such company, along with Conchitina mining concession, in 1996 from the Portuguese cement manufacturer Cimpor. The Conchitina Segunda mining concession was granted to Cuarzos Industriales S.A.U. in 1997 for a 30-year term after proper mining research had been conducted and the mining potential of the area had been demonstrated. The Conchitina concession expired in 2009 and Cuarzos Industriales S.A.U. has applied for its renewal, also requesting the competent authority to consolidate the concession with that of Conchitina Segunda. The legal support for the consolidation request is that both mining rights apply over a unique quartz deposit. Although the approval has not been formally granted by the authority, Ferroglobe is not legally prevented from commencing mining operations in the area because the relevant authority has not issued an express declaration of expiry of the Conchitina concession. Cuarzos Industriales S.A.U. is the owner of the properties currently mined at both Conchitina and Conchitina Segunda. The surface area covered by Conchitina and Conchitina Segunda concessions is 497 hectares.

Cabanetas

The mining right granting process and tax regulations applicable to the Cabanetas limestone quarry slightly differ from those applicable to other Ferroglobe mines in Spain because Cabanetas is classified as a quarry, rather than a mine. Ferroglobe is currently operating the Cabanetas quarry pursuant to a permit resolution, which authorized the extension of the original mining concession, issued in 2013 by the competent mining authority. The renewal is for a period of 30 years and, consequently, the concession will expire in 2043. Limestone extracted from the Cabanetas quarry was intended to be used by the Hidro Nitro Española S.A. electrometallurgy plant. However, because new metallurgical techniques require low consumption of this product, most of the Cabanetas limestone is generally sold to the civil engineering and construction industries. The production level of the Cabanetas quarry has fallen considerably in recent years, mainly due to difficulties in the local construction industry.

The land on which the mining property is located is owned by Mancomunidad de propietarios de Fincas Las Sierras and the plot containing the mining property is leased to Hidro Nitro Española S.A. pursuant to a lease agreement entered into in 1950, which was subsequently restated in 2000 and due to expire in 2020. The lease agreement may be extended until 2050. To retain the lease, Hidro Nitro Española S.A. pays the landlord an annual fee currently equal to €0.15 per ton of limestone quarried out of the mine. The quarry covers a surface area of approximately 180 hectares. The area affected by the planned exploitation during the current extension of the concession area is 6.9 hectares.

For further information regarding Spanish regulations applicable to mining concessions, as well as environmental and other regulations, see "—Laws and regulations applicable to Ferroglobe's mining operations—Spain."

South African mining rights

SamQuarz

The SamQuarz mining rights were transferred from the original owners, Glass South Africa Holdings (Pty) Ltd and Samancor Limited, to SamQuarz (Pty) Ltd in 1997. Our FerroAtlántica division acquired control of SamQuarz, along with the SamQuarz mining rights, in 2012. In 2009, the Minister of Mineral Resources converted the then-existing SamQuarz mining rights into new mining rights due to expire after 30 years in 2039. At the end of 2014, SamQuarz mining rights were transferred from SamQuarz (Pty) Ltd to its sole shareholder, Thaba Chueu Mining. SamQuarz (Pty) Ltd is the owner of the properties currently mined in Delmas. The total surface area covered by SamQuarz mine is 118.1 hectares.

Mahale

Mahale is state-owned land, lawfully occupied by the Mahale community. Thaba Chueu Mining (Pty.), Ltd., a subsidiary of Ferroglobe, currently leases the land pursuant to an agreement with the Majeje Traditional Authority and runs mining operations on the area pursuant to mining rights owned by the state and licensed to it. The latest mining right license was granted by the Department of Mineral Resources in December 2014 (and was registered at the mining titles deeds office in the beginning of 2016). The license is for a 20-year period and will expire in 2035. The total surface area covered by Mahale mine is 329.7 hectares. The lease agreement between Thaba Chueu Mining (Pty.), Ltd. and the Majeje Traditional Authority will be in force for the entire duration of the mining right or as long as it is economically viable for the lessee to mine. Under the lease agreement, a monthly rent of ZAR 1,500 is paid to the lessor, which is reviewed annually to reflect increases in the consumer price index. A general authorization has been granted to Thaba Chueu Mining (Pty.), Ltd. by the Water Affairs Department in order to allow the company to use the water at the site, provided usage does not exceed 10,000 cubic metres per month.

Roodeport

Roodeport mining right is held by Silicon Smelters (Pty.), Ltd., Ferroglobe's subsidiary, and will expire in 2028. In 2009, Silicon Smelters (Pty.), Ltd. applied for a conversion of the mining right into a new mining right under the Mineral and Petroleum Resources Development Act (the "MPRDA"), which entered into force in 2004. Although the license has not yet been approved by the competent authority, the Company is permitted to mine while waiting for the finalization of the application. The license could be finalized before the end of 2017, subject to Silicon Smelters (Pty) Ltd meeting the following requirements:

- submission of a Mining Works Programme;
- submission of a Social Labour Plan;
- approval of a Shareholders Agreement or Black Economic Empowerment Agreement;
- submission of mining plans; and
- the passing of a board resolution appointing a person to sign on behalf of the Company.

Pursuant to the mining right, Silicon Smelters (Pty.), Ltd. is entitled to mine quartz as long as it is economically viable (i.e., for the duration of the mine). The total surface area covered by Roodeport mine is 19.5 hectares. The mining area covers the cobble and block areas. The land in which Roodeport mine is located is owned by Alpha Sand, which also conducts all mining operations as a contractor for Silicon Smelters (Pty.), Ltd. An agreement is

in place whereby Alpha Sand operates the mine and Silicon Smelters (Pty.), Ltd. purchases the quartz mined from Alpha Sand based on the quartz requirements of Silicon Smelters (Pty.), Ltd. and at prices that are reviewed annually on the basis of increases in production costs and diesel fuel. The agreement with Alpha Sand will terminate at the expiry of the mining right or when it is no longer economically viable to mine quartz in the area.

Fort Klipdam

The land on which the Fort Klipdam is located is owned by Silicon Smelters (Pty.), Ltd. Silicon Smelters (Pty.), Ltd. filed a mining right application that was rejected on the basis of the alleged inadequacy of the mine social and labor plan (SLP). An appeal has been filed by Silicon Smelters (Pty.), Ltd. Pending a decision on the appeal, mining operations may only be conducted on an area located outside the area covered by the mining right, pursuant to three mining permits granted to Silicon Smelters (Pty.), Ltd that will expire in 2017. The total surface area covered by the Fort Klipdam mine, including both the mining permits and the mining right, is 640.9 hectares.

For further information regarding South African regulations applicable to mining concessions, as well as environmental and other regulations, see "—Laws and regulations applicable to Ferroglobe's mining operations—South Africa."

French mining rights

Soleyron

Of the overall Soleyron mine area, FerroPem, S.A.S., a subsidiary of Ferroglobe, owns 7.5 hectares. The Saint-Hippolyte de Montaigu Municipality owns the remaining 12.9 hectares. In February 2015, FerroPem, S.A.S. entered into a lease and royalty agreement with the municipality, which is valid for five years. The effective date of the agreement and the relevant term coincide with the effective date and the term of the prefectural authorization renewal, which was granted to FerroPem, S.A.S. in March 2015 and is due to expire in 2020. Pursuant to this agreement, FerroPem, S.A.S. pays to the municipality on an annual basis: (i) a fixed allowance for the lease of the land, and (ii) variable royalties on the basis of tons of quartz produced. In addition, FerroPem, S.A.S. provided financial guarantees through an insurance company for an amount of €146,300. Such amount has been defined in the prefectural authorization as the amount needed for the land remediation.

United States and Canadian mining rights

Coal

As of December 31, 2016, we had four active coal mines (one surface mine and three underground mines) located in Kentucky. We also had eight inactive permitted coal mines available for extraction located in Kentucky and Alabama. All of our coal mines are leased and the remaining term of the leases range from 2 to 40 years. The majority of the coal production is consumed internally in the production of silicon metal and silicon-based alloys. As of December 31, 2016, we estimate our proven and probable reserves to be approximately 16,356,000 tons with an average permitted life of approximately 35 years at present operating levels. Present operating levels are determined based on a three-year annual average production rate. Reserve estimates were made by our geologists, engineers and third parties based primarily on drilling studies performed. These estimates are reviewed and reassessed from time to time. Reserve estimates are based on various assumptions, and any material changes in these assumptions could have a material impact on the accuracy of our reserve estimates.

We currently have two coal processing facilities, one of which is inactive. The active facility processes approximately 720,000 tons of coal annually, with a capacity of 2,500,000 tons. The average coal processing recovery rate is approximately is 65%.

Quartzite

We have an open-pit quartz mining operation in Billingsly, Alabama, which includes two wash-plant facilities. We also have a concession to mine quartzite in Saint-Urbain, Québec (operated by a third party miner). These mines supply our North American operations with a substantial portion of their requirements for quartzite.

Laws and regulations applicable to Ferroglobe's mining operations

Spain

In Spain, mining concessions have an average term of 30 years and are extendable for additional 30-year terms, up to a maximum of 90 years. In order to extend the concession term, the concessionaire must file an application with the competent public authority. The application, which must be filed three years prior to the expiration of the concession term, must be accompanied by a detailed report demonstrating the continuity of mineral deposits and the technical ability to extract such deposits, as well as reserve estimates, an overall mining plan for the term of the concession and a detailed description of extraction and treatment techniques. The renewal process is straightforward for a mining company that has been mining the concession regularly. The main impediments to renewal are a lack of mining activity and legal conflicts. Every year in January, in order to maintain the validity of the mining concession, an annual mining plan must be submitted to the competent public authority. This document must detail the work to be developed during the year.

Regarding the environmental requirements applicable to Ferroglobe's mining operations in Spain, each of Serrabal, Esmeralda, Conchitina and Conchitina Segunda is subject to an "environmental impact statement" (or "EIS"), issued by the relevant environmental authority and specifically tailored to the environmental features of the relevant mine. The EIS requires compliance with high environmental standards and is based on the environmental impact study performed by the mining concession applicant in connection with each mining project. It is the result of a consultation process involving several public administrations, including cultural, archaeology, landscape, urbanistic, health, agriculture, water and industrial administrations. The EIS sets forth all conditions to be fulfilled by the applicant, including in connection with the protection of air, water, soil, flora and fauna, landscape, cultural heritage, restoration and the interaction of such elements. The EIS covers mining activities, auxiliary facilities and heaps carried out in a determined perimeter of each mine, and includes a program of surveillance and environmental monitoring. The relevant authority regularly verifies compliance with it.

Sonia is subject to a "restoration plan" which provides for less stringent environmental requirements than an EIS and is mainly aimed at ensuring that the new areas generated as a result of the mining activity are properly restored in an environmentally friendly manner. The restoration plan is submitted by the mining concession applicant for the approval of the relevant authority together with the mining project for the area. Information about the exploitation project, including area of operation, annual production, method and operating system, and designed top and bottom level of the pit is included in the restoration plan.

All mines, with the exception of Cabanetas, also need to obtain from the relevant public administration an authorization for the discharge of the water used at the mine. This authorization is subject to certain conditions, including analyzing the water before any such discharge is made. In addition, when presenting to the competent mining authorities its annual mining plans, Ferroglobe must include an environmental report describing all environmental actions carried out during the year. Authorities are able to oversee such actions upon their annual inspections. Because Cabanetas is classified as a quarry and not as a mine, environmental requirements are generally less stringent and an environmental report is not required. The environmental license for Cabanetas is included in the mining permit and is formalized in the annual work plan and the annual restoration plan approved by the mining authority.

The main recurring payment obligation in connection with Ferroglobe's mines in Spain relates to a tax payable annually, calculated on the basis of the budget included in the relevant annual mining plan provided to the authority. In addition, with the exception of Cabanetas, a small surface tax is paid annually to the administration on the basis of the mine property extension. A levy also applies to water consumption at each mine property, which is paid at irregular intervals whenever the relevant public administration requires it.

South Africa

In South Africa, mining rights are valid for a maximum of 30 years and may be renewed for further periods of up to 30 years per renewal. Prior to granting and renewing a mining right, the competent authority must be satisfied with the technical and financial capacity of the intended mining operator and the mining work program according to which the operator intends to mine. In addition, a species rescue, relocation and re-introduction plan must be developed and implemented by a qualified person prior to the commencement of excavation, a detailed vegetation and habitat and rehabilitation plan must be developed by a qualified person and a permit must be obtained from the South African Heritage Resource Agency prior to the commencement of excavations. The mining right holder must also compile a labor and social plan for its mining operations and comply with

certain additional regulatory requirements relating to, among other things, human resource development, employment equity, housing and living conditions and health and safety of employees, and the usage of water, which must be licensed.

It is a condition of the mining right that the holder shall dispose of all minerals and products derived from exploitation of the mineral at competitive market prices, which shall mean, in all cases, non-discriminatory prices or non-export parity prices. If the minerals are sold to any entity which is an affiliate or non-affiliate agent or subsidy of the mining right holder, or is directly or indirectly controlled by the holder, such purchaser must unconditionally undertake in writing to dispose of the minerals and any products from the minerals and any products produced from the minerals, at competitive market prices. The mining right, a shareholding, an equity, an interest or participation in the right or joint venture, or a controlling interest in a company, close corporation or joint venture, may not be encumbered, ceded, transferred, mortgaged, let, sublet, assigned, alienated or otherwise disposed of without the written consent of the Minister of Mineral Resources, except in the case of a change of controlling interest in listed companies.

Environmental requirements applicable to mining operations in South Africa are mostly set out in the MPRDA. Pursuant to the MPRDA, in order to obtain reconnaissance permissions as well as actual mining rights, applicants must have in place an approved environmental management plan, pursuant to which, among other things, all boreholes, excavations and openings sunk or made during the duration of the mining right must be sealed, closed, fenced and made safe by the mining operator. Further environmental requirements apply in connection with health and safety matters, waste management and water usage. The MPRDA further requires mining right applicants to conduct an environmental impact assessment on the area of interest and submit an environmental management programme setting forth, among other things, baseline information concerning the affected environment to determine protection, remedial measures and environmental management objectives, and describing the manner in which the applicant intends to modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation, contain or remedy the cause of pollution or degradation and migration of pollutants and comply with any prescribed waste standard or management standards or practices. In addition, applicants must provide sufficient insurance, bank guarantees, trust funds or cash to ensure the availability of sufficient funds to undertake the agreed work programmes and for the rehabilitation, management and remediation of any negative environmental impact on the interested areas. Holders of a mining right must conduct continuous monitoring of the environmental management plan, conduct performance assessments of the plan and compile and submit a performance assessment report to the competent authority, the frequency of which must be as approved in the environmental management programme, or every two years or as otherwise agreed by the authority in writing. Mine closure costs are evaluated and reported on an annual basis, but are typically only incurred at mine closure.

The mining right holder must also be in compliance with an important governmental regulation called Black Economic Empowerment (“BEE”), a program launched by the South African government to redress certain racial inequalities. In order for a mining right to be granted, a mining company must agree on certain BEE-related conditions with the Department of Mineral and Petroleum Resources. Such conditions relate to, among other things, the company’s ownership and employment equity and require the submission of a social and labor plan. Failure to comply with any of these BEE conditions may have an impact on, among other things, the ability of the mining company to retain the mining right or obtain its renewal upon expiry. In addition, companies subject to BEE must conduct, on an annual basis, a BEE rating audit on several aspects of the business, including black ownership, management control, employment equity, skills development, preferential procurement, enterprise development and socio-economic development. Poor performance on the BEE rating audit may have a negative impact on the company’s ability to do business with other companies, to the extent that a company’s low rating is likely to reduce the rating of its business partners.

Mining rights are subject to payments of royalties to the tax authority, the South African Revenue Services. Such payments are generally made by June 30 and December 31 each year and upon the approval of the concessionaire’s annual financial statements.

France

In France, mining rights are subject to a prefectural authorization. The authorization provides details of all requirements, including environmental requirements, which the mining operator and its subcontractors must comply with to operate the mine. Such requirements mainly concern archaeology, water protection, air pollution, control of noise, visual impact and safety matters. The authorization also contains the requirements relating to the remediation of the land after the end of the mining operations, including the provision of adequate financial guarantees by the mining operator. Mines are regularly inspected by the administration and local

environmental commissions, comprising representatives of the relevant municipality, administration, several associations and the mining operator, which must meet at least once a year.

United States

The Coal Mine Health and Safety Act of 1969 and the Federal Mine Safety and Health Act of 1977 impose stringent safety and health standards on all aspects of mining operations. Also, the state of Kentucky, in which we operate underground and surface coal mines, has state mine safety and health regulations. The Mine Safety and Health Administration (the "MSHA") inspects mine sites and enforces safety regulations and the Company must comply with ongoing regulatory reporting to the MSHA. Numerous governmental permits, licenses or approvals are required for mining operations. In order to obtain mining permits and approvals from state regulatory authorities, we must submit a reclamation plan for restoring, upon the completion of mining operations, the mined property to its prior or better condition, productive use or other permitted condition. We are also required to establish performance bonds, consistent with state requirements, to secure our financial obligations for reclamation, including removal of mining structures and ponds, backfilling and regrading and revegetation.

Mauritania

In 2013, we signed an option to purchase two exploration permits of Quartz relating to a 2,000 square kilometer area located in northern Mauritania, approximately 250 kilometers from Nouadhibou harbor. After a successful exploration program and the granting of the mining rights of both exploration permits (Vadel 1 and Vadel 2 Mines) on June 30, 2016, Ferroglobe exercised the purchase option. Vadel 1 and 2 Mines are held by Ferroquartz Mauritania SARL, a subsidiary of Ferroglobe, and will expire in 2031. The total surface area covered by Vadel 1 Mine is 195 square kilometers and by Vadel 2 Mine is 240 square kilometers. The project is under construction and we will start the production in Vadel 2 in 2017 and in Vadel 1 in 2018.

Customers and Markets

Ferroglobe's Spanish hydroelectric operations deliver and all the electricity produced to the Spanish national grid for sale in the Spanish wholesale market. We have entered into a definitive agreement with respect to the disposal of our hydroelectric power operations in Spain with an experienced and reputable owner and operator of renewable energy businesses, pursuant to which we expect to receive gross proceeds of €255 million (approximately $270 million) and net cash proceeds of approximately $165 million. The closing of the transaction remains subject to certain conditions, including receipt of applicable governmental approvals. Additionally, we are pursuing a strategic disposal of our hydroelectric power operations in France, from which we expect to receive gross and net cash proceeds of approximately $21 million.

The following table details the breakdown of Ferroglobe's revenues from its electrometallurgy operations by geographic end market for the years ended December 31, 2016, 2015 and 2014.

	Year ended December 31,		
($ millions)	**2016**	**2015**	**2014**
United States of America	563.6	208.4	201.3
Europe			
Spain	181.0	194.9	257.0
Germany	241.0	231.0	238.6
Italy	90.3	120.0	146.2
Rest of Europe	236.7	314.1	302.2
Total revenues in Europe	749.1	860.0	944.0
Rest of the World	243.0	221.6	271.8
Total	**1,555.7**	**1,290.0**	**1,417.1**

For the year ended December 31, 2016, Ferroglobe's ten largest customers accounted for approximately 42.23% of Ferroglobe's consolidated revenue and sales corresponding to Dow Corning Corporation represented 13.69% of the Company's sales. The Company had one customer, Dow Corning Corporation that accounted for more than 10% of consolidated revenue during the year ended December 31, 2016. Ferroglobe's sales to these customers are mainly governed by contracts that are currently in force.

Customer base

We have a diversified customer base across our key product categories. We have built long-lasting relationships with our customers based on the breadth and quality of our product offerings and our ability to frequently offer lower-cost and more reliable supply options than our competitors who do not have production facilities located near the customers' facilities or production capabilities to meet specific customer requirements. We sell our products to customers in over 30 countries across six continents, though our largest customer concentration is in the United States and Europe. The average length of our relationships with our top 30 customers exceeds ten years and, in some cases, such relationships go back as far as 30 years.

For the year ended December 31, 2016, Ferroglobe's ten largest customers accounted for approximately 42.23% of Ferroglobe's consolidated revenue. For the year ended December 31, 2016, approximately 48% of our metallurgical segment sales were to customers in Europe, approximately 36.23% were to customers in the United States and approximately 15.62.% were to the rest of the world.

Customer contracts

Our contracting strategy seeks to lock in significant revenue while remaining flexible to benefit from any price increases. Historically, we have targeted to contract approximately 80% of our silicon metal and manganese-based ferroalloys production and approximately 75% of our silicon-based ferroalloy production in the fourth quarter for the following calendar year. Our silicon metal is typically sold under annual contracts, whereas our manganese-based ferroalloys and silicon-based ferroalloys tend to be sold under both annual and quarterly contracts. Approximately 50% of contracted production has fixed prices whereas the other 50% are indexed to benchmarks.

The remaining 20% of our silicon metal and manganese-based ferroalloys production and 25% of our silicon-based ferroalloy production are sold on a spot basis. By selling on a spot basis, we are able to take advantage of premiums for prompt delivery. We believe that our diversified contract portfolio allows us to lock in a significant amount of revenues while also allowing us to remain flexible and benefit from unexpected price and demand upticks. Given spot price and current market dynamics, we are looking to enter into contracts for 2017 with short terms in order to benefit from expected price increases. We are also in the process of moving away from index-based contracts in favor of fixed prices.

Sales and Marketing Activities

Ferroglobe generally sells the majority of its products under annual contracts for silicone producers, and between three months to one year for steel and aluminum producing customers. All contracts generally include a volume framework and price formula based on the spot market price and other elements, including production costs and premiums. Ferroglobe also makes spot sales to customers with whom it does not have a contract as well as through quarterly agreements at prices that generally reflect market spot prices. In addition, Ferroglobe sells certain high quality products at prices that are not directly correlated with the market prices for the metals or alloys from which they are composed. Some of Ferroglobe's customer contracts contain provisions relating to the purchase of minimum volumes of products.

The vast majority of Ferroglobe's products are sold directly by its own sales force located in Spain, France, the United States and Germany, as well as in all of the countries in which Ferroglobe operates. Prior to the Business Combination with Globe, almost all sales in the United States were intermediated through local exclusive agents pursuant to standardized contractual arrangements. Some sales to primary and secondary aluminum manufacturers and silicone producers were direct. In Italy and the United Kingdom, sales of products other than silicon metal are intermediated through local exclusive agents.

Ferroglobe maintains credit insurance for the majority of its customer receivables to mitigate collection risk.

Competition

The most significant factor on which players in the silicon metal, manganese- and silicon-based alloys and specialty metals markets compete is price. Other factors include consistency of the chemical and physical specifications over time and reliability of supply.

The silicon metal, manganese- and silicon-based alloys and specialty metals markets are highly competitive, global markets, in which suppliers are able to reach customers across different geographies, and in which local presence is generally a minor advantage. In the silicon metal market, Ferroglobe's primary competitors include

Chinese producers, which have production capacity that exceeds total global demand. Aside from Chinese producers, Ferroglobe's competitors include Elkem, a Norwegian manufacturer of silicon metal, ferrosilicon, foundry products, silica fumes, carbon products and energy, Dow Corning, an American company specializing in silicone and silicon-based technology, Rusal, a Russian company that is a leading global aluminum and silicon metal producer, Rima, a Brazilian silicon metal and ferrosilicon producer, Liasa, a Brazilian producer of silicon, Wacker, a German chemical business which manufactures silicon and Simcoa Operations, an Australian company specializing in the production of silicon.

In the manganese and silicon alloys market, Ferroglobe's competitors include Privat Group, a Ukrainian company with operations in Australia, Ghana and Ukraine, Eramet, a French mining and metallurgical group, CHEMK Industrial Group, a Russian conglomerate which is one of the largest silicon-based alloy producers in the world, South 32 (formerly BHP Billiton), a global mining company with operations in Australia and South Africa, and Vale, a mining and metals group based in Brazil and Elkem.

In the silica fumes market, Ferroglobe's competitors include Elkem and Dow Corning.

Ferroglobe strives to be a highly efficient, low-cost producer, offering competitive pricing and engaging in manufacturing processes that capture most of its production by-products for reuse or resale. Additionally, through the vertical integration of its quartz mines in Spain, the United States, Canada and South Africa, its metallurgical coal mines in the United States and tree plantations in South Africa to obtain wood with which to produce charcoal, Ferroglobe has ensured access to some of the high quality raw materials that are essential in the silicon metal, manganese- and silicon-based alloy and specialty metals production process, and has been able to gain a competitive advantage over some of its competitors because it has reduced the contribution of these raw materials to its cost base.

Research and Development (R&D)

Ferroglobe focuses on continually developing its technology in an effort to improve its products and production processes. Our FerroAtlántica division's research and development division coordinates all the research and development activities within Ferroglobe. Ferroglobe also has cooperation agreements in place with various universities and research institutes in Spain, France and other countries around the world. For the years ended December 31, 2016, 2015 and 2014, Ferroglobe spent $6.2 million, $11.1 million, $11.2 million, respectively, on research and development projects and activities. Set forth below is a description of Ferroglobe's significant ongoing research and development projects.

ELSA electrode

Ferroglobe has internally developed a patented technology for electrodes used in silicon metal furnaces, which it has been able to sell to several major silicon producers globally. This technology, known as the ELSA electrode, improves the energy efficiency in the production process of silicon metal and eliminates contamination with iron. Ferroglobe has granted these producers the right to use the ELSA electrode against payment to Ferroglobe of royalties.

Solar grade silicon

Ferroglobe's solar grade silicon involves the production of solar grade silicon metal with a purity above 99.9999% through a new, potentially cost-effective, electrometallurgical process. The traditional chemical process tends to be costly and involves high energy consumption and potentially environmentally hazardous processes. The new technology, entirely developed by Ferroglobe at an earlier stage at its research and development facilities in Spain and France, aims to reduce the costs and energy consumption associated with the production of solar grade silicon.

In 2016, FerroAtlántica entered into a project with Aurinka for a feasibility study and basic engineering for an upgraded metallurgical grade ("UMG") solar silicon manufacturing plant. Purchases under this project were approximately €3.0 million for 2016. On December 20, 2016, Ferroglobe entered into an agreement with Aurinka and Blue Power (the "Solar JV Agreement") providing for the formation and operation of a joint venture with the purpose of UMG solar silicon, subject to the satisfaction of certain conditions precedent. Under the Solar JV Agreement, Ferroglobe will indirectly own 75% of the operating companies to be formed as part of the joint venture and 51% of the company to be formed as part of the joint venture to hold the intellectual property rights and know how contributed by Aurinka and Ferroglobe to the joint venture. See "Item 7.B.—Major Shareholders and Related Party Transactions—Related Party Transactions"

Pursuant to the Solar JV Agreement, and subject to the satisfaction of certain conditions precedent, FerroAtlántica has committed to incur capital expenditures in connection with the joint venture of approximately $118 million over the first three years, which constitutes the first phase of the project contemplated by the Solar JV Agreement. Plans for and financing of further phases are subject to agreement and approval by the parties to the Solar JV Agreement pursuant to specified procedures. To the extent the project continues into further phases, we would expect to commit, in the future and subject to appropriate approval and authorization, to incur approximately $100 million in joint venture-related capital expenditures in the fourth year, and approximately $77 million over the following three years. In connection with the Solar JV Agreement, FerroAtlántica has obtained two loans, with principal amounts of approximately €45 million and €27 million, respectively, from the Spanish Ministry of Industry and Energy for the purpose of building and operating the UMG solar silicon plant.

Capital Expenditures

Ferroglobe's capital expenditures for the years ended December 31, 2016, 2015 and 2014 were $71.1 million, $68.5 million and $45.4 million, respectively. Principal capital expenditures during these periods were primarily for maintenance and improvement works at Ferroglobe's plants and mines. We expect our capital expenditures for 2017 to equal approximately $65 million, excluding any capital expenditures related to our hydroelectric power operations in Spain and France, which we may sell in 2017, or to our solar grade silicon project. We believe we have the ability to reduce our capital expenditures by, as needed, idling individual electrometallurgy facilities. Additionally, subject to the satisfaction of certain conditions precedent, we have committed to incur approximately $118 million of capital expenditures in connection with our solar grade silicon joint venture over an initial phase estimated for up to three years. While we would expect to commit to further amounts in connection with this joint venture in the future if the project continues to subsequent phases, which is subject to agreement and approval with our joint venture partners, we have not yet committed to any expenditures with respect to further phases. Capital expenditures in connection with our solar grade silicon joint venture are financed in part by two loans obtained from the Spanish Ministry of Industry and Energy. See "Item 4.B.—Information on the Company—Business Overview—Research and Development (R&D)—Solar grade silicon" and "Item 7.B.—Major Shareholders and Related Party Transactions—Related Party Transactions."
Ferroglobe finances capital expenditures mainly from cash generated by its operating activities, and to a lesser extent, where applicable, from its existing credit facilities.

Proprietary Rights and Licensing

The majority of Ferroglobe's intellectual property consists of proprietary know-how and trade secrets. Ferroglobe's intellectual property strategy is focused on developing and protecting proprietary know-how and trade secrets, which are maintained through employee and third-party confidentiality agreements and physical security measures. Although Ferroglobe has some patented technology, Ferroglobe believes that its businesses and profitability do not rely fundamentally upon patented technology.

Regulatory Matters

Environmental and health and safety

Ferroglobe operates facilities worldwide, which are subject to foreign, national, regional, provincial and local environmental, health and safety laws and regulations, including, among others, those requirements governing the discharge of materials into the environment, the generation, use, storage and disposal of hazardous substances, the extraction and use of water, land use, reclamation and remediation and the health and safety of Ferroglobe's employees. These laws and regulations require Ferroglobe to obtain from governmental authorities permits to conduct its regulated activities, which permits may be subject to modification or revocation by such authorities.

Ferroglobe may not be at all times in complete compliance with such laws, regulations and permits, although Ferroglobe is not aware of any material past or current noncompliance. Failure to comply with these laws, regulations and permits may result in the assessment of administrative, civil and criminal penalties or other sanctions by regulators, the imposition of obligations to conduct remediation or upgrade or install pollution or dust control equipment, the issuance of injunctions limiting or preventing Ferroglobe's activities, legal claims for personal injury or property damages, and other liabilities.

Under these laws, regulations and permits, Ferroglobe could also be held liable for any consequences arising out of human exposure to hazardous substances or environmental damage Ferroglobe may cause or that relates to its current or former operations or properties. Environmental, health and safety laws are likely to become more stringent in the future. Ferroglobe's costs of complying with current and future environmental, health and safety laws, and its liabilities arising from past or future releases of, or exposure to, hazardous substances, may exceed budgeted or reserved amounts and adversely affect Ferroglobe's business, results of operations and financial condition.

There are a variety of laws and regulations in place or being considered at the international, national, regional, provincial and local levels of government that restrict or are reasonably likely to result in limitations on emissions of carbon dioxide and other greenhouse gases. These legislative and regulatory developments may cause Ferroglobe to incur material costs to reduce the greenhouse gas emissions from its operations (through additional environmental control equipment or retiring and replacing existing equipment) or to obtain emission allowance or credits, or result in the incurrence of material taxes, fees or other governmental impositions on account of such emissions. In addition, such developments may have indirect impacts on Ferroglobe's operations, which could be material. For example, they may impose significant additional costs or limitations on electricity generators, which could result in a material increase in energy costs.

Some environmental laws assess liability on current or previous owners or operators of real property for the cost of removal or remediation of hazardous substances. In addition to cleanup, cost recovery or compensatory actions brought by foreign, national, provincial and local agencies, neighbors, employees or other third parties could make personal injury, property damage or other private claims relating to the presence or release of hazardous substances. Environmental laws often impose liability even if the owner or operator did not know of, or did not cause, the release of hazardous substances. Persons who arrange for the disposal or treatment of hazardous substances also may be responsible for the cost of removal or remediation of these substances. Such persons can be responsible for removal and remediation costs even if they never owned or operated the disposal or treatment facility. In addition, such owners or operators of real property and persons who arrange for the disposal or treatment of hazardous substances can be held responsible for damages to natural resources.

For a summary of regulatory matters applicable to Ferroglobe's mining operations, see "—Laws and regulations applicable to Ferroglobe's mining operations."

Energy and electricity generation

Ferroglobe operates hydroelectric plants in Spain and France, which are subject to energy, environmental, health and safety laws and regulations, including those governing the health and safety of Ferroglobe's employees, the generation of electricity and the use of water and river basins. These laws and regulations require Ferroglobe to obtain from governmental authorities permits to conduct its activities, which permits may be subject to modification or revocation by these authorities.

Additionally, Ferroglobe's energy operations are subject to government regulation. In Spain, the regulatory framework applicable to electricity producers underwent significant changes in 2013. The regulatory framework previously applicable to renewable energies was abolished, and a new regulatory framework was established through the enactment of Royal Decree-Law 9/2013 of July 13, taking certain urgent measures to guarantee the financial stability of the Spanish electrical system. The development of this new framework continued with the passing of the new Electricity Industry Law 24/2013 in Spain in December 2013, and was completed with the enactment of Royal Decree 413/2014 of June 6, which regulates electricity generation activities using renewable energy sources, co-generation and waste, and Order IET/1045/2014 of June 16, approving the compensation parameters for standard facilities applicable to certain production facilities based on renewable energy sources, co-generation and waste. This regulation established a new compensation scheme based on two concepts: remuneration for investments based on installed capacity, and remuneration for operation based on the energy produced. The first one guarantees a "reasonable return" on the investments, and the second one covers the operating cost of those technologies for which operating cost exceeds market revenues. As a result, since July 2013, Ferroglobe has sold the electricity it generates in Spain at market prices rather than at guaranteed prices that provided a premium above market prices, with the exception of energy generated by the Novo Pindo plant in Galicia, which continues to receive a premium that is considerably lower than the premium it received under the prior regulatory framework. It is expected that new regulations will allow Ferroglobe to continue to participate in "ancillary services" markets.

Trade

Ferroglobe benefits from antidumping and countervailing duty orders and laws that protect its products by imposing special duties on unfairly traded imports from certain countries. In the United States, antidumping duties are in effect covering silicon metal imports from China and Russia. In the European Union, antidumping duties are in place covering silicon metal imports from China and ferrosilicon imports from China and Russia. In Canada, there are antidumping and countervailing duties in effect covering silicon metal imports from China. These orders are subject to revision, revocation or rescission as a result of periodic reviews.

A sunset review of the U.S. antidumping order covering silicon metal imports from China is currently being conducted, which may result in the removal of the duties on such imports. If the duties are removed, our sales in the United States may be adversely affected.

In March 2017, Globe filed a petition with the U.S. Department of Commerce and the U.S. International Trade Commission covering imports of silicon metal from Australia, Brazil, Kazakhstan and Norway. If the petition is unsuccessful, our sales in the United States may be adversely affected.

In December 2016, Ferroglobe and its subsidiaries filed a complaint with the Canada Border Services Agency against imports of silicon metal from Brazil, Kazakhstan, Laos, Malaysia, Norway, Russia, and Thailand. If the complaint is unsuccessful, our sales in Canada may be adversely affected.

Seasonality

Electrometallurgy

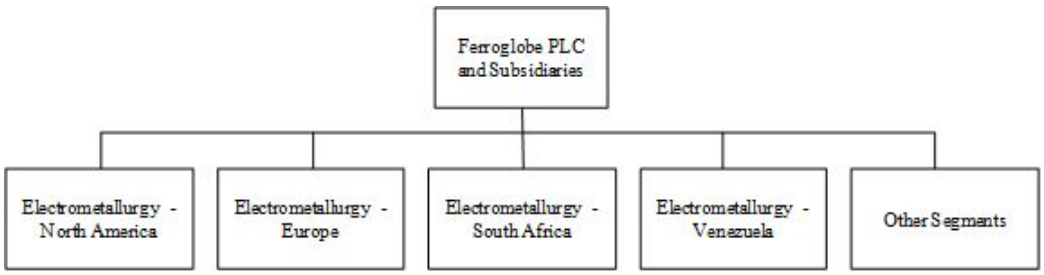
Due to the cyclicality of energy prices in certain jurisdictions and the energy-intensive nature of the production processes for silicon metal, manganese- and silicon-based alloys and specialty metals, Ferroglobe does not operate its electrometallurgy plants during certain periods or times of day when energy prices are at their peak. Demand for Ferroglobe's manganese- and silicon-based alloy and specialty metals products is lower during these periods as its customers also suspend their energy-intensive production processes involving Ferroglobe's products. As a result, sales within particular geographic regions are subject to seasonality.

The seasonality of Ferroglobe's operations is reflected in its borrowings, with its subsidiaries repaying borrowings between December and March, and increasing borrowings from April through November.

Energy

Ferroglobe's hydroelectric power generation is dependent on the amount of rainfall in the regions in which its hydropower projects are located, which varies considerably from season to season.

C. Organizational structure.



For a list of subsidiaries and ownership structure see Note 2 in the Consolidated Financial Statements.

D. Property, Plant and Equipment.

See "Item 4.B.—Information on the Company—Business Overview."

ITEM 4A. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

A. Operating Results

Introduction

The following "management's discussion and analysis" should be read in conjunction with the Consolidated Financial Statements of Ferroglobe as of December 31, 2016 and 2015 and for the years ended December 31, 2016, 2015 and 2014, which are included in this annual report. This discussion includes forward-looking statements, which, although based on assumptions that Ferroglobe considers reasonable, are subject to risks and uncertainties which could cause actual events or conditions to differ materially from those expressed or implied by the forward-looking statements. See "Cautionary Statements Regarding Forward-Looking Statements." For a discussion of risks and uncertainties facing Ferroglobe, see "Item 3.D.—Key Information—Risk Factors."

The Consolidated Financial Statements of Ferroglobe included in this annual report were translated from Euro (functional currency) to U.S. Dollars. In accordance with IAS 21 — The Effects of Changes in Foreign Exchange Rates, Ferroglobe's consolidated income statements for the years ended December 31, 2016, 2015 and 2014 have been translated from Euro into U.S. Dollars using the rate of $1.1069, $1.1099 and $1.3285, respectively, to one Euro, and Ferroglobe's consolidated balance sheets as of December 31, 2016 and 2015 have been translated from Euro into U.S. Dollars using the rate of $1.0541 and $1.0887, respectively, to one Euro.

The Company's business started with the consummation of the Business Combination on December 23, 2015. FerroAtlántica is the Company's "Predecessor" for accounting purposes. Therefore, the results of the Company for the 2015 fiscal year were composed of the results of:

- Ferroglobe PLC for the period beginning February 5, 2015 (inception of the entity) and ended December 31, 2015;
- FerroAtlántica, the Company's "Predecessor," for the year ended December 31, 2015; and
- Globe for the eight-day period ended December 31, 2015.

The data and results of fiscal years prior to 2015 correspond exclusively to the Predecessor, FerroAtlántica, unless otherwise expressly stated.

The statement of financial position reflects the balance sheet of the Company as of December 31, 2016 and 2015.

Principal Factors Affecting Our Results of Operations

Sale prices

Ferroglobe's operating performance is highly correlated to sales prices, which are influenced by several different factors that vary across Ferroglobe's segments.

Manganese-based alloy prices have shown a significant correlation with the price of manganese ore, which allows us to pass increases in the cost of manganese ore through to our customers, but also results in a decrease in prices for our manganese-based alloys when the price of manganese ore decreases. During 2015, we saw two different trends. The first part of the year came with a high demand due to the performance of the steel industry, with sustained support in prices for the manganese alloys. Starting June 2015, the trend evolved to negative, with an important decrease in prices of all raw materials and specifically manganese ore. This had an impact on the evolution of prices. In the second half of 2016, manganese ore prices increased substantially, followed with a certain time lag by a significant increase in manganese alloys prices.

We have experienced a weakened economic environment in national and international metals markets, including a sharp decrease in silicon metal prices in all major markets since late 2014, though we have experienced an improvement in silicon metal prices since the fourth quarter of 2016.

Under Ferroglobe's pricing policy, which is aimed at reducing dependence on spot market prices, prices applied to its term contracts have a diversity of formulas ranging from prices related to spot market prices to annual or quarterly fixed prices. Ferroglobe sells certain high quality products for which pricing is not directly correlated to spot market prices.

Cost of raw materials

The key raw materials sourced by Ferroglobe are quartz, manganese ore, coal, wood and charcoal. Manganese ore is the largest component of the cost base for manganese-based alloys. In 2016, approximately 95% of Ferroglobe's total $77.3 million expense with respect to manganese ore fell under contractual agreements with producers of manganese ore with terms of one to three years, while the remaining manganese ore was procured from the international spot market. Coal meeting certain standards for ash content and other physical properties is used as a major carbon reductant in silicon-based alloy production. In 2016, coal represented a $150.0 million expense for Ferroglobe. Wood is both an important element for the production of silicon alloys and used to produce charcoal, which is used as a carbon reductant at Ferroglobe's South African subsidiary Silicon Smelters (Pty.), Ltd. Ferroglobe's wood expense amounted to $57.9 million in 2016. The FerroAtlántica subsidiaries of Ferroglobe source approximately 55% of their quartz needs from FerroAtlántica's mines in Spain and South Africa, and, the Globe subsidiaries source approximately 75% of their quartz needs from Globe's mines in the United States and Canada. Total quartz consumption in 2016 represented an expense of $100.8 million.

Power

Power constitutes one of the single largest expenses for most of Ferroglobe's products other than manganese-based alloys. Ferroglobe focuses on minimizing energy prices and unit consumption throughout its operations by concentrating its production during periods when energy prices are lower. In 2016, Ferroglobe's total power consumption was 8,468 gigawatt hours with power contracts that vary across its operations. In Spain and South Africa, power prices are mostly spot or daily prices with important seasonal fluctuations, whereas in France and Venezuela, Ferroglobe has power contracts that provide for flat or near-flat rates for most of the year.

In Spain, FerroAtlántica receives a rebate on a portion of its energy costs in exchange for an agreement to interrupt production, and thus power usage, upon request. FerroAtlántica uses derivative financial instruments to partly hedge risks related to energy price volatility in Spain.

In France, FerroPem S.A.S. has traditionally had access to relatively low power prices, as it benefited from Electricité de France's green tariff ("Tarif Vert"), and a discount thereon. The green tariffs expired at the end of 2015 and Ferroglobe has negotiated alternative arrangements with Electricité de France for 2017, and is currently negotiating long-term supply contracts with suppliers in the market place. Additionally, a new regulation enacted by the National Assembly and the Government through Laws and Decrees allows FerroPem S.A.S. to benefit from reduced access tariffs plus rebates based on interruptibility. Furthermore, the new arrangements allow FerroPem S.A.S. to operate competitively on a 12-month basis, avoiding the need to stop for two months due to the Tarif Vert. We believe that the new arrangements will provide power prices comparable to past levels and with high degree of predictability going forward.

In Venezuela, FerroVen, S.A. has access to low and stable power prices denominated in U.S. Dollars through a long-term contract with the local power supplier, as its factories are located in the proximity of five hydroelectric power plants. In South Africa, energy prices are regulated by the National Energy Regulator (NERSA) and price increases are publicly announced in advance.

In the United States, we enter into long-term electric power supply contracts. Our power supply contracts have in the past resulted in stable, long-term commitments of power at what we believe to be reasonable rates. In West Virginia, we have a contract with Brookfield Energy to provide approximately 45% of our power needs, from a dedicated hydroelectric facility, at a fixed rate through December 2021. The rate of our power needs in West Virginia, Ohio and Alabama are primarily sourced through special contracts that provide historically competitive rates and the remainder is sourced at market rates. At our Niagara Falls, New York plant, we have been granted a public sector package including 18.4 megawatts and hydro power through to 2021, effective June 1, 2016.

Foreign currency fluctuation

As a result of the Business Combination, Ferroglobe has a diversified production base consisting of production facilities across the United States, Europe, South America, South Africa and Asia. Ferroglobe production costs are mostly dependent on local factors, with the exception of the cost of manganese ore and coal, which are dependent on global commodity prices. The relative strength of the functional currencies of Ferroglobe's subsidiaries influences its competitiveness in the international market, most notably in the case of Ferroglobe's Venezuelan and South African operations, which have historically exported a majority of their production to the U.S. and the European Union. For additional information see "Item 11.—Quantitative and Qualitative Disclosures About Market Risk—Foreign Exchange Rate Risk."

The current loss of value of the Euro versus the U.S. Dollar has resulted in a significant price gap between U.S. Dollar- and Euro-denominated spot market prices for silicon metal in particular, which enhances the competitiveness of our European production units in the international markets.

Regulatory changes

Ferroglobe's energy operations are subject to government regulation. In Spain, the regulatory framework applicable to electricity producers underwent significant changes in 2013. The regulatory framework previously applicable to renewable energies was abolished, and the foundation for a new framework was established through the enactment of Royal Decree-Law 9/2013. The development of this new framework continued with the passing of the Electricity Industry Law in Spain in December 2013, and was completed with the enactment of Royal Decree 413/2014 and Order IET/1045/2014.

As a result, since July 2013, the subsidiary FerroAtlántica, S.A. has sold the electricity it generates at market prices, optimizing its generation by operating during peak price hours and participating in the "ancillary services" markets rather than at guaranteed prices that provided a premium above market prices, with the exception of energy generated by the Novo Pindo plant in Galicia, which continues to receive a premium. It is expected that new regulations will allow FerroAtlántica to continue to participate in "ancillary services" markets. New power supply arrangements that have been entered into in 2016 for our French plants have managed to avoid this seasonal interruption.

Critical Accounting Policies

The discussion and analysis of Ferroglobe's financial condition and results of operations is based upon its Consolidated Financial Statements, which have been prepared in accordance with IFRS as issued by the IASB. The preparation of those financial statements requires Ferroglobe to make estimates and judgments that affect the reported amounts of assets and liabilities, revenues and expenses, the disclosure of contingent assets and liabilities and related disclosure at the date of its financial statements. The estimates and related assumptions are based on available information at the date of preparation of the financial statements, on historical experience and on other relevant factors. Actual results may differ from these estimates under different assumptions and conditions. Critical accounting policies are those that reflect significant judgments of uncertainties and potentially result in materially different results under different assumptions and conditions. The principal items affected by estimates are income taxes, business combinations, inventories, goodwill, and impairment of long-lived assets. The following are Ferroglobe's most critical accounting policies, because they generally involve a comparatively higher degree of judgment in their application. For a description of all of Ferroglobe's principal accounting policies, see note 4 to the Consolidated Financial Statements of Ferroglobe included elsewhere in this annual report.

Business combinations

Ferroglobe subsidiaries have completed a number of significant business acquisitions over the past several years. Our business strategy contemplates that we may pursue additional acquisitions in the future. When we acquire a business, the purchase price is allocated based on the fair value of tangible assets and identifiable intangible assets acquired and liabilities assumed. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. Goodwill as of the acquisition date is measured as the residual of the excess of the consideration transferred, plus the fair value of any non-controlling interest in the acquiree at the acquisition date, over the fair value of the identifiable net assets acquired. We generally engage independent third-party appraisal firms to assist in determining the fair value of assets acquired and liabilities assumed. Such a valuation requires management to make significant estimates, especially with respect to intangible assets. These estimates are based on historical experience and

information obtained from the management of the acquired companies. These estimates are inherently uncertain and may impact reported depreciation and amortization in future periods, as well as any related impairment of goodwill or other long lived assets.

See note 5 to the accompanying audited Consolidated Financial Statements for detailed disclosures related to our acquisitions.

Goodwill

Goodwill represents the excess purchase price of acquired businesses over fair values attributed to underlying net tangible assets and identifiable intangible assets. For the purpose of impairment testing, goodwill is allocated to each of the Company's cash-generating units (or groups of cash generating units) that is expected to benefit from the synergies of the combination. A cash-generating unit to which goodwill has been allocated is tested for impairment annually, or more frequently when there is an indication that the unit may be impaired. If the recoverable amount of the cash-generating unit is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit pro rata based on the carrying amount of each asset in the unit. Any impairment loss for goodwill is recognized directly in profit or loss. On disposal of the relevant cash-generating unit, the attributable amount of goodwill is included in the determination of the profit or loss on disposal.

The valuation of the Company's cash generating units requires significant judgment in evaluation of, among other things, recent indicators of market activity and estimated future cash flows, discount rates and other factors. The estimates of cash flows, future earnings, and discount rate are subject to change due to the economic environment and business trends, including such factors as raw material and product pricing, interest rates, expected market returns and volatility of markets served, as well as our future manufacturing capabilities, government regulation and technological change. We believe that the estimates of future cash flows, future earnings, and fair value are reasonable; however, changes in estimates, circumstances or conditions could have a significant impact on our fair valuation estimation, which could then result in an impairment charge in the future.

During the year ended December 31, 2016, in connection with our annual goodwill impairment test, the Company recognized an impairment charge of $193,000,000 related to the partial impairment of goodwill in North America, that was recorded as a result of Business Combination, resulting from a sustained decline in sales prices that continued throughout 2016 and which caused the Company to revise its expected future cash flows from its North American business operations. Ferroglobe operates in a cyclical market, and silicon and silicon-based alloy index pricing and foreign import pressure into the U.S. and Canadian markets impact the future projected cash flows used in our impairment analysis.

Long-lived assets

In order to ascertain whether its assets have become impaired, Ferroglobe compares their carrying amount with their recoverable amount at the end of the reporting period, or more frequently if there are indications that the assets might have become impaired. Where the asset itself does not generate cash flows that are independent from other assets, Ferroglobe estimates the recoverable amount of the cash-generating unit to which the asset belongs. Recoverable amount is the higher of fair value and value in use, which is the present value of the future cash flows that are expected to be derived from continuing use of the asset and from its ultimate disposal at the end of its useful life, discounted at a pre-tax rate which reflects the time value of money and the risks specific to the business to which the asset belongs.

If the recoverable amount of an asset or cash-generating unit is less than its carrying amount, the carrying amount of the asset is reduced to its recoverable amount, and an impairment loss is recognized as an expense under "net impairment losses" in the consolidated income statement. Where an impairment loss subsequently reverses, the carrying amount of the asset is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset in prior years. A reversal of an impairment is recognized as "other income" in the consolidated income statement. The basis for depreciation or amortization is the carrying amount of the assets, deemed to be the acquisition cost less any accumulated impairment losses.

During 2016, the Company determined due to market conditions that our facility in Venezuela was to be idled. Since the cash flows from the cash generating unit were uncertain, the Company tested the long-lived assets for impairment. The recoverable amount of the cash generating unit was determined based on the fair value of the

assets less costs to dispose. The Company concluded that the costs to dispose exceed the fair value of the assets, primarily due to political and financial instability in Venezuela. As a result, the Company fully impaired the long-lived assets and took an impairment charge of $58,472,000 for property, plant and equipment.

During 2016, the Company recognized an impairment charge of $9,176,000 related to the Company's mining assets in South Africa, which was comprised of goodwill impairment of $1,612,000, impairment of property, plant and equipment of $7,334,000 (including associated translation differences) and impairment of other intangible assets of $230,000.

Inventories

Cost of inventories is determined by the average cost method. Inventories are valued at the lower of cost or market value. Circumstances may arise (e.g., reductions in market pricing, obsolete, slow moving or defective inventory) that require the carrying amount of our inventory to be written down to net realizable value. We estimate market and net realizable value based on current and future expected selling prices, as well as expected costs to complete, including utilization of parts and supplies in our manufacturing process. We believe that these estimates are reasonable; however, future market price decreases caused by changing economic conditions, customer demand, or other factors could result in future inventory write-downs that could be material.

Income taxes

The current income tax expense incurred by Ferroglobe subsidiaries on an individual basis is determined by applying the applicable tax rate to the taxable profit for the year, calculated on the basis of accounting profit before tax, increased or decreased, as appropriate, by the permanent differences arising from the application of tax legislation and by the elimination of any tax consolidation adjustments, taking into account tax relief and tax credits. The consolidated income tax expense is calculated by adding together the expense recognized by each of the consolidated subsidiaries, increased or decreased, as appropriate, as a result of the tax effect of consolidation adjustments for accounting purposes.

Ferroglobe's deferred tax assets and liabilities include temporary differences measured at the amounts expected to be payable or recoverable on differences between the carrying amounts of assets and liabilities and their tax bases, and tax loss and tax credit carryforwards. These amounts are measured at the tax rates that are expected to apply in the period when the asset is realized or the liability is settled. Deferred tax liabilities are recognized for all taxable temporary differences, except for those arising from the initial recognition of goodwill. Deferred tax assets are recognized to the extent that it is considered probable that Ferroglobe will have taxable profits in the future against which the deferred tax assets can be utilized. The deferred tax assets and liabilities recognized are reassessed at each reporting date in order to ascertain whether they still exist, and the appropriate adjustments are made on the basis of the findings of the analyses performed.

Significant judgment is required in determining income tax provisions and tax positions. Ferroglobe may be challenged upon review by the applicable taxing authorities, and positions taken may not be sustained. The accounting for uncertain income tax positions requires consideration of timing and judgments about tax issues and potential outcomes and is a subjective estimate. In certain circumstances, the ultimate outcome of exposures and risks involves significant uncertainties. If actual outcomes differ materially from these estimates, they could have a material impact on Ferroglobe's results of operations and financial condition. Interest and penalties related to uncertain tax positions are recognized in income tax expense.

Results of Operations — Ferroglobe Year Ended December 31, 2016 Compared to Ferroglobe Year Ended December 31, 2015

($ thousands)	**Year ended December 31,**	
	2016	**2015**
Sales	1,555,657	1,289,886
Cost of sales	(1,043,000)	(817,875)
Other operating income	25,712	15,500
Staff costs	(293,032)	(202,585)
Other operating expense	(234,326)	(190,034)
Depreciation and amortization charges, operating allowances and write-downs	(121,346)	(62,201)
Operating (loss) profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**(110,335)**	**32,691**
Impairment losses	(267,449)	(52,042)
Net gain (loss) due to changes in the value of assets	1,891	(912)
Loss on disposal of non-current assets	(340)	(2,208)
Other loss	(40)	(347)
OPERATING LOSS	**(375,593)**	**(22,818)**
Finance income	1,534	1,095
Finance costs	(24,585)	(23,738)
Exchange differences	(3,513)	35,904
LOSS BEFORE TAXES	**(402,157)**	**(9,557)**
Income tax benefit (expense)	46,609	(48,719)
LOSS FROM CONTINUING OPERATIONS	**(355,548)**	**(58,276)**
Loss from discontinued operations	(3,065)	(196)
LOSS FOR THE YEAR	**(358,613)**	**(58,472)**
Loss attributable to non-controlling interests	20,186	15,204
LOSS ATTRIBUTABLE TO FERROGLOBE	**(338,427)**	**(43,268)**

The financial information for the year ended December 31, 2016 includes the consolidated results for the full year ended December 31, 2016, whereas the financial information for the year ended December 31, 2015 includes the results of Globe for only the eight -day period ended December 31, 2015 subsequent to the Business Combination on December 23, 2015.

Sales

Sales increased $265,771,000 or 20.6%, from $1,289,886,000 for the year ended December 31, 2015 to $1,555,657,000 for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe sales in 2016 of $545,264,000 as compared to the inclusion of only eight days of Globe sales in 2015. This increase was offset by a 20.3% decrease in average selling prices (prices based in euros) of all primary products and a 0.4% decrease in sales volumes at FerroAtlántica.

Excluding Globe, average selling prices (in local currency) for silicon metal, silicon-based alloys and manganese alloys pricing decreased by 16.0%, 9.2% and 18.2%, respectively, primarily due to lower European market index pricing.

Excluding Globe, silicon metal sales volume decreased 7.5% primarily due to lower demand driven by pricing pressure from imports. This decrease was partially offset by slight increases in sales volumes of silicon-based alloys and manganese alloys, of 3.5% and 2.4%, respectively.

In summary, since late 2014, we have experienced a sharp decrease in silicon metal prices, our main product produced and sold, which has adversely affected our sales for the year ended December 31, 2016, as compared to the sales of FerroAtlántica and Globe for the year ended December 31, 2015. This effect was particularly pronounced in relation to the sales of our European business.

Cost of sales

Cost of sales increased $225,125,000, or 27.5%, from $817,875,000 for the year ended December 31, 2015 to $1,043,000,000 for the year ended December 31, 2016, primarily due to the inlcusion of a full year of Globe cost of sales in 2016 of $340,617,000 as compared to the inclusion of only eight days of Globe cost of sales in 2015. This increase was offset by a 14.2% decrease in the cost of sales of FerroAtlántica due to manufacturing cost improvement initiatives, including lower raw material and energy costs.

Other operating income

Other operating income increased $10,212,000, or 65.9%, from $15,500,000 for the year ended December 31, 2015 to $25,712,000 for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe other operating income in 2016 of $2,986,000 as compared to the inclusion of only eight days of Globe other operating income in 2015. In addition, the increase in other operating income is attributable to an increase in sales of fines, silica fume and other by-products.

Staff costs

Staff costs increased $90,447,000, or 44.6%, from $202,585,000 for the year ended December 31, 2015 to $293,032,000 for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe staff costs in 2016 of $121,251,000 as compared to the inclusion of only eight days of Globe staff costs in 2015. This increase was offset by a decrease in FerroAtlántica staff costs of approximately $30,000,000 due to a decrease in variable-based compensation expense reflecting annual company performance.

Other operating expense

Other operating expense increased $44,292,000, or 23.3%, from $190,034,000 for the year ended December 31, 2015 to $234,326,000 for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe other operating expense in 2016 of $63,065,000 as compared to the inclusion of only eight days of Globe other operating expense in 2015. This increase was offset by a decrease in due diligence expenses related to the Business Combination in 2015.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs increased $59,145,000 or 95.1%, from $62,201,000 for the year ended December 31, 2015 to $121,346,000 for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe depreciation and amortization charges, operating allowances and write-downs in 2016 of $73,525,000 as compared to the inclusion of only eight days of Globe depreciation and amortization charges, operating allowances and write-downs in 2015.

Impairment losses

Net impairment losses increased $215,407,000, from a loss of $52,042,000 for the year ended December 31, 2015 to a loss of $267,449,000 for the year ended December 31, 2016. The increase in impairment losses is primarily due to the impairment of goodwill in relation to our North American assets of $193,000,000, the impairment of non-current operational assets located in Venezuela, South Africa and France, totaling $58,472,000, $9,176,000, and $1,178,000, respectively, and the impairment of non-current financial assets amounting $5,623,000.

Finance income

Finance income increased $439,000, or 40.1%, from $1,095,000 for the year ended December 31, 2015 to $1,534,000 for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe finance income in 2016 of $676,000 as compared to the inclusion of only eight days of Globe finance income in 2015.

Finance costs

Finance costs increased $847,000, or 3.6%, from $23,738,000 for the year ended December 31, 2015 to $24,585,000 for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe finance costs in 2016 of $5,714,000 as compared to the inclusion of only eight days of Globe finance income in 2015. This increase was offset by a reduction in FerroAtlántica's outstanding debt and, therefore incurred lower finance costs, as well as a decrease in interest rates year-over-year.

Exchange differences

Exchange differences decreased $39,417,000, from a gain of $35,904,000 for the year ended December 31, 2015 to a loss of $3,513,000 for the year ended December 31, 2016, partially due to the inclusion of a full year of Globe exchange differences in 2016 of $4,567,000 related to the devaluation of the Argentine Peso, as compared to the inclusion of only eight days of Globe exchange differences in 2015.

Income tax

Income tax expense decreased $95,328,000, or 195.7%, from an income tax expense of $48,719,000 for the year ended December 31, 2015 to an income tax benefit of $46,609,000 for the year ended December 31, 2016. This decrease is primarily attributable to the inclusion of a full year of Globe income tax benefit in 2016 of $30,598,000 as compared to the inclusion of eight days of Globe income tax expense in 2015. In addition, FerroAtlántica operations generated losses in 2016, which further increased the income tax benefit for the year ended December 31, 2016.

Segment operations

During 2016, upon further evaluation of the management reporting structure as a result if the integration of the operations of FerroAtlántica and Globe we have concluded that our operating and reportable segments have changed since the prior year. The comparative prior periods have been restated to conform to the 2016 reportable segment presentation.

Operating segments are based upon the Company's management reporting structure. As such, we report our results in accordance with the following segments:

- Electrometallurgy – North America;
- Electrometallurgy – Europe;
- Electrometallurgy – South Africa;
- Electrometallurgy – Venezuela; and
- Other segments.

Electrometallurgy – North America

	Year ended December 31,	
($ thousands)	**2016**	**2015**
Sales	521,192	10,062
Cost of sales	(325,254)	(6,200)
Other operating income	362	17
Staff costs	(82,032)	(1,983)
Other operating expense	(64,606)	(276)
Depreciation and amortization charges, operating allowances and write-downs	(73,530)	(1,183)
Operating (loss) profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**(23,868)**	**437**

The Electrometallurgy – North America segment is comprised of only Globe subsidiaries. As a result, the segment information for the year ended December 31, 2016 includes the segment information for the full year ended December 31, 2016, whereas the segment information for the year ended December 31, 2015 includes the segment information for only the eight-day period ended December 31, 2015 subsequent to the Business Combination on December 23, 2015.

Sales

Sales increased $511,130,000, from $10,062,000 for the year ended December 31, 2015 to $521,192,000 for the year ended December 31, 2016, primarily due to the inclusion of the full year of sales in 2016 as compared to the inclusion of only eight days of sales in 2015 following the Business Combination. On a pro-forma basis, sales for the segment decreased $165,655,000, or 24%, from $686,847,000 in 2015 to $521,192,000 in 2016. The decrease was primarily attributable to a 12% decrease in average selling prices coupled with a 15% decrease in tons sold. Silicon metal pricing decreased 14%, primarily due to lower index pricing which resulted in lower pricing on annual calendar 2016 contracts and index-based contracts. Silicon-based alloys pricing decreased 10% as a result of lower index pricing. Silicon metal volume decreased 10%, primarily due to lower demand driven by pricing pressure from imports. Silicon-based alloys volume decreased 24% due to a weaker end market and lower customer demand.

Cost of sales

Cost of sales increased by $319,054,000, from $6,200,000 for the year ended December 31, 2015 to $325,254,000 for the year ended December 31, 2016. On a pro-forma basis, cost of sales decreased in line with

the 15% decrease in sales volumes, offset by higher stand-down costs associated with the idling of the Selma, Alabama plant in February 2016 without any corresponding production.

Staff costs

Staff costs increased by $80,049,000, from $1,983,000 for the year ended December 31, 2015 to $82,032,000 for the year ended December 31, 2016. On a pro forma basis, staff costs decreased by approximately 18%, due to lower variable-based compensation expense reflecting annual company performance year-over-year.

Other operating expense

Other operating expense increased by $64,330,000, from $276,000 for the year ended December 31, 2015 to $64,606,000 for the year ended December 31, 2016, primarily due to a full year of other operating expense in 2016 as compared to only eight days of Globe other operating expense in 2015. On a pro forma basis, other operating expense decreased due to lower non-recurring transaction costs during 2015 related to the Business Combination.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs increased by $72,347,000 from $1,183,000 for the year ended December 31, 2015 to $73,530,000 for the year ended December 31, 2016. On a pro forma basis, depreciation and amortization charges, operating allowances and write-downs increased by approximately 50%. This increase is attributable to the increased depreciable asset balance during 2016 as a result of the use of the acquisition-method treatment of Globe's non-current assets associated with the Business Combination, as all acquired assets and liabilities were stepped up to fair value as of the closing date of the Business Combination.

Electrometallurgy – Europe

	Year ended December 31,	
($ thousands)	**2016**	**2015**
Sales	949,547	1,174,968
Cost of sales	(672,026)	(811,114)
Other operating income	25,908	52,211
Staff costs	(132,440)	(148,652)
Other operating expense	(118,269)	(142,867)
Depreciation and amortization charges, operating allowances and write-downs	(31,730)	(35,255)
Operating profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**20,990**	**89,291**

Sales

Sales decreased $225,421,000, or 19.2%, from $1,174,968,000 for the year ended December 31, 2015 to $949,547,000 for the year ended December 31, 2016, primarily due to an 18.5% decrease in average selling prices for all primary products as well as a foreign exchange impact which decreased sales by $2,574,000.

Average selling prices (in local currency) for silicon metal, silicon-based alloys and manganese alloys pricing decreased 20.4%, 22.6% and 12.3%, respectively, primarily due to lower European market index pricing. The sales volume of primary products was relatively consistent year-over-year.

Cost of sales

Cost of sales decreased $139,088,000, or 17.1%, from $811,114,000 for the year ended December 31, 2015 to $672,026,000 for the year ended December 31, 2016, primarily due to manufacturing cost improvement initiatives, including lower raw material and energy costs. In addition, there was a favorable foreign exchange impact, which decreased Euro-denominated costs by $1,821,000.

Other operating income

Other operating income decreased $26,303,000, or 50.4%, from $52,211,000 for the year ended December 31, 2015 to $25,908,000 for the year ended December 31, 2016, primarily due to intercompany charges to the parent

company during 2015 for its share of non-recurring transaction costs related to the Business Combination, which FerroAtlántica paid.

Staff costs

Staff costs decreased $16,212,000 or 10.9%, from $148,652,000 for the year ended December 31, 2015 to $132,440,000 for the year ended December 31, 2016, primarily due to a decrease in the bonus and other social benefits in France and in Spain to reflect the Company's annual performance.

Other operating expense

Other operating expense decreased $24,598,000, or 17.2%, from $142,867,000 for the year ended December 31, 2015 to $118,269,000 for the year ended December 31, 2016, primarily due to a reduction of non-recurring transaction costs of approximately $27,000,000 related to the Business Combination in 2015.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $3,525,000, or 10.0%, from $35,255,000 for the year ended December 31, 2015 to $31,730,000 for the year ended December 31, 2016, primarily due to a decrease in write-downs of trade receivables allowances of $2,115,000 as we reduced exposure to customers that entered delinquency in 2015. In addition, there was a $1,410,000 decrease in depreciation as a result of lower capital expenditures year-over-year.

Electrometallurgy – South Africa

	Year ended December 31,	
($ thousands)	**2016**	**2015**
Sales	142,160	219,890
Cost of sales	(99,124)	(134,978)
Other operating income	3,422	5,070
Staff costs	(23,589)	(24,663)
Other operating expense	(28,834)	(29,237)
Depreciation and amortization charges, operating allowances and write-downs	(4,732)	(7,744)
Operating (loss) profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**(10,697)**	**28,338**

Sales

Sales decreased $77,730,000, or 35.3%, from $219,890,000 for the year ended December 31, 2015 to $142,160,000 for the year ended December 31, 2016, primarily due to a 17.1% decrease in silicon metal sales volumes due to the decline in exports to North America. In addition, there was an 18.8% decrease in silicon-based alloy sales volumes due to a weak domestic market. Average selling prices of all primary products decreased 30% in 2016 compared to 2015 due to a decrease in index pricing. This decrease was offset by a foreign exchange impact which increased sales by $18,761,000.

Cost of sales

Cost of sales decreased $35,854,000, or 26.6%, from $134,978,000 for the year ended December 31, 2015 to $99,124,000 for the year ended December 31, 2016, primarily due to a 17.1% decrease in silicon metal sales volumes from 2015 to 2016 as well as a 33.4% decrease in silicon-based alloy sales volumes. This decrease was offset by a foreign exchange impact which increased cost of sales by $13,082,000.

Other operating income

Other operating income decreased $1,648,000, or 32.5%, from $5,070,000 for the year ended December 31, 2015 to $3,422,000 for the year ended December 31, 2016, primarily due to a decrease in by-product sales as a result of a weak domestic market as well as a reduction of other services provided to third parties.

Staff costs

Staff costs decreased $1,074,000 or 4.4%, from $24,663,000 for the year ended December 31, 2015 to $23,589,000 in for the year ended December 31, 2016, primarily due to a $4,187,000 reduction of bonus and other

social benefits to reflect the Company's annual performance. This decrease was offset by a foreign exchange impact which increased staff costs by $3,113,000.

Other operating expense

Other operating expense decreased $403,000, or 1.4%, from $29,237,000 for the year ended December 31, 2015 to $28,834,000 for the year ended December 31, 2016, primarily due to lower variable, selling, and administrative costs during 2016 when the plant was idled or operating at a reduced production level. This decrease was offset by a foreign exchange impact which increased other operating expense by $3,805,000.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $3,012,000, or 38.9%, from $7,744,000 for the year ended December 31, 2015 to $4,732,000 for the year ended December 31, 2016. This change is primarily attributable to a $1,572,000 decrease in Receivable allowances and a decrease in depreciation of $2,064,000 due to lower capital expenditures year-over-year. This decrease was offset by a foreign exchange impact which increased depreciation and amortization charges by $624,000.

Electrometallurgy – Venezuela

	Year ended December 31,	
($ thousands)	**2016**	**2015**
Sales	30,430	69,956
Cost of sales	(34,643)	(57,647)
Other operating income	27	44
Staff costs	(5,656)	(20,922)
Other operating expense	(6,747)	(28,677)
Depreciation and amortization charges, operating allowances and write-downs	(4,118)	(9,396)
Operating loss before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**(20,707)**	**(46,642)**

Sales

Sales decreased $39,526,000, or 56.5%, from $69,956,000 for the year ended December 31, 2015 to $30,430,000 for the year ended December 31, 2016, primarily due to a 27% decrease in average sales prices as global market index pricing fell year-over-year.

In addition, in June 2016, due to the uncertainty of the cash flow generating capacity of FerroVen as a result of the economic, political and social instability of Venezuela, FerroVen's management decided to continue operations at the local level only until free market conditions are reestablished.

Cost of sales

Cost of sales decreased $23,004,000, or 39.9%, from $57,647,000 for the year ended December 31, 2015 to $34,643,000 for the year ended December 31, 2016, primarily due to the 41% decrease in sales volumes described above. In addition, the devaluation of the Venezuelan Bolivar further reduced cost of sales.

Staff costs

Staff costs decreased $15,266,000, or 73.0%, from $20,922,000 for the year ended December 31, 2015 to $5,656,000 for the year ended December 31, 2016, primarily due to the devaluation of the Venezuelan Bolivar as all employees are paid in the local currency.

Other operating expense

Other operating expense decreased $21,930,000, or 76.5%, from $28,677,000 for the year ended December 31, 2015 to $6,747,000 for the year ended December 31, 2016, primarily due to the devaluation of the Venezuelan Bolivar as most local suppliers are paid in the local currency. In addition, there was a decrease in variable, selling, and administrative costs during 2016 due to the reduction in production volumes year-over-year.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $5,278,000, or 56.2%, from $9,396,000 for the year ended December 31, 2015 to $4,118,000 for the year ended December 31, 2016. Due to the uncertainty of the cash flow generating capacity of FerroVen, as described above, FerroVen fully impaired its fixed assets at June 30, 2016. Therefore, only six months of depreciation is included in depreciation and amortization charges, operating allowances and write-downs for the year ended December 31, 2016.

Other segments

	Year ended December 31,	
($ thousands)	**2016**	**2015**
Sales	59,907	59,167
Cost of sales	(45,269)	(30,394)
Other operating income	4,686	2,065
Staff costs	(52,921)	(9,652)
Other operating expense	(31,217)	(38,670)
Depreciation and amortization charges, operating allowances and write-downs	(8,700)	(13,096)
Operating profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**(73,514)**	**(30,580)**

Sales

Sales increased $740,000, or 1.3%, from $59,167,000 for the year ended December 31, 2015 to $59,907,000 for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe sales in 2016 of $23,532,000 as compared to the inclusion of only eight days of Globe sales in 2015. This increase was offset by a decrease in sales from idled facilities, most significantly, MangShi, which was idled in November 2015.

Cost of sales

Cost of sales increased $14,875,000, or 48.9%, from $30,394,000 for the year ended December 31, 2015 to $45,269,000 for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe cost of sales in 2016 as compared to the inclusion of only eight days of Globe cost of sales in 2015. In addition, inventory write-offs of approximately $2,500,000 at MangShi were recorded to cost of sales during 2016.

Other operating income

Other operating income increased $2,621,000, or 126.9%, from $2,065,000 for the year ended December 31, 2015 to $4,686,000 for the year ended December 31, 2016, primarily due to the inlcusion of a full year of Globe other operating income in 2016 of $1,647,000 as compared to the inclusion of only eight days of Globe other operating income in 2015.

Staff costs

Staff costs increased $43,269,000 or 448.3%, from $9,652,000 for the year ended December 31, 2015 to $52,921,000 for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe staff costs in 2016 of $38,427,000 as compared to the inclusion of only eight days of Globe sales in 2015. In addition, staff costs for the year ended December 31, 2016 include Alan Kestenbaum's severance payment of approximately $21,000,000, as well as other payments, and the accelerated vesting of equity awards made in connection with his resignation pursuant to the terms of the Employment Agreement.

Other operating expense

Other operating expense decreased $7,453,000, or 19.3%, from $38,670,000 for the year ended December 31, 2015 to $31,217,000 for the year ended December 31, 2016, primarily due to lower due diligence and development expenses year-over-year as a result of the abandonment of the FerroQuébec, Inc. project in late 2015.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $4,396,000, or 33.6%, from $13,096,000 for the year ended December 31, 2015 to $8,700,000 for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe depreciation and amortization charges, operating allowances and write-downs in 2016 as compared to the inclusion of only eight days of Globe depreciation and

amortization charges, operating allowances and write-downs in 2015. This increase was offset by a decrease in depreciation as the Property, plant and equipment at MangShi was impaired in 2015 and no longer depreciated.

Results of Operations — Ferroglobe Year Ended December 31, 2015 Compared to FerroAtlántica Year Ended December 31, 2014

($ thousands)	**Year ended December 31,**	
	2015	**2014**
Sales	1,289,886	1,417,079
Cost of sales	(817,875)	(887,772)
Other operating income	15,500	6,694
Staff costs	(202,585)	(213,829)
Other operating expense	(190,034)	(148,553)
Depreciation and amortization charges, operating allowances and write-downs	(62,201)	(69,131)
Operating profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**32,691**	**104,488**
Impairment losses	(52,042)	(399)
Net loss due to changes in the value of assets	(912)	(9,472)
(Loss) gain on disposal of non-current assets	(2,208)	555
Other loss	(347)	(60)
OPERATING (LOSS) PROFIT	**(22,818)**	**95,112**
Finance income	1,095	4,596
Finance costs	(23,738)	(28,415)
Exchange differences	35,904	7,800
(LOSS) PROFIT BEFORE TAXES	**(9,557)**	**79,093**
Income tax expense	(48,719)	(57,652)
(LOSS) PROFIT FROM CONTINUING OPERATIONS	**(58,276)**	**21,441**
(Loss) Profit from discontinued operations	(196)	10,290
(LOSS) PROFIT FOR THE YEAR	**(58,472)**	**31,731**
Loss attributable to non-controlling interests	15,204	6,706
(LOSS) PROFIT ATTRIBUTABLE TO FERROGLOBE	**(43,268)**	**38,437**

Sales

Sales decreased $127,193,000, or 9.0%, from $1,417,079,000 for the year ended December 31, 2014 to $1,289,886,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates which lowered sales by $254,049,000. This decrease was partially offset by a 14% increase in the average selling prices of silicon metal (in local currency) as well as a 1.4% increase in silicon metal sales volumes.

Cost of sales

Cost of sales decreased $69,897,000, or 7.9%, from $887,772,000 for the year ended December 31, 2014, to $817,875,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates, which lowered cost of sales by $161,084,000. This decrease was offset by an increase in costs of production in Venezuela and France (in local currencies) due to the increase in energy prices and the increase in the price of some raw materials and others production costs.

Other operating income

Other operating income increased $8,806,000, or 131.6%, from $6,694,000 for the year ended December 31, 2014 to $15,500,000 for the year ended December 31, 2015, primarily due to $5,685,295 of grants (deferred income) received related to due to CO_2 emissions by FerroAtlántica.

Staff costs

Staff costs decreased $11,244,000, or 5.3%, from $213,829,000 for the year ended December 31, 2014 to $202,585,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates which lowered staff costs by $39,900,000. This decrease was partially offset by an increase in social benefits for employees in Venezuela as well as increased bonuses and other social benefits to employees in France.

Other operating expense

Other operating expense increased $41,481,000, or 27.9%, from $148,553,000 for the year ended December 31, 2014 to $190,034,000 for the year ended December 31, 2015, primarily due to non-recurring transaction costs related to the Business Combination in 2015.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $6,930,000, or 10.0%, from $69,131,000 for the year ended December 31, 2014 to $62,201,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates, which lowered depreciation and amortization charges by $12,251,000. This decrease was partially offset by an increase of $3,848,000 in trade receivables allowances as certain customers entered delinquency, and a $1,473,000 increase in depreciation due to the increase of capital expenditure.

Impairment losses

Net impairment losses increased $51,643,000, from a loss of $399,000 for the year ended December 31, 2014 to a loss of $52,042,000 for the year ended December 31, 2015. During 2015, the Company impaired the long-lived assets at our Chinese subsidiaries, Ganzi and MangShi, and our Canadian subsidiary, FerroQuébec. The Ganzi and FerroQuébec impairments of $9,282,000 and $4,707,000, respectively, were made after the Company decided to no longer pursue these projects that were still in their development stage at the time. The MangShi impairment of $36,985,000 was made when the Company idled the plant indefinitely and marketed the business for sale in response to the global downturn in silicon metal pricing and demand.

Net gains/losses due to change in the value of assets

Net gains/losses due to change in the value of assets decreased $8,560,000, or 90.4%, from a loss of $9,472,000 for the year ended December 31, 2014 to a loss of $912,000 for the year ended December 31, 2015, as there were significant non-recurring losses due to the change in the value of assets in 2014 as compared to minimal losses in 2015.

Gains/losses due to disposal of non-current assets

Gains/losses due to disposal of current financial assets decreased $2,763,000, or 497.8%, from a gain of $555,000 for the year ended December 31, 2014 to a loss of $2,208,000 for the year ended December 31, 2015, resulting from the sale of certain fixed assets at our Chinese subsidiary, Ganzi, during the year ended December 31, 2015 (mainly, land and technical constructions).

Finance income

Finance income decreased $3,501,000, or 76.2%, from $4,596,000 for the year ended December 31, 2014 to $1,095,000 for the year ended December 31, 2015, due to a significant decrease in the intercompany financial position with FerroAtlántica Group's former parent, Grupo Villar Mir, which position was canceled in full by the end of 2014. As at December 31, 2013, there were $56.0 million in loans from FerroAtlántica Group to Grupo Villar Mir outstanding. FerroAtlántica Group made several additional loans in a total amount of $90.7 million to Grupo Villar Mir between July 2014 and December 2014, which is when the intercompany financial position was canceled in full against a portion of the dividends distributed by FerroAtlántica Group to its former sole shareholder.

Finance costs

Finance costs decreased $4,677,000, or 16.5%, from $28,415,000 for the year ended December 31, 2014 to $23,738,000 for the year ended December 31, 2015, as a result of reduction in the average indebtedness at FerroAtlántica's major subsidiaries throughout 2015 as compared to throughout 2014.

Exchange differences

Exchange differences increased $28,104,000, from $7,800,000 for the year ended December 31, 2014 to $35,904,000 for the year ended December 31, 2015, primarily due to the devaluation of the Venezuelan Bolivar in December 2015 (from VEF/USD 49.99 to VEF/USD 199) that originated a positive exchange difference of $18,500,000.

Income tax

Income tax decreased $8,933,000, or 15.5%, from $57,652,000 for the year ended December 31, 2014 to $48,719,000 for the year ended December 31, 2015. This decrease is principally due to tax expense in Venezuela decreasing $19,423,000, to $16,877,000 in 2015 from $36,300,000 in 2014. The decrease in Venezuela tax is driven by FerroAtlántica's tax position in Venezuela and the impact of the devaluation of the Venezuelan Bolivar in 2015 from VEF/USD 49.99 to VEF/USD 199. The decrease in Venezuela tax expense is partially offset by the revaluation of the tax value of certain assets.

Segment Operations

Electrometallurgy – North America

	Year ended December 31,	
($ thousands)	**2015**	**2014**
Sales	10,062	—
Cost of sales	(6,200)	—
Other operating income	17	—
Staff costs	(1,983)	—
Other operating expense	(276)	—
Depreciation and amortization charges, operating allowances and write-downs	(1,183)	—
Operating profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**437**	—

The Electrometallurgy – North America segment is comprised of only Globe subsidiaries. As a result, the 2015 segment information includes information relating only to the eight day period ended December 31, 2015, following the Business Combination on December 23, 2015; segment information for the year ended December 31, 2014 is not available. Therefore, there can be no meaningful discussion of sales, costs, or profitability in relation to these periods.

Electrometallurgy – Europe

	Year ended December 31,	
($ thousands)	**2015**	**2014**
Sales	1,174,968	1,275,497
Cost of sales	(811,114)	(880,851)
Other operating income	52,211	21,764
Staff costs	(148,652)	(165,796)
Other operating expense	(142,867)	(115,068)
Depreciation and amortization charges, operating allowances and write-downs	(35,255)	(43,080)
Operating profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**89,291**	**92,466**

Sales

Sales decreased $100,529,000, or 7.9%, from $1,275,497,000 for the year ended December 31, 2014 to $1,174,968,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates which lowered sales by $231,416,000. This decrease was partially offset by a 12% increase in the average selling prices of silicon metal (in Euros) as well as a 2% increase in silicon metal sales volumes.

Cost of sales

Cost of sales decreased $69,737,000, or 7.9%, from $880,851,000 for the year ended December 31, 2014 to $811,114,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates which lowered cost sales by $159,753,000. This decrease was partially offset by an increase in manufacturing costs due to the increase in energy prices and the price of some raw materials and other production costs.

Other operating income

Other operating income increased $30,447,000, or 139.9%, from $21,764,000 for the year ended December 31, 2014 to $52,211,000 for the year ended December 31, 2015, primarily due to intercompany charges to the parent company in 2015 for its share of non-recurring transaction costs related to the Business Combination, which FerroAtlántica paid.

Staff costs

Staff costs decreased $17,144,000 or 10.3%, from $165,796,000 for the year ended December 31, 2014 to $148,652,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates which lowered staff costs by $29,278,000. This decrease was partially offset by an increase in bonuses and social benefits for employees in France.

Other operating expense

Other operating expense increased $27,799,000, or 24.2%, from $115,068,000 for the year ended December 31, 2014 to $142,867,000 for the year ended December 31, 2015, primarily due to non-recurring transaction costs related to the Business Combination. Most of the transaction costs related to the Business Combination were reinvoiced to the former parent company, Grupo Villar Mir, as of December 31, 2016, as mentioned above.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $7,825,000, or 18.2%, from $43,080,000 for the year ended December 31, 2014 to $35,255,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates which lowered depreciation and amortization charges, operating allowances and write downs by $6,944,000.

Electrometallurgy – South Africa

	Year ended December 31,	
($ thousands)	**2015**	**2014**
Sales	219,890	239,023
Cost of sales	(134,978)	(149,800)
Other operating income	5,070	1,527
Staff costs	(24,663)	(30,974)
Other operating expense	(29,237)	(27,135)
Depreciation and amortization charges, operating allowances and write-downs	(7,744)	(6,993)
Operating profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**28,338**	**25,648**

Sales

Sales decreased $19,133,000, or 8.0%, from $239,023,000 for the year ended December 31, 2014 to $219,890,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates which lowered sales by $43,308,000, as well as an 8% decrease in sales volumes. This decrease was partially offset by a 1.2% increase in average sales prices.

Cost of sales

Cost of sales decreased $14,822,000, or 9.9%, from $149,800,000 for the year ended December 31, 2014 to $134,978,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates which lowered sales by $26,585,000. This decrease was partially offset by a year-over-year increase cost of production due to higher energy costs.

Other operating income

Other operating income increased $3,543,000, or 232.0%, from $1,527,000 for the year ended December 31, 2014 to $5,070,000 for the year ended December 31, 2015, mainly due to the increase of the domestic market of the by-products produced and sold as well as an increase of other services provided to third parties.

Staff costs

Staff costs decreased $6,311,000 or 20.4%, from $30,974,000 for the year ended December 31, 2014 to $24,663,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates which lowered staff costs by $4,857,000, as well as a year-over-year reduction of bonus and other social benefits to employees.

Other operating expense

Other operating expense increased $2,102,000, or 7.7%, from $27,135,000 for the year ended December 31, 2014 to $29,237,000 for the year ended December 31, 2015, primarily due to a $7,860,000 increase in variable overhead costs indirectly related to production as production increased year-over-year. This increase was offset by a change in foreign exchange rates which lowered other operating expense by $5,758,000.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs increased $751,000, or 10.7%, from $6,993,000 for the year ended December 31, 2014 to $7,744,000 for the year ended December 31, 2015, due to higher capital expenditures during 2015.

Electrometallurgy – Venezuela

	Year ended December 31,	
($ thousands)	**2015**	**2014**
Sales	69,956	97,718
Cost of sales	(57,647)	(62,857)
Other operating income	44	416
Staff costs	(20,922)	(11,517)
Other operating expense	(28,677)	(14,530)
Depreciation and amortization charges, operating allowances and write-downs	(9,396)	(9,322)
Operating loss before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**(46,642)**	**(92)**

Sales

Sales decreased $27,762,000, or 28.4%, from $97,718,000 for the year ended December 31, 2014 to $69,956,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates which lowered sales by $13,778,000. In addition, there was a 9.8% decrease in average sales prices due to the increase in domestic market sales volumes, where average sales prices are lower in comparison to average export prices, as well as a 20.6% decrease in sales volumes due to the reduction in exports.

Cost of sales

Cost of sales decreased $5,210,000, or 8.3%, from $62,857,000 for the year ended December 31, 2014 to $57,647,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates, which lowered cost of sales by $11,354,000. This decrease was partially offset by an increase in production costs, mainly due to higher energy costs.

Staff costs

Staff costs increased $9,405,000 or 81.7%, from $11,517,000 for the year ended December 31, 2014 to $20,922,000 for the year ended December 31, 2015, primarily due to an increase in social benefits for employees in Venezuela. The remaining variation is primarily due to the effect of the devaluation of the Venezuelan Bolivar, the currency in which the entity pays its employees, and the effect of the increase of inflation in Venezuela on employee salaries and other benefits.

Other operating expense

Other operating expense increased $14,147,000, from $14,530,000 for the year ended December 31, 2014 or 97.4%, to $28,677,000 for the year ended December 31, 2015, primarily due to the effect of the devaluation of the Venezuelan Bolivar as most local suppliers are paid in the local currency, as well as an increase in the prices of the services included in other operating expenses due to the increase of inflation in Venezuela.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs increased $74,000, or 0.8%, from $9,322,000 for the year ended December 31, 2014 to $9,396,000 for the year ended December 31, 2015, due to higher capital expenditures in 2015.

Other segments

($ thousands)	Year ended December 31, 2015	2014
Sales	59,167	93,552
Cost of sales	(30,394)	(36,382)
Other operating income	2,065	3,436
Staff costs	(9,652)	(9,756)
Other operating expense	(38,670)	(28,169)
Depreciation and amortization charges, operating allowances and write-downs	(13,096)	(14,797)
Operating profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**(30,580)**	**7,884**

Sales

Sales decreased $34,385,000, or 36.8%, from $93,552,000 for the year ended December 31, 2014 to $59,167,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates which lowered sales by $11,653,000. In addition, sales from the Mexican trading subsidiary decreased significantly year-over-year due to its domestic market condition.

Cost of sales

Cost of sales decreased $5,988,000, or 16.5%, from $36,382,000 for the year ended December 31, 2014 to $30,394,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates which lowered sales by $5,986,000.

Other operating income

Other operating income decreased $1,371,000, or 39.9%, from $3,436,000 for the year ended December 31, 2014 to $2,065,000 for the year ended December 31, 2015, due to non-recurring revenues and chargebacks in 2014 that were not given in 2015.

Staff costs

Staff costs decreased $104,000 or 1.1%, from $9,756,000 for the year ended December 31, 2014 to $9,652,000 for the year ended December 31, 2015.

Other operating expense

Other operating expense increased $10,501,000, or 37.3%, from $28,169,000 for the year ended December 31, 2014 to $38,670,000 for the year ended December 31, 2015, primarily due to non-recurring transaction costs related to the Business Combination in 2015.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $1,701,000, or 11.5%, from $14,797,000 for the year ended December 31, 2014 to $13,096,000 for the year ended December 31, 2015, mainly due to the decrease in depreciation as a result of the decrease in the balance of depreciable fixed assets.

Effect of Inflation

Management believes that the impact of inflation was not material to Ferroglobe's results of operations in the years ended December 31, 2016, 2015 and 2014, although we experienced the impact of Venezuelan inflation in 2016, 2015 and 2014 on FerroVen, S.A.'s production costs in these years, which resulted in a loss of competitiveness.

Cyclical Nature of the Industry and Movement in Market Prices, Raw Materials and Input Costs

Our business has historically been subject to fluctuations in the price of our products and market demand for them, caused by general and regional economic cycles, raw material and energy price fluctuations, among other factors. We have experienced a weakened economic environment in national and international metals markets, including a sharp decrease in silicon metal prices in all major markets since late 2014, though we have

experienced an improvement in silicon metal prices since the fourth quarter of 2016. The weakened economic environment has adversely affected our profitability for the year ended December 31, 2016, with a particularly pronounced effect on the profitability of our European business over this period.

B. Liquidity and Capital Resources

Sources of Liquidity

Ferroglobe finances its capital requirements with operating cash flows and long-term bank borrowings. Its primary short-term liquidity needs are to fund its capital expenditure commitments and operational needs and dividend policy and service its existing debt. Ferroglobe's long-term liquidity needs primarily relate to debt repayment. Ferroglobe's core objective with respect to capital management is to maintain a balanced and sustainable capital structure through the economic cycles of the industries in which it has a presence, while keeping the cost of capital at competitive levels so as to fund Ferroglobe's growth.

Ferroglobe finances its operations through: (i) cash flows from operations, which totaled $121,169,000 in 2016, compared to $145,449,000 in 2015, (ii) corporate financing through each of Ferroglobe's main subsidiaries in the currency in which it operates, which totaled $518,200,000 in 2016, compared to $306,174,000 in 2015, and (iii) liquidity facilities taken out by Ferroglobe under bilateral agreements with banks to provide Ferroglobe with flexibility in its cash management activities, which totaled $305,000,000 in 2016, compared to $216,657,830 in 2015.

In 2016, operating activities generated $121,169,000 in cash. Investing activities used a total of $84,281,000 of cash. Financing activities resulted in a total inflow of $49,917,000 in cash. See "Cash Flow Analysis" below for additional information.

As of December 31, 2016, Ferroglobe had cash and cash equivalents from continuing operations and discontinuing operations of $196,931,000 and $51,000, respectively. As of December 31, 2015, Ferroglobe had cash and cash equivalents of $116,666,000, all of which were from continuring operations. Cash and cash equivalents are held primarily held in U.S. Dollars and Euro.

At December 31, 2016, Ferroglobe's total gross financial debt was $514,587,000, compared to $516,976,000 at December 31, 2015. Of the total gross financial debt at December 31, 2016, $5,237,000 ($103,197,000 at December 31, 2015) related to finance leases that are treated as debt under IFRS. Of the remaining $509,350,000 of debt at December 31, 2016 ($413,779,000 at December 31, 2015), bank borrowings and other financial liabilities accounted for $508,651,000 ($406,230,000 at December 31, 2015) and other financial liabilities, consisting of interest rate swaps, accounted for the remaining $699,000 ($7,549,000 at December 31, 2015). See notes 16, 17 and 18 to the Consolidated Financial Statements of Ferroglobe included in this annual report for additional information on Ferroglobe's indebtedness at December 31, 2016.

Working Capital Position

Taking into account generally expected market conditions, Ferroglobe anticipates that cash flow generated from operations will be sufficient to fund its operations, including its working capital requirements, and to make the required principal and interest payments on its indebtedness during the next 12 months.

As of December 31, 2016, Ferroglobe's current assets totaled $861,675,000 while current liabilities totaled $626,756,000, resulting in a positive working capital position of $234,919,000.

We may experience increases in our working capital position in 2017 to the extent that we restart production at any of our idled facilities.

Capital Expenditures

Ferroglobe incurs capital expenditures in connection with expansion and productivity improvements, production plants maintenance and research and development projects. Capital expenditures are funded through cash generated from operations and financing activities. Ferroglobe's capital expenditures for the years ended December 31, 2016, 2015 and 2014 were $71.1 million, $68.5 million and $45.4 million, respectively. Principal capital expenditures during these periods were primarily for maintenance and improvement works at Ferroglobe's plants and mines. We expect our capital expenditures for 2017 to equal approximately $65 million, excluding any capital expenditures related to our hydroelectric power operations in Spain and France, which we may sell in 2017, or to our solar grade silicon project. We believe we have the ability to reduce our capital

expenditures by, as needed, idling individual electrometallurgy facilities. Additionally, subject to the satisfaction of certain conditions precedent, we have committed to incur approximately $118 million of capital expenditures in connection with our solar grade silicon joint venture over an initial phase estimated for up to three years. Further investment in the joint venture will be determined as the joint venture progresses. Capital expenditures in connection with our solar grade silicon joint venture are financed in part by two loans obtained from the Spanish Ministry of Industry and Energy. See "Item 4.B.—Information on the Company—Business Overview—Research and Development (R&D)—Solar grade silicon" and "Item 7.B.—Major Shareholders and Related Party Transactions—Related Party Transactions." See also "—Tabular Disclosure of Contractual Obligations" for disclosure regarding future committed capital expenditures.

Cash Flow Analysis — Ferroglobe Year Ended December 31, 2016 Compared to FerroAtlántica's Year Ended December 31, 2015

The following table summarizes Ferroglobe's primary sources (uses) of cash for the periods indicated:

	Year ended December 31,	
($ thousands)	**2016**	**2015**
Cash and cash equivalents at beginning of period	116,666	48,651
Cash flows from operating activities	121,169	145,449
Cash flows from investing activities	(84,281)	17,966
Cash flows from financing activities	49,917	(87,593)
Exchange differences on cash and cash equivalents in foreign currencies	(6,489)	(7,807)
Cash and cash equivalents at end of period	196,982	116,666
Cash and cash equivalents at end of period from continued operations	196,931	116,666
Cash and cash equivalents at end of period from discontinued operations	51	—

The following table sets forth the dividends paid by Ferroglobe for the year ended December 31, 2016.

($ thousands)	**Year ended December 31, 2016**
Cash payment	54,988
Cash dividends	54,988

Cash flows from operating activities

Cash flows from operating activities decreased by $24,281,000, from $145,449,000 for the year ended December 31, 2015, to $121,169,000 for the year ended December 31, 2016. The decrease was due to a decrease in inventories of $108,207,000, a decrease in trade receivables of $56,297,000 and an increase in accounts payable of $28,572,000 as compared to the prior year period as a result of various working capital initiatives. This was offset by the $32,500,000 settlement payment in connection with the litigation related to the Business Combination that was paid during the year ended December 31, 2016 and lower profits from operations as compared to the prior year period.

Cash flows from investing activities

Cash flows from investing activities decreased by $102,247,000 from an inflow of $17,966,000 for the year ended December 31, 2015 to an outflow of $84,281,000 for the year ended December 31, 2016. The decrease is primarily attributable to a cash inflow of $77,709,000, which represents the cash and cash equivalents balance of Globe on the date of the Business Combination in 2015. In addition, capital expenditures increased as a result of including the full year of Globe's capital expenditures of $27,577,000 during 2016, which was offset by an overall reduction in capital expenditures on a pro-forma basis reflecting the market conditions during 2016.

Cash flows from financing activities

Cash flows from financing activities increased by $137,510,000 from an outflow of $87,593,000 for the year ended December 31, 2015 to an inflow of $49,917,000 for the year ended December 31, 2016. The increase is mainly attributable to $118,945,000 of net bank borrowings during the year ended December 31, 2016 compared to $55,390,000 of net bank payments during the year ended December 31, 2015. The increase in net bank borrowings compared to the prior year period was to meet liquidity needs as a result of lower profits from operations. This was partly offset by a $33,509,000 increase in cash dividends paid to shareholders during the year ended December 31, 2016.

Cash Flow Analysis — Year Ended December 31, 2015 Compared to FerroAtlántica's Year Ended December 31, 2014

The following table summarizes Ferroglobe's primary sources (uses) of cash for the periods indicated:

	Year ended December 31,	
(US$ thousands)	**2015**	**2014[(1)]**
Cash and cash equivalents at beginning of period	48,651	62,246
Cash flows from operating activities	145,449	191,420
Cash flows from investing activities	17,966	(155,293)
Cash flows from financing activities	(87,593)	(50,913)
Exchange differences on cash and cash equivalents in foreign currencies	(7,807)	1,190
Cash and cash equivalents at end of period	**116,666**	**48,650**

(1) Financial data for the Predecessor, FerroAtlántica.

The following table sets forth the dividends paid by FerroAtlántica to Grupo VM in the year ended December 31, 2015.

(US$ thousands)	**Year ended December 31, 2015**
Cash payment	21,479
Cash dividends	**21,479**

Cash flows from operating activities

Cash flows from operating activities decreased by $45,971,000, to $145,449,000 in the year ended December 31, 2015, from $191,420,000 during the year ended December 31, 2014. The decrease was due to lower profit from operations, a $6.7 million decrease in financial interest expense, and negative short-term variations totaling $38.1 million and a $13.0 million increase in income tax paid, partly offset by a $92.7 million increase in funds from operating working capital changes.

Cash flows from investing activities

Cash flows from investing activities increased by $173,259,000 to $17,966,000 in the year ended December 31, 2015, from an outflow of $155,293,000 in the year ended December 31, 2014. The additional cash inflow is primarily due to cash received from the Business Combination of $77.7 million, a $15.3 million increase in disposals, a $95.4 million decrease in cash outflows relating to investment in non-current financial assets and a decrease of $7.7 million in payments relating to other investment activities, partly offset by a $19.1 million increase in capital expenditures and a $3.8 million decrease in interest received.

Cash flows from financing activities

Cash flows from financing activities decreased by $36,680,000 to an outflow of $87,593,000 in the year ended December 31, 2015, from an outflow of $50,913,000 in the year ended December 31, 2014. The decrease is mainly attributable to a decrease in $95.8 million in bank debts emissions (issuances) and a $10.7 million increase in other negative financing variations, partly offset by a decrease in $51.2 million in bank debts reimbursements (repayments) and $18.6 million decrease in cash dividends paid in 2015.

Capital resources

Ferroglobe's core objective is to maintain a balanced and sustainable capital structure through the economic cycles of the industries in which it has a presence, while keeping the cost of capital at competitive levels so as to fund Ferroglobe's growth. In addition to cash flows from continuing operations, the main sources of financing are long-term corporate financing through each of Ferroglobe's main subsidiaries and in the currency in which they operate and liquidity facilities taken out by Ferroglobe under bilateral agreements with banks to provide Ferroglobe with flexibility in its cash management activities. In the case of Venezuela, given the complexity of the Venezuelan financial market and the restrictions on capital flows, long-term financing is structured through intercompany loan agreements, whereas working capital needs are met with local currency bilateral agreements without recourse to Ferroglobe. Ferroglobe's general policy is for each main subsidiary to be financed without recourse to or guarantees provided by Ferroglobe.

As described in the previous paragraph, some payments of dividends, distributions and advances by Ferroglobe's subsidiaries will be contingent upon their earnings and business considerations and may be limited by legal, regulatory and contractual restrictions. For instance, the repatriation of dividends from Ferroglobe's Venezuelan and Argentinean subsidiaries have been subject to certain restrictions and there is no assurance that further restrictions will not be imposed. Additionally, Ferroglobe's right to receive any assets of its subsidiaries as an equity holder of such subsidiaries, upon their liquidation or reorganization, will be effectively subordinated to the claims of such subsidiaries' creditors, including trade creditors.

Details and description of Ferroglobe's bank borrowing and financial leasing as at December 31, 2016 are described in notes 16 and 17 of the Consolidated Financial Statements included elsewhere in this annual report. These credit facilities contain certain customary representations, warranties and covenants, and certain of them contain maintenance financial covenants.

C. Research and Development, Patents and Licenses, etc.

Ferroglobe focuses on continually developing its technology in an effort to improve its products and production processes. Our FerroAtlántica division's research and development division coordinates all the research and development activities within Ferroglobe. Ferroglobe also has cooperation agreements in place with various universities and research institutes in Spain, France and other countries around the world. For the years ended December 31, 2016, 2015 and 2014, Ferroglobe spent $6.2 million, $8.8 million and $5.4 million, respectively, on research and development projects and activities. Set forth below is a description of Ferroglobe's significant ongoing research and development projects.

ELSA electrode

Ferroglobe has internally developed a patented technology for electrodes used in silicon metal furnaces, which it has been able to sell to several major silicon producers globally. This technology, known as the ELSA electrode, improves the energy efficiency in the production process of silicon metal and eliminates contamination with iron. Ferroglobe has granted these producers the right to use the ELSA electrode against payment to Ferroglobe of royalties.

Solar grade silicon

Ferroglobe's solar grade silicon involves the production of solar grade silicon metal with purity above 99.9999% through a new, potentially cost-effective, electrometallurgical process. The traditional chemical process tends to be costly and involves high energy consumption and potentially environmentally hazardous processes. The new technology, entirely developed by Ferroglobe at an earlier stage at its research and development facilities in Spain and France, aims to reduce the costs and energy consumption associated with the production of solar grade silicon.

In 2016, FerroAtlántica entered into a project with Aurinka for a feasibility study and basic engineering for an upgraded metallurgical grade ("UMG") solar silicon manufacturing plant. Purchases under this project were approximately €3,000,000 for 2016. On December 20, 2016, Ferroglobe entered into an agreement with Aurinka and Blue Power (the "Solar JV Agreement") providing for the formation and operation of a joint venture with the purpose of UMG solar silicon, subject to the satisfaction of certain conditions precedent. Under the Solar JV Agreement, Ferroglobe will indirectly own 75% of the operating companies to be formed as part of the joint venture and 51% of the company to be formed as part of the joint venture to hold the intellectual property rights and know-how contributed by Aurinka and Ferroglobe to the joint venture.

Pursuant to the Solar JV Agreement, and subject to the satisfaction of certain conditions precedent, FerroAtlántica has committed to incur capital expenditures in connection with the joint venture of approximately $118 million over the first three years, which constitutes the first phase of the project contemplated by the Solar JV Agreement. Plans for and financing of further phases are subject to agreement and approval by the parties to the Solar JV Agreement pursuant to specified procedures. To the extent the project continues into further phases, we would expect to, in the future and subject to appropriate approval and authorization, commit to incur approximately $100 million in joint venture-related capital expenditures in the fourth year, and approximately $77 million over the following three years. In connection with the Solar JV Agreement, FerroAtlántica has obtained two loans, principal amounts approximately €45 million and €27 million, respectively, from the Spanish Ministry of Industry and Energy for the purpose of building and operating the UMG solar silicon plant.

D. Trend Information

We discuss in Item 5.A. above and elsewhere in this annual report, trends, uncertainties, demands, commitments or events for the year ended December 31, 2016 that we believe are reasonably likely to have a material adverse effect on our revenues, income, profitability, liquidity or capital resources or to cause the disclosed financial information not to be necessarily indicative of future operating results or financial conditions.

E. Off-Balance Sheet Arrangements

We do not have any outstanding off-balance sheet arrangements.

F. Tabular Disclosure of Contractual Obligations

The following table sets forth Ferroglobe's contractual obligations and commercial commitments with definitive payment terms that will require significant cash outlays in the future, as of December 31, 2016.

		Payments Due by Period			
	Total	Less than 1 year	1 - 3 years	3 - 5 years	More than 5 years
		(Expressed in thousands of $)			
Long-term debt obligations	495,855	240,585	179,472	21,656	54,142
Capital expenditures	121,116	26,716	94,400	—	—
Finance leases	86,620	12,359	24,943	25,817	23,501
Power purchase commitments[1]	32,827	32,827	—	—	—
Purchase obligations[2]	19,956	19,956	—	—	—
Operating lease obligations	9,658	1,788	2,772	2,783	2,315
Total	**766,032**	**334,231**	**301,587**	**50,256**	**79,958**

(1) Represents minimum charges that are enforceable and legally binding, and do not represent total anticipated purchases. Minimum charges requirements expire after providing one year notice of contract cancellation.

(2) The Company has outstanding purchase obligations with suppliers for raw materials in the normal course of business. The disclosed purchase obligation amount represents commitments to suppliers that are enforceable and legally binding and do not represent total anticipated purchases of raw materials in the future.

The table above also excludes certain other obligations reflected in our consolidated balance sheet, including estimated funding for pension obligations, for which the timing of payments may vary based on changes in the fair value of pension plan assets and actuarial assumptions. We expect to contribute approximately $1,167,000 to our pension plans for the year ended December 31, 2017.

G. Safe Harbor

This annual report contains forward-looking statements within the meaning of Section 27A of the U.S. Securities Act and Section 21E of the U.S. Exchange Act and as defined in the Private Securities Litigation Reform Act of 1995. See "Cautionary Statements Regarding Forward-Looking Statements."

ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

A. Directors, Senior Management and Employees

The following table lists each of our executive officers and directors and their respective ages and positions as of the date of this annual report. The business address of all our directors and senior management is our business address as set forth in "Item 4.A.—Information on the Company—History and Development of the Company."

Name	Age	Position
Javier López Madrid	52	Director and Executive Chairman
Pedro Larrea Paguaga	53	Chief Executive Officer
Joseph Ragan	55	Chief Financial Officer and Principal Accounting Officer
Nicholas Deeming	63	Chief Legal Officer and Corporate Secretary
Donald G. Barger, Jr.	74	Director
Bruce L. Crockett	73	Director
Stuart E. Eizenstat	74	Director
Tomás García Madrid	54	Director
Greger Hamilton	50	Director
Javier Monzón	61	Director
Juan Villar-Mir de Fuentes	55	Director

Other than Javier López Madrid, who was appointed on February 5, 2015 (our date of incorporation), each director was appointed on December 23, 2015.

Other than employment agreements between Ferroglobe and each of Javier López Madrid, Pedro Larrea Paguaga, Joseph Ragan and Nicholas Deeming, there are no service contracts between the officers and directors listed in the table above, on the one hand, and us or any of our subsidiaries on the other, providing for benefits upon termination of employment. Other than the individuals listed in the table above, we have no other directors or senior managers.

There are no family relationships between our executive officers and directors, except that Javier López Madrid is married to the sister of Juan Villar-Mir de Fuentes.

Alan Kestenbaum resigned as Executive Chairman of the Ferroglobe Board of Directors, effective December 31, 2016. Javier López Madrid, the former Vice Chairman of the Ferroglobe Board of Directors, was unanimously appointed to succeed Mr. Kestenbaum as Executive Chairman. Mr. Kestenbaum serves as an independent consultant to the Company, advising on matters relating to international trade, commercial contract negotiations, legacy customer relationships and business development opportunities.

Mr. Kestenbaum was entitled to a lump sum severance payment of approximately $21 million, which is in addition to other payments and the accelerated vesting of equity awards, in connection with his resignation pursuant to the terms of the Employment Agreement dated January 27, 2011, as amended on February 22, 2015 (the "Employment Agreement"), and an agreement relating to Mr. Kestenbaum's release of potential claims, including claims arising from the interpretation of the provisions of the Employment Agreement.

Set forth below is a brief biography of each of our executive officers and directors.

Javier López Madrid has served as a director since our inception in February 2015 and served as Executive Vice-Chairman from December 23, 2015 until December 31, 2016, when he was appointed Executive Chairman. He is Chief Executive Officer of Grupo VM. He is founder and largest shareholder of Siacapital and Tressis, Spain's largest independent private bank. In addition to his professional activities, he is also a member of the World Economic Forum, Group of Fifty and a board member of Fundación Juan Miguel Villar Mir. Mr. López Madrid holds a Master in Law and Business from ICADE University.

Pedro Larrea Paguaga has served as the Chief Executive Officer since December 23, 2015. He was Chairman and CEO of FerroAtlántica since December 2012, and served in that role until the closing of the Business Combination. He joined FerroAtlántica as CEO in 2011. Before joining FerroAtlántica, for thirteen years (1996 to 2009), he worked in Endesa, the biggest power company in Spain and Latin America, where he reached the position of Chairman and CEO of Endesa Latinoamérica, with total revenues above €8 billion and EBITDA above €3 billion. He served in the Board of Directors of Enersis (2007 to 2009) and Endesa Chile (1999 to 2002 and 2006 to 2007), both public Chilean companies listed on the NYSE. Pedro Larrea has also worked in

management consulting firms PwC (2010 to 2011), where he lead the energy sector practice in Spain, and McKinsey & Company in Spain, Latin America and the United States (1989 to 1995). Mr. Larrea holds a Mining Engineer degree (MSc equivalent) from Universidad Politécnica de Madrid (graduated with honors). He also holds an MBA from INSEAD, where he obtained the Henry Ford II award for academic excellence.

Joseph Ragan has served as Chief Financial Officer and Principal Accounting Officer since December 23, 2015. He joined Globe as Chief Financial Officer in May 2013, and served in that role until the closing of the Business Combination. Prior to that, Mr. Ragan served from 2008 to 2013 as Chief Financial Officer for Boart Longyear, the world's largest drilling services contractor for the global mining sector, operating in more than 40 countries and selling its products in nearly 100 countries. Prior to joining Boart Longyear, he held the position of Chief Financial Officer for the GTSI Corporation, a leading technology solutions provider for the public sector listed on NASDAQ. Earlier in his career, he held various international and domestic finance positions for PSEG, The AES Corporation, and Deloitte and Touche. He received his Bachelor of Science in Accounting from The University of the State of New York, his Master's degree in Accounting from George Mason University, and was a Certified Public Accountant in the commonwealth of Virginia for over 25 years.

Nicholas Deeming has worked as Corporate Secretary since September 1, 2016 and as Corporate Secretary and Chief Legal Officer since December 21, 2016. Prior to joining Ferroglobe, he held a number of non-executive roles and coached senior executives, as well as project managing litigation projects and M&A transactions. He has worked, through his career, as a General Counsel and a member of executive management in a number of sectors including Oil & Gas, Gases, Industrial and Medical, Healthcare, Insurance, Auctioneering/Art and Deep Sea Drilling, and he has worked in varied listing environments, including the United States, the United Kingdom, Europe and South Africa. He is qualified as a solicitor in the United Kingdom, has an MBA from Cranfield University and a qualification from Ashridge School of Management in executive coaching.

Donald G. Barger, Jr. has served as a director since December 23, 2015. He is a member of our Compensation Committee and serves as the chairman of the Nominating and Corporate Governance Committee. He served as a member of the Globe board of directors since December 2008 until the closing of the Business Combination and was Chairman of Globe's Audit Committee and Chairman of Globe's Compensation Committee. Mr. Barger had a successful 36-year business career in manufacturing and services companies. He retired in February 2008 from YRC Worldwide Inc. (formerly Yellow Roadway Corporation), one of the world's largest transportation service providers. Mr. Barger served as Vice President and Chief Financial Officer of YRC Worldwide Inc. from December 2000 to August 2007 and from August 2007 until his retirement as advisor to the CEO. From March 1998 to December 2000, Mr. Barger was Vice President and Chief Financial Officer of Hillenbrand Industries, a provider of services and products for the health care and funeral services industries. From 1993 to 1998, Mr. Barger was Vice President of Finance and Chief Financial Officer of Worthington Industries, Inc., a diversified steel processor. Mr. Barger served on the Board of Directors of Gardner Denver, Inc. and was a member of the Audit Committee for his entire 19-year tenure until the company's sale in July 2013. He served as Chair of the committee 17 of those years. He also served on the Board of Directors of Quanex Building Products Corporation for sixteen years, retiring in February 2012. Additionally, he served on the Audit Committee for 14 years and was its Chair for most of that time. On all the public company boards on which Mr. Barger served, he was considered a "financial expert" for SEC purposes. Mr. Barger received a B.S. degree from the U.S. Naval Academy and an MBA from the University of Pennsylvania.

Bruce L. Crockett has served as a director since December 23, 2015. He is a member of our Audit Committee and the BCA Special Committee. He served as a member of Globe's board of directors since April 2014 until the closing of the Business Combination and was a member of Globe's Audit Committee. Mr. Crockett is Chairman of the Invesco Mutual Funds Group Board of Directors, and is also a member of the audit, investment and governance committees. He serves as a director and audit committee chair of ALPS Property & Casualty Insurance Company. Mr. Crockett is the chairman of Crockett Technologies Associates and a private investor. Mr. Crockett served as President and Chief Executive Officer of COMSAT Corporation from February 1992 until July 1996 and as President and Chief Operating Officer of COMSAT from April 1991 to February 1992. As an employee of COMSAT since 1980, Mr. Crockett held various other operational and financial positions, including Vice President and Chief Financial Officer. Mr. Crockett served as a director of Ace Limited from 1995 until 2012 and as a director of Captaris, Inc. from 2001 until its acquisition in 2008, and as Chairman from 2003 to 2008. Mr. Crockett is also a life trustee of the University of Rochester. Mr. Crockett received an A.B. degree from the University of Rochester, a B.S. degree from the University of Maryland, and an MBA from Columbia University and holds an honorary Doctor of Law degree from the University of Maryland.

Stuart E. Eizenstat has served as a director since December 23, 2015. He is a member of our Nominating and Corporate Governance Committee and BCA Special Committee. He served as a director of Globe since

February 2008 until the closing of the Business Combination and was the Chairman of Globe's Nominating Committee. Mr. Eizenstat is Senior Counsel of Covington & Burling LLP in Washington, D.C. and heads the law firm's international practice. He served as Deputy Secretary of the United States Department of the Treasury from July 1999 to January 2001. He was Under Secretary of State for Economic, Business and Agricultural Affairs from 1997 to 1999. Mr. Eizenstat served as Under Secretary of Commerce for International Trade from 1996 to 1997 and was the U.S. Ambassador to the European Union from 1993 to 1996. During the Clinton Administration he also served as Special Representative of the President and Secretary of State on Holocaust Issues. From 1977 to 1981 he was Chief Domestic Policy Advisor in the White House to President Carter. He is a trustee of BlackRock Funds and served as a member of the board of directors of Alcatel-Lucent until 2016. He served as a member of the Board of Directors of United Parcel Service from 2005 to 2015. He serves on the Advisory Board of GML Ltd., and Office of Cherifien de Phosphates. He has received eight honorary doctorate degrees and awards from the United States, French, German, Austrian, Belgian and Israeli governments. He is the author of "Imperfect Justice: Looted Assets, Slave Labor, and the Unfinished Business of World War II" and "The Future of the Jews: How Global Forces are Impacting the Jewish People, Israel, and its Relationship with the United States." He currently serves as a Special Adviser to Secretary of State Kerry on Holocaust-Era Issues. Mr. Eizenstat holds a B.A. in Political Science, cum laude and Phi Beta Kappa from the University of North Carolina at Chapel Hill and a J.D. from Harvard Law School.

Tomás García Madrid has served as a director since December 23, 2015. He is a member of our Nominating and Corporate Governance Committee. Mr. García Madrid is the Chief Executive Officer of Obrascón Huarte Lain, SA, a public company listed on the Madrid Stock Exchange, in which Grupo Villar Mir is the majority shareholder. He also has served on the board of Obrascon Huarte Lain Mexico since 2010 and Abertis Infraestructuras, S.A. since 2012 through 2016. Mr. García Madrid holds a Master's Degree in Civil Engineering from the Universidad Politécnica de Madrid and an MBA from IESE.

Greger Hamilton has served as a director since December 23, 2015. He is a member of our Compensation Committee and BCA Special Committee and serves as chairman of the Audit Committee. Mr. Hamilton is Managing Partner of Ovington Financial Partners, LTD, a role he has held since 2009. From 2009 to 2014 he also served as a Partner at European Resolution Capital Partners, where he assisted in the restructuring of international banks in 16 countries. Prior to that, he was a Managing Director at Goldman Sachs International, where he worked from 1997 to 2008. He began his career at McKinsey and Company, where he worked from 1990 to 1997. Mr. Hamilton holds a B.A. in Business Economics and International Commerce from Brown University.

Javier Monzón has served as a director since December 23, 2015. He is a member of our Audit Committee and serves as chairman of the Compensation Committee. He is a director of the Spanish ACS Servicios y Concesiones, S.A. since 2004 and member of the supervisory board of the French Lagardère SCA since 2008, as well as member of the advisory council of Chemo group and senior advisor to the group executive chairman at Banco Santander (and board member of Santander Spain), both since June 2015. Prior to that, Mr. Monzón was Chairman and CEO of Indra Sistemas, S.A. from 1992 until 2015. He was a Partner at Arthur Andersen from 1989 to 1990. He also served as Chief Financial Officer of Telefonica, S.A. from 1984 to 1987, after which he acted as Executive Vice President until 1989. Mr. Monzón began his career at Caja Madrid, where he was a Corporate Banking Director. Mr. Monzón served as vice chairman of the American Chamber of Commerce in Spain from March 2010 until January 2015 and is member of the international advisory council of Brookings since 2014. He holds a Degree in Economics from Universidad Complutense de Madrid.

Juan Villar-Mir de Fuentes has served as a director since December 23, 2015. He has acted as the Vice Chairman of Grupo Villar Mir, S.A.U. since 1999. He is also Vice Chairman and CEO of Inmobiliaria Espacio, S.A. Mr. Villar-Mir de Fuentes has served on the board of directors of Obrascón Huarte Lain, S.A. since 1996 and as Chairman since 2016. He also serves as a director and on the audit committee of Inmobiliaria Colonial, S.A. He holds a Bachelor's Degree in Business Administration and Economics and Business Management.

B. Compensation

Compensation of executive officers and directors

The table below sets out the remuneration earned by our directors during the year ended December 31, 2016:

Name	Salary & Fees	Benefits	Pension	Annual Bonus	Long-Term Incentives	Total
Executive						
Alan Kestenbaum	$ 995,000	$ 122,407	$ 3,975	$ 748,738	$ —	$ 1,870,120

Javier López Madrid	$ 751,988	$ 300,795	$ 150,398	$ 641,668	$ 1,142,000	$ 2,986,849
Non-Executive						
Donald G. Barger, Jr.	$ 194,095	$ 18,969	$ —	$ 0	$ —	$ 213,065
Bruce L. Crockett	$ 130,414	$ 23,711	$ —	$ 0	$ —	$ 154,125
Stuart E. Eizenstat	$ 119,234	$ 14,227	$ —	$ 0	$ —	$ 133,461
Tomás García Madrid	$ 119,234	$ 8,130	$ —	$ 0	$ —	$ 127,364
Greger Hamilton	$ 197,483	$ —	$ —	$ 0	$ —	$ 197,483
Javier Monzón	$ 193,418	$ 10,162	$ —	$ 0	$ —	$ 203,575
Juan Villar-Mir de Fuentes	$ 94,845	$ 8,130	$ —	$ 0	$ —	$ 102,975

Pension, benefits to our executive management team represent matching 401(k) contributions to Alan Kestenbaum and cash payments as a percentage of salary in lieu of a contribution to pension to Javier López Madrid. On November 24, 2016, Javier López Madrid received 68,541 options with a strike price of nil, which vest and become exercisable three years from the date of grant, to the extent that performance conditions are satisfied and subject to continued service to the company. The options remain exercisable until the tenth anniversary of the grant date.

Remuneration policy

In June 2016, our shareholders approved the remuneration policy applicable to executive directors and non-executive directors of the Company as set out in the directors' remuneration report within our U.K. annual report for the year ended December 31, 2015 (the "Policy"), as required by the UK Companies Act 2006 and the Large and Medium-sized Companies and Groups (Accounts and Reports) (Amendment) Regulations 2013. The Policy was approved on June 29, 2016 and applied with effect from January 1, 2016.

The overall aim of our remuneration strategy is to provide appropriate incentives that reflect our high-performance culture and values to maximize returns for our shareholders. In summary, we aim to:

- attract, retain and motivate high-caliber, high-performing employees;
- encourage strong performance and engagement, both in the short and the long term, to enable us to achieve our strategic objectives;
- structure the total remuneration package so that a very significant proportion is linked to performance conditions measured over both the short-term and longer term;
- set fixed pay levels at or around market norms to allow for a greater proportion of total remuneration opportunity to be in variable pay; and
- create strong alignment between the interests of shareholders and executives through both the use of equity in variable incentive plans and the setting of shareholding guidelines for directors.

Consistent with this remuneration strategy, in relation to the Company's executive directors, the Policy provides, in summary, that:

- executive director salaries are set at a rate commensurate with the individual's role, responsibilities and experience, having regard to broader market rates. Salaries are reviewed annually, when Group performance, individual performance, changes in responsibility and levels of increase for the broader employee population and market salary levels will be taken into account. No maximum salary is set under the Policy;
- executive directors may receive a cash allowance in lieu of contribution to a pension, up to a maximum of 20% of base salary per annum, which includes contributions to a U.S. tax-qualified defined contribution 401(k) plan;
- executive directors may receive other market competitive benefits such as medical cover, life assurance and income protection insurance and, where appropriate, relocation allowances (with the Compensation Committee to review relocation allowances annually);
- executive directors are provided with directors' and officers' liability insurance and an indemnity to the fullest extent permitted by the UK Companies Act 2006;

- executive directors are eligible for an annual bonus, which normally has a maximum bonus opportunity of 200% of annual base salary but could have a maximum bonus opportunity of up to 500% of annual base salary in exceptional circumstances. No more than 25% of the maximum bonus payable for each performance condition will be payable for threshold performance. Any bonus award will be subject to the achievement of quantitative and qualitative performance conditions as determined by the Compensation Committee each year (at least two-thirds of the bonus will be based on financial metrics with the balance based on non-financial metrics). Normally any bonus earned in excess of the target amount will be deferred for three years into shares in the Company and the executive director may be granted an additional long-term incentive award of equal value (at maximum) to the amount of annual bonus deferred. Recovery and recoupment provisions apply to all bonus awards for misstatement, error or gross misconduct;

- executive directors are eligible to be granted an award under the Company's long-term incentive plan, at the discretion of the Compensation Committee. Any awards granted would normally vest three years after the date of grant and may, at the Compensation Committee's discretion, be subject to the achievement of performance targets. Under the policy at least two-thirds of the total long-term incentive awards granted to an executive director in any financial year will be awards where the vesting is subject to achievement of performance targets. Considering feedback and best practice, the Committee has decided all future awards for Executive Directors will be subject to performance conditions. If an award is granted, the annual target award limit will not normally be higher than 300% of salary (save that in recruitment, appointment and retention situations, it could be up to 500% of salary) and maximum vesting is normally 200% of target (both measures based on the face value of shares at the date of grant). Recovery and recoupment provisions apply to all long-term incentive awards for misstatement, error or gross misconduct;

- for 2016, reflecting the special nature of the challenges following the Business Combination, the Compensation Committee decided to rebalance the size of annual bonus and long-term incentive awards. This was a one off arrangement and the long term for 2017 will be greater than the short term;

- the Company has share ownership guidelines in place under which it recommends that executive directors hold a number of shares in the Company equivalent to 200% of base salary; and

- when determining the remuneration package for a new executive director, the Compensation Committee expects to apply the Policy set out above but may, in some circumstances, need to take account of other relevant factors, such as that individual's existing employment and/or their personal circumstances.

The Policy also incorporates certain legacy arrangements (including the Employment Agreement) with Mr. Kestenbaum, our former Executive Chairman, who ceased to be a director effective December 31, 2016. In connection with his departure, Mr. Kestenbaum was entitled to a lump-sum severance payment of approximately $21 million, in addition to other payments and benefits.

On Mr. Kestenbaum's departure, Mr. López Madrid, our former Vice Chairman, became Executive Chairman, and is currently the only executive director of the Company. Mr. Lopez Madrid receives a base salary of £555,000 per annum, which is unchanged as a result of his new appointment.

In relation to the Company's non-executive directors, the Policy provides, in summary, that:

- Non-executive directors are paid a basic fee. Supplementary fees are paid for additional responsibilities and activities such as membership of a main Board committee or assuming chairmanship of a committee. Travel fees may be paid to reflect additional time incurred in travelling to meetings.

- Currently, non-executive directors receive a base fee of £70,000 per annum, with supplemental fees being payable if that non-executive director is also the senior independent director (£35,000 per annum), a member of the Audit Committee (£17,500 per annum), a member of the Compensation Committee (£15,500 per annum), a member of the Nominating

and Corporate Governance Committee (£12,000 per annum) or a Committee Chairman (two times membership fee). Non-executive directors receive a travel fee of either £3,500 (for intercontinental travel) or £1,500 (for continental travel) per meeting. Non-executive director fee levels are reviewed periodically, with reference to time commitment, knowledge, experience and responsibilities of the role as well as market levels in comparable companies both in terms of size and sector. No maximum fee level or prescribed annual increase is set under the Policy;

- reasonable expenses incurred by the non-executive directors in carrying out their duties may be reimbursed by the Company including any personal tax payable by the non-executive director as a result of reimbursement of those expenses. The Company may also pay an allowance in lieu of expenses if it deems this appropriate;

- non-executive directors are provided with directors' and officers' liability insurance and an indemnity to the fullest extent permitted by the UK Companies Act 2006; and

- to provide alignment with shareholders, non-executive directors have voluntarily agreed to build and retain a shareholding worth twice their annual fees.

C. Board Practices

Board composition and election of directors

As of the date of this annual report, our Board of Directors consists of eight directors with three directors designated by Globe prior to the closing of the Business Combination, five directors designated by Grupo VM and one vacant board seat following the resignation of Alan Kestenbaum as Executive Chairman of the Board, effective December 31, 2016. Javier López Madrid is the Executive Chairman of the Board and is one of the Grupo VM nominees. At least two of the Grupo VM nominees and three of the Globe nominees are required to qualify as "independent directors," as such term is defined in the NASDAQ stock market rules and applicable law.

Pursuant to the Articles, our directors are elected to a term concluding at the first annual general meeting of shareholders after the consummation of the Business Combination and thereafter for one-year terms.

Director independence

Pursuant to the Articles, each director of the Company shall at all times (A) be qualified to serve as a director under applicable rules and policies of the Company, the NASDAQ and applicable law and (B) have demonstrated good judgment, character and integrity in his or her personal and professional dealings and have relevant financial, management and/or global business experience.

Pursuant to the Shareholder Agreement between Grupo VM and us entered into on December 23, 2015, the qualification of each of the director nominees who are required to qualify as "independent" under the NASDAQ shall be determined by the Nominating and Corporate Governance Committee, acting reasonably and in good faith and in a manner consistent with the fiduciary duties of each director and the rules of the NASDAQ and applicable law.

In connection with the director appointments to the Board upon the closing of the Business Combination, our previous Board passed a Directors' Written Resolution by unanimous written consent, dated as of December 23, 2015, which, among other things, appointed our current directors to the Board upon the consummation of the Business Combination. During that meeting, the Board undertook a review of director independence by reviewing meeting declarations of interests held by each of Messrs. López Madrid, Barger, Crockett, Eizenstat, García Madrid, Hamilton, Monzón and Villar-Mir de Fuentes, which had been provided to the other directors of the Company in accordance with the requirements of section 184 of the UK Companies Act 2006. This review is designed to identify and evaluate any transactions or relationships between a director or any member of his immediate family and us or members of our senior management. Based on this review, our Board of Directors has affirmatively determined that each of Messrs. Barger, Crockett, Eizenstat, Hamilton and Monzón meet the independence requirements of the NASDAQ rules.

Certain approvals of the board of directors

Pursuant to our Articles of Association, as in effect since December 23, 2015, the approval of certain matters by our Board of Directors requires the approval of more than a simple majority of directors present.

So long as Grupo VM owns greater than 15% of our outstanding shares, any action of our Board of Directors to approve the following matters requires the affirmative vote of at least two-thirds of the entire Board of Directors, including the affirmative vote of at least one independent director initially designated by Globe or, if there is no such director on the Board, at least one independent director nominated for election or appointment to the Board by the independent directors initially designated by Globe:

- Any transaction that results in a change of control, or sale of all or substantially all of the consolidated assets, or the redomiciling into a different jurisdiction, other than a sale of 100% of the equity securities of Ferroglobe to a third party in a transaction in which all shareholders receive the same per-share consideration;
- Payment of any extraordinary dividend or other extraordinary distributions;
- Extraordinary purchases, repurchases or redemptions of our shares; and
- The appointment or removal of any member of our Board of Directors other than in accordance with our organizational documents.
- Alteration, amendment or repeal of any provision of the organizational documents in a manner inconsistent with the agreed governance structure;
- Increase or decrease of the size of our Board other than in accordance with our Articles of Association;
- Until December 23, 2018: (a) removal without cause of the Executive Chairman; and (b) appointment or election of a replacement Executive Chairman;
- Alteration, amendment or repeal of any authorization given by the Board in respect of the exercise of a director's independent judgement or a conflict of interest;
- Alteration, amendment or repeal of any guidelines established by the Board regarding the authority and responsibilities of the Executive Chairman or Executive Vice-Chairman; and
- Re-acquiring "controlled company" status in the event and after Ferroglobe no longer qualifies for such exemption under the NASDAQ stock market rules.

Committees of the board of directors

Our Board of Directors has three standing committees: an Audit Committee, a Compensation Committee, and a Nominating and Corporate Governance Committee. In addition, pursuant to the Business Combination Agreement, the Board created a "BCA Special Committee."

Audit committee

Our Audit Committee consists of three directors: Messrs. Crockett, Hamilton and Monzón, and Mr. Hamilton serves as its chairman and meets the requirements as an "audit committee financial expert" under the rules of the SEC and qualifies as a financially sophisticated audit committee member as required by the NASDAQ rules relating to audit committees. Our Board has determined that each of these directors satisfies the enhanced independence requirements for audit committee members required by Rule 10A-3 under the U.S. Exchange Act, and is financially literate as that phrase is used in the additional audit committee requirements of the NASDAQ rules.

Our Audit Committee has responsibility to: (1) oversee our accounting and financial reporting processes and the audits of our financial statements; (2) monitor and make recommendations to the Board regarding the auditing and integrity of our consolidated financial statements; (3) be directly responsible for the qualification, selection, retention, independence, performance and compensation of our independent auditors, including resolution of disagreements between management and the auditors regarding financial reporting, for the purpose of preparing

or issuing an audit report or performing other audit, review or attest services for us, and have the auditors report directly to the Committee; and (4) provide oversight in respect of our internal audit and accounting and financial reporting processes. The Audit Committee meets at least four times a year. Additional meetings may occur as the Audit Committee or its chair deem advisable.

Compensation committee

Our Compensation Committee consists of three directors: Messrs. Barger, Hamilton and Monzón, and Mr. Monzón serves as its chairman. Our Board has determined that each of these directors meets the heightened independence requirements of compensation committee members under SEC rules.

Our Compensation Committee has responsibility to: (1) evaluate and approve the compensation of our directors, executive officers and key employees; (2) oversee directly or indirectly all compensation programs involving the use of our stock; (3) produce a report annually on executive compensation for inclusion in our proxy statement for our annual meeting of shareholders; (4) produce a report annually in compliance with remuneration reporting requirements (i.e., a directors' remuneration report), in each case in accordance with applicable rules and regulations; and (5) produce, review on an ongoing basis and update as needed, a directors' remuneration policy. The Compensation Committee meets with such frequency, and at such times, and places and whether in person or electronically/telephonically as it determines is necessary to carry out its duties and responsibilities, but shall meet at least two times annually.

Nominating and corporate governance committee

Our nominating and corporate governance committee (the "N&CG Committee") consists of three directors: Messrs. Barger, Eizenstat and García Madrid, and Mr. Barger serves as its chairman.

Our N&CG Committee has responsibility to consider and make recommendations to the Board related to Board membership and governance. The responsibility of our N&CG Committee as set forth in its Terms of Reference includes the following: identifying and recommending to the Board for nomination individuals qualified to become Board members; reviewing and providing guidance on the independence of nominees; reviewing and providing guidance on the organization of the Board and its committee structure; reviewing and providing guidance on the self-evaluation procedures of the Board and its committees; reviewing and providing guidance on our code of ethics; reviewing and providing guidance on our stock ownership guidelines; and reviewing and providing guidance on proposed changes to the Articles. The N&CG Committee meets at least once a year. Additional meetings may occur as the N&CG Committee or its chairperson deem advisable.

BCA Special Committee

Our BCA Special Committee consists of three directors: Messrs. Crockett, Eizenstat and Hamilton. The BCA Special Committee was formed in connection with the Business Combination and has responsibility to: (1) administer the post-closing adjustment process and procedures, for us and on our behalf, pursuant to Section 1.3 of the Business Combination Agreement (which relates to the FerroAtlántica "net debt" adjustment provision in the Business Combination Agreement); (2) evaluate potential claims for losses and enforce the indemnification rights under the Business Combination Agreement; (3) exercise or waive any of our rights, benefits or remedies under the Business Combination Agreement; and (4) evaluate potential claims under our buyer-side Representations and Warranties Insurance Policy.

Code of business conduct and ethics

We have adopted a code of ethics that applies to all of our directors, officers and other employees of the Company and its subsidiaries. The code includes additional policies applicable to the Chief Executive Officer, Chief Financial Officer and Senior Financial Officers as required by NASDAQ rules and Section 406 of the Sarbanes Oxley Act of 2002.

Board policy

We have adopted a Board policy which provides certain practical principles relating to (i) the functioning of the Board; and (ii) the principles under which we will undertake our core management and overall supervision tasks from our London headquarters (the "Board Policy"). Following the Business Combination, and as set out in the Board Policy, we intend to provide management and other services (including, but not limited to, administration, financial, commercial and technical services) to Globe, FerroAtlántica and any other subsidiaries from time to time.

D. Employees

As of December 31, 2016, 2015 and 2014, on a consolidated basis, the number of employees was 4,018, 4,543 and 3,162, respectively, excluding temporary employees. The increase in total employees from 2014 to 2015 is a result of the business combination with Globe. We believe our relations with our employees are good and we have not experienced any significant labor disputes or work stoppages.

The following tables show the number of our full-time employees as of December 31, 2016, 2015 and 2014 on a consolidated basis broken down based on business segment and geographical location:

Geographic area	2016	2015	2014
North America	963	1,063	—
Spain	880	873	929
France	1,025	1,017	967
South Africa	718	776	790
Rest of the world	432	814	476
Total number of employees	**4,018**	**4,543**	**3,162**

A majority of employees are affiliated with labor unions and have entered into collective bargaining agreements in Spain, France, South Africa, the United States and Venezuela. We have experienced union activity and strikes in the past. For example, in 2014, there was a strike at our South African subsidiary that reduced production for seven days. Additionally, we have also experienced employee strikes in France from time to time. Our Spanish collective bargaining agreements expired at the end of 2016, though most of the provisions of these agreements remain effective until a new agreement is entered into. See “Item 3.D.—Key Information—Risk Factors—We are subject to the risk of union disputes and work stoppages at our facilities, which could have a material adverse effect on our business.”

Employees at Cee, Boo, Hidro Nitro, Sabón and Madrid work under a collective bargaining agreement that expired on December 31, 2015. A new agreement is under negotiation. During the negotiation period, the expired agreement remains effective, except for those provisions which explicitly state that they cease to be effective beyond December 31, 2015. For example, the provisions relating to salary increases are no longer effective (i.e., there cannot be any salary increases). Any future salary increases are dependent on the terms of the new agreement but may apply retroactively back to January 1, 2016.

The collective bargaining agreement for Silicio Ferrosolar will expire on December 31, 2017. Our research and development employees based in Sabón have no specific collective bargaining agreement, but rather adhere to the terms of the Sabón plant collective bargaining agreement.

Mine employees in Spain also work under union contracts. The contracts applicable to the employees at Cuarzos Industriales expired on December 31, 2016. A new agreement is under negotiation. The agreement applicable to our employees at Ramsa expired on December 31, 2015. A new agreement is under negotiation. During the negotiation period, the expired agreement remains effective, except for those provisions which explicitly state that they cease to be effective beyond December 31, 2015.

All employees at FerroPem, S.A.S. plants at Anglefort, Chateau-Feuillet, Les Clavaux, Laudun, Montricher, and Pierrefitte and the Chambéry offices are covered by the national Collective Chemistry Agreement. This agreement has no expiration date. The *d’accord intéressement*, which is an employee incentive bonus scheme whereby the incentive bonus is distributed according to a profit-sharing formula defined in the agreement, was signed on June 7, 2016. Additionally, the *accord de participation*, which is a compulsory profit-sharing agreement under French law, must be negotiated and signed before December 2, 2017.

The hourly paid employees at Polokwane work under a collective bargaining agreement, which will expire on June 2018, with the exception of employees who are members of the trade union AMCU, which has not signed the agreement for 2017 and 2018.

The collective bargaining agreement for Thaba Cheue Mining expires on March 30, 2017. A new agreement is under negotiation.

Hourly employees at the Selma, Alabama facility are covered by a collective bargaining agreement with the Industrial Division of the Communications Workers of America, under a contract running through April 2, 2017. Hourly employees at the Alloy, West Virginia, Niagara Falls, New York and Bridgeport, Alabama facilities are covered by collective bargaining agreements with The United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union under contracts running through April 28, 2017, July 31, 2017, and March 31, 2018, respectively. Union employees in Argentina are working under a contract running through April 30, 2016, the terms of which will remain in place until the Argentine government ratifies a new agreement. Operations in Poland and Yonvey, China are not unionized. Union employees in Canada work at the Becancour, Québec, plant and are covered by a Union Certification held by CEP, Local 184. The corresponding collective bargaining agreement at its Becancour facility runs through April 30, 2017.

E. Share Ownership

The following table and accompanying footnotes show information regarding the beneficial ownership of our shares as of April 24, 2017 by:

- each named executive officer;
- each of our directors; and
- all executive officers and directors as a group.

The percentage of shares beneficially owned is based on 171,946,731 shares issued and outstanding on April 24, 2017. Beneficial ownership for the purposes of this table is determined in accordance with the rules and regulations of the SEC. These rules generally provide that a person is the beneficial owner of securities if such person has or shares the power to vote or direct the voting thereof, or to dispose or direct the disposition thereof or has the right to acquire such powers within 60 days.

Name	Number of Shares Beneficially Owned	Percentage of Outstanding Shares
Directors and Executive Officers:		
Javier López Madrid	20,000	*
Pedro Larrea Paguaga	12,000	*
Joseph Ragan[1]	211,761	*
Nicholas Deeming	—	—
Donald G. Barger, Jr.[2]	42,815	*
Bruce L. Crockett[3]	17,892	—
Stuart E. Eizenstat[4]	37,883	*
Tomás García Madrid	—	—
Greger Hamilton	—	—
Javier Monzón	19,400	*
Juan Villar-Mir de Fuentes	—	—
Directors and Executive Officers as a Group	**361,751**	*

* Less than one percent (1%).

(1) Includes 191,761 shares issuable upon exercise of options within 60 days of April 24, 2017.
(2) Includes 31,216 shares issuable upon exercise of options within 60 days of April 24, 2017.
(3) Includes 17,892 shares issuable upon exercise of options within 60 days of April 24, 2017.
(4) Includes 31,216 shares issuable upon exercise of options within 60 days of April 24, 2017.

ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

A. Major Shareholders

The following table sets forth certain information regarding beneficial ownership of shares by each stockholder known by us to be the beneficial owner of more than 5% of the shares.

Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to the securities. Shares that may be acquired by an individual or group within 60 days of

April 24, 2017, pursuant to the exercise of options, are deemed to be outstanding for the purpose of computing the percentage ownership of such individual or group, but are not deemed to be outstanding for the purpose of computing the percentage ownership of any other person shown in the table. Percentage of ownership is based on 171,946,731 shares outstanding on April 24, 2017.

Name	Number of Shares Beneficially Owned	Percentage of Outstanding Shares
Grupo Villar Mir, S.A.U.	94,554,634	55%

As reported on Schedule 13G, filed on February 19, 2016, Adage Capital Partners, L.P., Adage Capital Partners GP, L.L.C. and Adage Capital Advisors, L.L.C. (together, the "Adage Entities") beneficially owned 8,920,075 shares of the Company, constituting 5.19% of the then outstanding shares. As reported on Schedule 13G/A, filed on February 9, 2017, the Adage Entities beneficially owned 7,687,487 shares of the Company, constituting 4.47% of the then outstanding shares.

As reported on Schedule 13G, filed on February 16, 2016, Alan Kestenbaum beneficially owned 8,840,938 shares of the Company, constituting 5.13% of the then outstanding shares. As reported on Schedule 13G/A, filed on February 14, 2017, Alan Kestenbaum beneficially owned 6,502,363 shares of the Company, constituting 3.78% of the then outstanding shares.

The Company's shareholders do not have different voting rights.

As of April 14, 2017, Ferroglobe had four record holders in the United States, holding all of our outstanding shares.

B. Related Party Transactions

The following includes a summary of transactions since (x) February 5, 2015, when we were formed, to which we have been a party, (y) January 1, 2014 to which Globe has been a party and (z) January 1, 2014 to which FerroAtlántica has been a party, with any: (i) enterprises that directly or indirectly through one or more intermediaries, control or are controlled by, or are under common control with, us, Globe or FerroAtlántica, as applicable, (ii) associates, (iii) individuals owning, directly or indirectly, an interest in the voting power of the Company, Globe, or FerroAtlántica, as applicable, that gives them significant influence over us, Globe or FerroAtlántica, as applicable, and close members of any such individual's family, (iv) key management personnel, including directors and senior management of companies and close members of such individuals' families or (v) enterprises in which a substantial interest in the voting power is owned, directly or indirectly, by any person described in (iii) or (iv) or over which such person is able to exercise significant influence.

Grupo VM shareholder agreement

On December 23, 2015, we entered into a shareholder agreement with Grupo VM (the "Grupo VM Shareholder Agreement") that contained various rights and obligations with respect to Grupo VM's Class A Ordinary Shares. Under the Grupo VM Shareholder Agreement, Grupo VM has the right to nominate the number of directors for the Board that is proportionate to its share ownership and to designate one of the Grupo VM director nominees to serve as Executive Vice-Chairman of the Board. On December 23, 2015, Grupo VM designated Javier López Madrid to serve as the Executive Vice-Chairman of the Board in connection with the closing of the Business Combination. Upon the resignation of Alan Kestenbaum as Executive Chairman of the Board, Mr. López Madrid was appointed as Executive Chairman of the Board effective December 31, 2016. The Grupo VM Shareholder Agreement also provides that Grupo VM director nominees will be proportionately represented on each committee of the Board, subject to the NASDAQ stock market rules, except that the Globe independent directors will constitute a majority of the Nominating and Corporate Governance Committee and the BCA Special Committee will be composed of two Globe independent directors and one independent Grupo VM director.

Until the date on which Grupo VM no longer has the right to designate or nominate a majority of the Board and Grupo VM directors no longer constitute the majority of the Board (the "Decrease Date"), the independent directors designated to the Board by Globe (or replacements designated thereby) will have the exclusive right to nominate persons for election at any shareholders meeting called for the purpose of electing directors, subject to the right of Grupo VM to designate and nominate directors as provided under the Grupo VM Shareholder Agreement. On and after the Decrease Date, the Board will have the right to nominate persons for election at

any shareholders meeting called for the purpose of electing directors, subject to the right of Grupo VM to designate and nominate directors as provided under the Grupo VM Shareholder Agreement.

Under the Grupo VM Shareholder Agreement, other than with respect to the election of directors (other than the Grupo VM director nominees) in a contested election for directors that occurs from and after the fifth anniversary of the closing of the Business Combination, Grupo VM shall vote its shares to cause the election or reelection, as applicable, of the Grupo VM director nominees and the other persons nominated by the Board for election of directors. Grupo VM shall also not vote its shares to cause the removal of the Globe independent directors or any director appointed or elected in replacement of Alan Kestenbaum. In the case of a contested election for directors that occurs from and after the fifth anniversary of the closing of the Business Combination, Grupo VM will agree to abstain from voting its shares with respect to the election of directors (other than the Grupo VM director nominees or, if not a Grupo VM director nominee, the Executive Chairman).

Subject to certain exceptions, Grupo VM has preemptive rights to subscribe for up to its proportionate share of any shares issued in connection with any primary offerings. The Grupo VM Shareholder Agreement (i) also restricts the ability of Grupo VM and its affiliates to acquire additional shares and (ii) contains a standstill provision that limits certain proposals and other actions that can be taken by Grupo VM or its affiliates with respect to the Company, in each case, subject to certain exceptions, including prior Board approval. The Grupo VM Shareholder Agreement also restricts the manner by which, and persons to whom, Grupo VM or its affiliates may transfer shares. On February 3, 2016, during an in-person meeting of our Board, the Board approved the purchase of up to 1% of the shares by Javier López Madrid in the open market pursuant to Section 5.01(b)(vi) of the Grupo VM Shareholder Agreement (“JLM Shares”). In connection with the foregoing, Grupo VM and the Company entered into Amendment No. 1 to the Grupo VM Shareholder Agreement, dated as of February 10, 2016, which amended the Grupo VM Shareholder Agreement to disregard the JLM Shares from determining the percentage of the total aggregate issued and outstanding Shares of the Company owned by Grupo VM and its affiliates.

The Grupo VM Shareholder Agreement will terminate on the first date on which Grupo VM and its affiliates hold less than 15% of the outstanding Shares.

AK shareholder agreement

On December 23, 2015, we entered into a separate shareholder agreement with Mr. Kestenbaum and certain of his affiliates (the “AK Shareholder Agreement”) that contained various rights and obligations with respect to their shares. Pursuant to the AK Shareholder Agreement, Mr. Kestenbaum was appointed as Executive Chairman of the Board on December 23, 2015 in connection with the closing of the Business Combination. Mr. Kestenbaum resigned as Executive Chairman of the Ferroglobe Board of Directors, effective December 31, 2016.

Under the AK Shareholder Agreement, except with respect to a contested election for directors (other than Grupo VM director nominees), that occurs after the fifth anniversary of the closing of the Business Combination, so long as Mr. Kestenbaum and his affiliates own at least 1% of the total issued and outstanding shares, Mr. Kestenbaum and his affiliates will vote their shares to cause the election or reelection, as applicable, of the Grupo VM director nominees and the other persons nominated by the Board for election of directors. In the case of a contested election for directors that occurs from and after the fifth anniversary of the closing of the Business Combination, Mr. Kestenbaum and his affiliates may vote their shares with respect to the election of directors (other than the Grupo VM director nominees) in any manner with respect to such contested election for directors. Mr. Kestenbaum and his affiliates must always vote in favor of the Grupo VM director nominees.

The AK Shareholder Agreement also provides that Mr. Kestenbaum will enter into a “gain recognition agreement” with the IRS if he is treated as a “five-percent transferee shareholder” of the Company following the Globe Merger, and will enter into subsequent “gain recognition agreements” with respect to actions or transactions taken by the Company or its affiliates, as required under applicable law.

The AK Shareholder Agreement will terminate upon the aggregate total issued and outstanding shares owned by Mr. Kestenbaum and his affiliates falling below 1%; provided that the tax covenants and indemnification obligation will survive until such time as set forth in the AK Shareholder Agreement.

Registration rights agreement

On December 23, 2015, we entered into a registration rights agreement with Grupo VM and Mr. Kestenbaum pursuant to which we will grant certain registration rights to each of Grupo VM and Mr. Kestenbaum.

Agreements with executive officers and key employees

We have entered into agreements with our executive officers and key employees. See "Item 6.A.—Directors, Senior Management and Employees—Directors, Senior Management and Employees."

Marco International

Alan Kestenbaum, a former member of our board of directors, is affiliated with Marco International. We have entered into the following transactions with Marco International.

- the purchase of carbon electrodes. At December 31, 2016, we have a receivable balance from Marco International under these agreements totaling $629,000 resulting from the settlement of a claim against the electrode producer for quality issues in the purchased electrodes.

- the sale of ferrosilicon to Marco International. At December 31, 2016, receivables from Marco International under these agreements totaled $127,000.

- the purchase of rare earth. At December 31, 2016, payables to Marco International under these agreements totaled $0.

VM Energía

VM Energía, a Spanish company wholly-owned by Grupo VM, advises in the day-to-day operations of FerroAtlántica Group's hydroelectric plants under two contracts entered into in April 2013 that provide for strategic advisory services to be provided by VM Energía to FerroAtlántica and Hidro Nitro Española. VM Energía's services under these contracts include the provision of advisory services in relation to any economic, technical and administrative aspect of FerroAtlántica Group's energy operations, the preparation of periodic reports assessing the main risks associated with the energy market and analyzing the performance of each hydroelectric power plant, the provision of advisory services in connection with changes in the applicable energy regulatory framework and related assistance in dealing with the competent energy authorities. The contracts have five-year terms and are due to expire in 2018. FerroAtlántica and Hidro Nitro Española pay VM Energía a monthly remuneration calculated as a percentage of the revenues made each month by FerroAtlántica Group's hydroelectric power plants. For the fiscal years ended December 31, 2016, 2015 and 2014, FerroAtlántica and Hidro Nitro Española made payments under these contracts to VM Energía of $3,102,541, $4,022,346 and $7,055,663, respectively. VM Energía is not legally deemed to be a direct or indirect operator of the hydroelectric power plants owned by FerroAtlántica Group in spite of the services provided to FerroAtlántica Group under the strategic advisory services agreement.

Under contracts entered into with FerroAtlántica on June 22, 2010 and December 29, 2010, and with Hidro Nitro Española on December 27, 2012, VM Energía supplies the energy needs of the Boo, Sabón and Monzón electrometallurgy facilities, as a broker for FerroAtlántica and Hidro Nitro Española in the wholesale power market. The contracts allow FerroAtlántica and Hidro Nitro Española to buy energy from the grid at market conditions without incurring costs normally associated with operating in the complex wholesale power market, as well as to apply for fixed energy price arrangements in advance from VM Energía, based on the energy markets for the power, period and profile applied for. The contracts have a term of one year, which can be extended by the mutual consent of the parties to the contract, and will expire on December 31, 2017, unless it is extended FerroAtlántica pays VM Energía a service charge in addition to paying for the cost of energy purchase from the market. For the fiscal years ended December 31, 2016, 2015 and 2014, FerroAtlántica and Hidro Nitro Española made payments under these contracts to VM Energía of $69,054,451, $85,509,925 and $87,032,692, respectively for the purchase of energy plus the service charge. These contracts are similar to contracts FerroAtlántica signs with other third-party brokers. Additionally, for the fiscal years ended December 31, 2016, 2015 and 2014, VM Energía invoiced other subsidiaries of FerroAtlántica Group for a total amount of $524,185, $587,289 and $738,645, respectively.

Under contracts dated June 30, 2012, Enérgya VM Generación, S.L. ("Enérgya VM"), a Spanish company wholly-owned by VM Energía, arranges for the sale of energy produced by FerroAtlántica and Hidro Nitro

Española's hydroelectric plants. Pursuant to the contracts, Enérgya VM provides energy market brokerage services and represents the FerroAtlántica Group subsidiaries before the applicable energy market operator, the system operator and the Spanish National Markets and Competition Commission. FerroAtlántica and Hidro Nitro Española pay Enérgya VM a monthly remuneration calculated as a percentage of the sales made each month by their hydroelectric power plants. These contracts currently have one-year terms, subject to automatic yearly renewal, unless terminated with notice provided one month prior to the scheduled renewal. For the fiscal years ended December 31, 2016, 2015 and 2014, Hidro Nitro Española made payments under its contract to Enérgya VM of $110,462, $166,851 and $666,907, respectively, and FerroAtlántica made payments under its contracts to Enérgya VM of $391,768, $474,161 and $1,234,176, respectively.

On January 25, 2016, FerroAtlántica entered into a swap contract with Enérgya VM, a wholly-owned subsidiary of VM Energía of 75 megawatts of energy per hour during 43.1 €/megawatt hours for each of the second, third and fourth quarters of 2016.

Espacio Information Technology, S.A.

Espacio Information Technology, S.A. ("Espacio I.T."), a Spanish company wholly-owned by Grupo VM, provides information technology and data processing services to certain FerroAtlántica Group subsidiaries: FerroAtlántica, FerroAtlántica de Mexico, Silicon Smelters (Pty.), Ltd. and FerroPem, S.A.S. pursuant to several contracts.

Under a contract entered into on January 1, 2004, Espacio I.T. provides FerroAtlántica with information processing, data management, data security, communications, systems control and customer support services. The contract has a one-year term, subject to automatic yearly renewal, unless terminated with notice provided three months prior to the scheduled renewal. The base yearly amount due under the contract for these services is $519,788, exclusive of VAT and subject to inflation adjustment. For the fiscal years ended December 31, 2016, 2015 and 2014, FerroAtlántica made payments under this contract to Espacio I.T. of $1,000,412, $939,464 and $1,235,505, respectively.

Under a contract entered into on January 1, 2006, Espacio I.T. provides FerroPem, S.A.S. with information processing, data management, data security, communications, systems control and customer support services. The contract has a one-year term, subject to automatic yearly renewal, unless terminated with notice provided three months prior to the scheduled renewal. The base yearly amount due under the contract for these services is $762,094, exclusive of VAT and subject to inflation adjustment. For the fiscal years ended December 31, 2016, 2015 and 2014, FerroPem, S.A.S. made payments under this contract to Espacio I.T. of $936,611, $861,133 and $1,146,495, respectively.

Under a contract entered into on June 26, 2014, Espacio I.T. provides FerroAtlántica de Mexico with information processing, data management, data security, communications, systems control and customer support services. The contract has a two-year term, subject to automatic renewal every two years, unless terminated with notice six months prior to the scheduled renewal. The base yearly amount due under the contract for these services is $21,920, exclusive of VAT and subject to inflation adjustment and adjustment based on the level of production of the previous year. From the date of effectiveness of the contract in July 2014 through December 31, 2014, FerroAtlántica de Mexico made payments to Espacio I.T. of $5,480. In 2016 and 2015, FerroAtlántica de Mexico made payments to Espacio I.T. of $18,264 and $18,313, respectively.

Under a contract entered into on January 1, 2009, Espacio I.T. provides Silicon Smelters (Pty.), Ltd. with services including the maintenance and monitoring of the company's network, servers, applications, and user workstations, as well as standard software licenses. The contract has a one-year term, subject to automatic yearly renewal, unless terminated with notice three months prior to the scheduled renewal. The base yearly amount due under the contact is $265,700, subject to inflation adjustment. For the twelve months ended December 31, 2016, 2015 and 2014, Silicon Smelters (Pty.), Ltd. made payments under this contract to Espacio I.T. of $262,753, $243,572 and $299,533, respectively.

For the fiscal years ended December 31, 2016, 2015 and 2014, Espacio I.T. invoiced other subsidiaries of FerroAtlántica in a total amount of $1,900,390, $780,353 and $240,987, respectively.

In April 2016, the Ferroglobe Board approved a proposal to obtain certain information technology services from Espacio I.T., and the parties are currently negotiating a contract for the provision of these services. The contract has a minimum term of five years and an annual base payment of $360,000 and required an initial investment of $1.7 million during 2016. These investments and services are required to consolidate the IT infrastructure and information systems of Globe and FerroAtlántica. Additional services may be required in 2017 to achieve full convergence of IT systems.

Inmobiliaria Espacio, S.A

On July 15, 2015, Grupo FerroAtlántica, S.A.U entered into a credit facility to Inmobiliaria Espacio, S.A., a Grupo Villar Mir S.A.U. subsidiary, with a credit limit of $20 million. The outstanding debt (amortized cost) of this facility as of December 31, 2016 and 2015 is $2,664,000 and $2,440,000, and accrues a rate interest of Euribor a differencial of 275 b.p. and has a maturity in the short-term and is automatically renewed for one year unless either party terminates the agreement.

Aurinka

Javier López Madrid, a current member of the Board, is affiliated with Aurinka Photovoltaic Group, S.L. (“Aurinka”). Mr. López Madrid currently owns approximately 100% of the outstanding share capital of Financiera Siacapital, which holds a (i) 31.33% interest in Blue Power Corporation, S.L. (“Blue Power”), a party to the joint venture, and (ii) 31.33% interest in Aurinka. Blue Power owns the main intellectual property being contributed to the joint venture and which will provide certain technology consulting services to the joint venture. The remaining equity interests in Blue Power and Aurinka are owned by third party outside investors.

In 2016, FerroAtlántica entered into a project with Aurinka for a feasibility study and basic engineering for a UMG solar silicon manufacturing plant. Purchases under this project were approximately €3.0 million for 2016.

On December 20, 2016, Grupo FerroAtlántica, S.A.U., FerroAtlántica, S.A., a wholly-owned subsidiary of Grupo FerroAtlántica, S.A.U. and Silicio Ferrosolar, S.L.U., a wholly-owned subsidiary of Grupo FerroAtlántica, S.A.U., entered into a joint venture agreement (the “Solar JV Agreement”) with Blue Power and Aurinka providing for the formation and operation of a joint venture with the purpose of producing UMG solar silicon. The entry into the joint venture pursuant to the Solar JV Agreement is subject to certain conditions precedent, including the satisfactory completion of an ex-ante verification procedure in relation to the ability of the technology to be contributed to the joint venture by Blue Power to meet certain technical and cost parameters and the authorization of the joint venture by Ferroglobe, Blue Power and Aurinka’s management bodies. All these conditions precendents were met during 2017 and the Solar JV Agreement is now fully binding. Under the Solar JV Agreement, FerroAtlántica will indirectly own 75% of the operating companies to be formed as part of the joint venture, one of which will own certain assets comprising, among others, constructions at Sabón and a UMG solar silicon plant at Puertollano, Spain, and 51% of the company to be formed as part of the joint venture to hold certain intellectual property rights and know-how contributed by Blue Power and FerroAtlántica, which will license such intellectual property rights and know-how to the aforementioned operating companies. Pursuant to the Solar JV Agreement, FerroAtlántica will incur capital expenditures, subject to the approval of the joint venture board, in connection with the joint venture of a maximum of €118 million over an initial phase estimated for up to two years. Further investment in the joint venture will be determined as the joint venture progresses. In connection with the Solar JV Agreement, FerroAtlántica has obtained two loans, the principal amounts of which are approximately €45 million and approximately €27 million, respectively, from the Spanish Ministry of Industry and Energy for the purpose of building and operating the UMG solar silicon plant.

On June 13, 2016 Silicio FerroSolar, S.L.U. granted a loan to Blue Power Corporation, S.L. in the amount of $8,360,000, related to the financing of the new Spanish solar project. This loan was amended on September 13, 2016 to increase the principal amount by $500,000. The outstanding debt (amortized cost) as of December 31, 2016 of this loan amounting $9,845,000 and bearing an interest rate of 10% and will be repaid on long-term basis.

C. Interests of Experts and Counsel

Not applicable.

ITEM 8. FINANCIAL INFORMATION

A. Consolidated Statements and Other Financial Information

We have included the Consolidated Financial Statements as part of this annual report. See “Item 18.—Financial Statements.”

Legal proceedings

In the ordinary course of its business, Ferroglobe is subject to periodic lawsuits, investigations, claims and proceedings, including, but not limited to, contractual disputes and employment, environmental, health and safety matters. Although Ferroglobe cannot predict with certainty the ultimate resolution of lawsuits,

investigations, claims and proceedings asserted against it, Ferroglobe does not believe any currently pending legal proceeding to which it is a party will have a material adverse effect on its business, prospects, financial condition, cash flows, results of operations or liquidity.

Matters pertaining to Joint Ventures

In 2015, FerroAtlántica Group filed a claim to recover the initial joint venture contribution of approximately $17 million from its counterparty in relation to the Joint Venture Agreement between FerroAtlántica Group and Zeus Mineraçao Ltda., José Rubens Moretti Junior and Guilherme Moretti. There was an arbitration hearing in April 2015 and, on June 10, 2016, an award of $17 million, plus costs, was confirmed in favor of FerroAtlántica. This award is binding and FerroAtlántica is now seeking to enforce the award. While the Company continues to pursue recovery, the Company considers recovery against the claim unlikely due to the apparent financial condition of the respondents and has written off the full amount of the claim as of December 31, 2016.

In March 2017, we received a demand for mediation from our North American joint venture partner regarding a dispute in relation to the price of coal charged by our subsidiary, Alden, to our North American joint ventures. The non-binding mediation is scheduled for June 2017. Although our investigation of this matter is underway, the period that is reasonably in dispute, the amount in dispute, including the materiality of such amount, and the expected outcome of the mediation process are uncertain at this stage.

Asbestos claims

Certain maintenance employees of FerroPem, S.A.S. entities in France may have been exposed prior to the early 1990s to asbestos in furnaces located at FerroPem, S.A.S. plants before those plants were purchased by the FerroAtlántica Group. During the period in question, FerroPem, S.A.S. was wholly-owned by Pechiney Bâtiments, which has indemnification obligations to our FerroAtlántica Group division pursuant to the sale and purchase agreement under which ownership of FerroPem, S.A.S. was transferred to our FerroAtlántica Group division in 2005 by Río Tinto France. As of the date of this annual report, at least 35 claims for inexcusable negligence ("*faute inexcusable*") are pending against FerroPem, S.A.S. for reasons of alleged injuries resulting from alleged asbestos exposure. The claims for inexcusable negligence are based either on the occurrence of work accidents ("*accident du travail*") or on the recognition of an occupational disease ("*maladie professionelle*"). Additional cases claiming damages for injuries related to asbestos exposure may be filed in the future. FerroPem, S.A.S. has initiated an arbitration process according to the terms contained in the sale and purchase agreement to enforce its indemnification rights against Río Tinto France with respect to the asbestos claims. The arbitration hearing is currently being planned.

Environmental matters

On April 10, 2015, the Magistrate Court Number 2 of Santiago de Compostela notified our FerroAtlántica division of the opening of proceedings against the former Quality Control and Environmental Evaluation General Director for Galicia for an alleged criminal offense against the environment. Our FerroAtlántica division was alleged to have profited from the alleged offense, which involved a determination regarding the flow of a river on which certain of its hydroelectric facilities are located. In addition, our FerroAtlántica division was required to post a bond in the amount of €8.5 million to guarantee any civil financial responsibility that may be imposed on it as a result of the proceedings, which seek disgorgement of profits in the amount of approximately €6.4 million. The civil complaint against our FerroAtlántica division was dependent on the criminal proceeding against the public official. On February 2, 2017, the Magistrate Court Number 2 of Santiago de Compostela dismissed the case against our FerroAtlántica division as well as against the General Director because the statute of limitations for the alleged criminal offense had expired.

On August 31, 2016, the U.S. Department of Justice (the "DOJ") requested a meeting with GMI to discuss potential resolution of a July 1, 2015 NOV/FOV that GMI received from the U.S. Environmental Protection Agency (the "EPA") alleging certain violations of the Prevention of Significant Deterioration ("PSD") and New Source Performance Standards provisions of the Clean Air Act associated with a 2013 project performed at GMI's Beverly facility. Specifically, the July 2015 NOV/FOV alleges violations of the facility's existing operating and construction permits, including allegations related to opacity emissions, sulfur dioxide and particulate matter emissions, and failure to keep necessary records and properly monitor certain equipment. On October 27, 2016, GMI met with the DOJ and the EPA to discuss the alleged violations, GMI's preliminary assessment of those alleged violations, and its possible defenses to the NOV/FOV. As a result of that meeting, GMI has agreed to the government's request that GMI prepare an assessment of Best Available Control Technologies ("BACT") that could be applicable to the facility under the federal PSD program, to conduct a

ventilation study to assess emissions at the facility, and to continue discussions with the government regarding an appropriate resolution of the NOV/FOV by consent. In February 2017, the EPA formally issued a request under Section 114 of the Clean Air Act, requiring GMI to conduct the ventilation study that GMI had previously agreed to conduct. On January 4, 2017, GMI received a second NOV/FOV dated December 6, 2016, arising from the same facts as the July 2015 NOV/FOV and subsequent EPA inspections. The second NOV/FOV alleges opacity exceedances at certain units, failure to prevent the release of particulate emissions through the use of furnace hoods at a certain unit, and the failure to install Reasonably Available Control Measures at certain emission units at the Beverly facility. As part of the on-going consent process to resolve the NOVs/FOVs, the government could demand that GMI install additional pollution control equipment and/or implement other measures to reduce emissions from the facility, as well as pay a civil penalty. At this time, however, GMI does not know the extent of potential injunctive relief or the amount of a civil penalty that could result from a negotiated resolution of this matter. Should the DOJ and GMI be unable to reach a negotiated resolution of the NOVs/FOVs, the government could institute formal legal proceedings for injunctive relief and civil penalties. The statutory maximum penalty is $93,750 per day per violation, from April 2013 to the present.

Matters pertaining to Mr. López Madrid

The legal proceedings described below are pending in Spain in which Mr. López Madrid has been called as "imputado" or "investigado"[5] by a Spanish criminal investigative court. At the conclusion of these criminal investigatory proceedings, the Spanish court in each proceeding may determine to withdraw the investigation without issuing formal charges, excuse certain parties previously called "imputado" or "investigado" on the basis that there is insufficient evidence to issue formal charges, or issue formal charges or indictments against specific named parties.

On October 25, 2012, Mr. López Madrid was called as "imputado" along with several other directors of Bankia, S.A. and Banco Financiero y de Ahorros, S.A., by a Spanish court investigating whether Mr. López Madrid and the other persons called as "imputado" in the investigation were involved in the misrepresentation of the financial condition of Bankia, S.A. in connection with its initial public offering. Mr. López Madrid advised us that he vehemently denies any allegations against him in connection with this matter and intends to defend himself vigorously.

As part of the same proceeding, Mr. López Madrid was called again on January 28, 2015, along with several other directors of Bankia, S.A. and several former directors and senior executives of Caja Madrid, by the Spanish court in connection with its investigation into whether Mr. López Madrid and the other persons called as "imputado" in the investigation improperly used credit cards for personal expenditures paid by Bankia, S.A. and/or Caja Madrid. Mr. López Madrid advised Globe and FerroAtlántica that, upon learning that questions had been raised about his credit card charges in an internal audit, he had promptly reimbursed Bankia, S.A. €32,000 for the credit card charges paid by Bankia, S.A. and paid all taxes otherwise due and payable on account of such amounts. A ruling was issued by the Spanish High Court (*Audiencia Nacional*) on February 23, 2017, pursuant to which Mr. López Madrid was convicted, together with 64 other former directors or executives of Bankia, S.A. and Caja Madrid, of certain charges as an accessory (not as an author) in connection with these proceedings. Mr. López Madrid has advised the Company that he has filed an appeal with the Spanish Supreme Court (*Tribunal* Supremo) in response to the ruling and will continue to defend himself vigorously in this matter.

On April 20 and 21, 2017, Mr. López Madrid was questioned by an investigating court ("Audiencia Nacional")[6] in Madrid in relation to an alleged payment in 2007 of €1.4 million by Obrascón Huarte Lain, S.A. ("OHL"), a listed company partially owned by Grupo Villar Mir, in favor of public officials in the context of the award of a public civil work in the Madrid region. Mr. López Madrid was a non-executive director of OHL at the time of the alleged payment and remains a non-executive director of OHL, and has never held any executive responsibility in OHL. After making the declaration, Mr. López Madrid was released, on the condition that he provided a €100,000 security bond with the court within seven days. He remains as "investigado" and the court will now continue its investigation and decide whether to bring any charges against Mr. López Madrid or the

[5] Pursuant to a reform to Spanish law in October 2015, the term "imputado" (imputed) has since been replaced with the term "investigado" (under investigation). In this annual report, Ferroglobe uses the term that was in use at the time of the matter to which Ferroglobe is referring herein.

[6] Under Spanish law, investigations of criminal offences are carried out by courts (rather than prosecutors or other government bodies). For alleged corruption crimes such as those in this investigation, Audiencia Nacional is the applicable court for investigation. So "investigado" refers to a person that is under investigation by a court that acts as a prosecutor in the case, but no charges have been brought against the person.

other “investigados.” The allegations do not involve Ferroglobe or Mr. López Madrid’s actions on behalf of Ferroglobe (or its predecessor Grupo FerroAtlántica). Mr. López Madrid vehemently denies the allegations against him and intends to defend himself vigorously in the matter. The Board of Directors of Ferroglobe has reviewed the developments and all the available information in this legal proceeding, and will monitor any further developments.

On February 11, 2016, Mr. López Madrid was called as “investigado” by a Spanish investigative court in connection with the “Púnica” investigation into possible bribery relating to awards of public contracts. This investigation, in which numerous individuals have been called as “imputado” or “investigado” thus far, has been underway since October 2014. Mr. López Madrid advised us that he vehemently denies the allegations against him and intends to defend himself vigorously in this matter.

On June 10, 2014, a physician (the “Physician”), who had previously treated Mr. López Madrid’s family, was called as “imputado” by a Spanish investigative court in connection with criminal allegations that the Physician had harassed Mr. López Madrid, his family and his associates through anonymous phone calls and messages making false accusations and serious threats, which were received daily over a period of several months. On September 24, 2014, Mr. López Madrid was called as “imputado” by a Spanish investigative court in connection with criminal allegations that he had sexually harassed the Physician and was involved in a campaign of threats and physical violence against the Physician, her family and her associates. On November 12, 2014, the Spanish court entered a restraining order against Mr. López Madrid in the matter. On February 26, 2016, the Spanish court resolved to dismiss the proceeding involving allegations against Mr. López Madrid and to render a restraining order ineffective. The Physician filed an appeal against this court resolution on March 17, 2016 and was rejected. The Physician filed a second appeal on February 6, 2017 before the Madrid High Court (*Audiencia Provincial de Madrid*), which, as of April 26, 2017, has not yet been heard.

On October 21, 2014, Mr. López Madrid was called as “imputado” by a Spanish court investigating the sale of shares of Infoglobal by Grupo Urbina to three private individuals, in connection with allegations that Grupo Urbina failed to disclose negative material information regarding Infoglobal prior to the sale. Mr. López Madrid has advised Globe and FerroAtlántica that he was a passive investor in Grupo Urbina. Mr. López Madrid further advised Globe and FerroAtlántica that he did not have any managerial position or participation in management bodies at either Grupo Urbina or Infoglobal. On December 22, 2014, the investigating court dismissed the case. On February 23, 2015, an appellate court ordered the investigation reopened and, following the new investigation, the investigating court dismissed the case again on December 1, 2016. A further appeal was filed on December 15, 2016. The appeal against the decision to dismiss the case is yet to be heard by the appellate court. Mr. López Madrid advised us that he vehemently denies any allegations against him in connection with this matter and intends to defend himself vigorously

Dividend policy

Our Board intends to declare annual (or final) dividends and interim dividends, payable quarterly, to be reviewed each year, but it will depend upon many factors, including the amount of our distributable profits as noted below. Pursuant to the Articles, and subject to applicable law, the Company may by ordinary resolution declare dividends (which shall not exceed the amounts recommended by the directors), and the directors may decide to pay interim dividends. The Articles provide that the directors may pay any dividend if it appears to them that the profits available for distribution justify the payment. Under English law, dividends may only be paid out of distributable reserves of the Company or distributable profits, defined as accumulated realized profits not previously utilized by distribution or capitalization less accumulated realized losses to the extent not previously written off in a reduction or reorganization of capital duly made, as reported to the Companies House, and not out of share capital, which includes the share premium account. Further, a U.K. public company may only make a distribution if the amount of its net assets is not less than the aggregate of its called-up share capital and undistributable reserves, and if, and to the extent that, the distribution does not reduce the amount of those assets to less than that aggregate. Distributable profits are determined in accordance with generally accepted accounting principles at the time the relevant accounts are prepared. The amount of Ferroglobe’s distributable profits is a cumulative calculation. Ferroglobe may be profitable in a single year but unable to pay a dividend if the profits of that year do not offset all the previous year’s accumulated losses. The shareholders of Ferroglobe may by ordinary resolution on the recommendation of the directors decide that the payment of all or any part of a dividend be satisfied by transferring non-cash assets of equivalent value, including shares or securities in any corporation.

The declaration and payment of future dividends to holders of our Shares will be at the discretion of our Board and will depend upon many factors, including our financial condition, earnings, distributable profits, legal

requirements, and restrictions in our debt agreements and other factors deemed relevant by our Board of Directors. In addition, as a holding company, our ability to pay dividends depends on our receipt of cash dividends from our operating subsidiaries, which may further restrict our ability to pay dividends as a result of the laws of their respective jurisdictions of organization, agreements of our subsidiaries or covenants under future indebtedness that we or they may incur.

B. Significant Changes

On February 15, 2017, we completed the Refinancing, as a result of which Ferroglobe and Globe issued $350,000,000 aggregate principal amount of 9.375% Senior Notes due 2022, the proceeds of which were used to repay certain existing indebtedness and compensation expenses, and entered into the Amended Revolving Credit Facility Agreement to amend the Existing Revolving Credit Facility Agreement. For further details regarding the Notes and the Amended Revolving Credit Facility Agreement, see "Item 10.C.–Additional Information–Material Contracts.

ITEM 9. THE OFFER AND LISTING

A. Offer and Listing Details

On December 24, 2015, our ordinary shares were listed for trading on the NASDAQ in U.S. Dollars under the symbol “GSM.” Prior to completion of the Business Combination, which occurred on December 23, 2015, shares of Globe’s common stock were registered pursuant to Section 12(b) of the U.S. Exchange Act and listed on NASDAQ under the ticker symbol “GSM.” Globe’s common stock was suspended from trading on the NASDAQ prior to the open of trading on December 24, 2015. The following table sets forth the high and low reported sale prices of our Ordinary Shares beginning as of December 24, 2015, as reported on the NASDAQ for the periods indicated:

	NASDAQ Trading	
Annual	**High**	**Low**
2016	$ 11.84	$ 7.11

Quarterly	**High**	**Low**
January 1, 2017 through March 31, 2017	$ 12.32	$ 9.25
October 1, 2016 through December 31, 2016	$ 11.84	$ 8.68
July 1, 2016 through September 30, 2016	$ 10.07	$ 7.73
April 1, 2016 through June 30, 2016	$ 10.45	$ 7.95
January 1, 2016 through March 31, 2016	$ 11.41	$ 7.11

Monthly	**High**	**Low**
April 2017	$ 10.55	$ 9.08
March 2017	$ 11.28	$ 9.73
February 2017	$ 12.32	$ 10.79
January 2017	$ 10.74	$ 9.25
December 2016	$ 11.84	$ 10.83
November 2016	$ 11.82	$ 8.84

B. Plan of Distribution

Not applicable.

C. Markets

Our ordinary shares are traded on the NASDAQ Global Select Market under the symbol “GSM.”

D. Selling Shareholders

Not applicable.

E. Dilution.

Not applicable.

F. Expenses of the Issue.

Not applicable.

ITEM 10. ADDITIONAL INFORMATION

A. Share Capital

Not applicable.

B. Memorandum and Articles of Association

The information for this item has been previously filed as exhibit 3.1 to the Company's registration statement on Form F-1 as filed on February 18, 2016.

C. Material Contracts

Amended Revolving Credit Facility

On February 15, 2017, Ferroglobe and Globe (collectively, together with certain subsidiaries of Ferroglobe party thereto from time to time as co-borrowers, the "Borrowers"), certain subsidiaries of Ferroglobe party thereto as guarantors, the financial institutions party thereto as lenders (the "Lenders") and Citizens Bank of Pennsylvania, as administrative agent for the Lenders (the "Administrative Agent"), entered into the Revolving Credit Facility Amendment to amend the Existing Revolving Credit Facility Agreement.

The Amended Revolving Credit Facility provides for borrowings up to an aggregate principal amount of $200 million to be made available to the Borrowers in U.S. Dollars. Multicurrency borrowings under the Amended Revolving Credit Facility will be available in Euros, Pound Sterling and such other mutually agreeable currencies to be determined in an aggregate amount not to exceed $100 million. The Amended Revolving Credit Facility contains a sublimit for the issuance of letters of credit in an amount of up to $25 million (up to $10 million of which may be used for letters of credit denominated in foreign currencies to be determined). The borrowings under the Amended Revolving Credit Facility will mature on August 20, 2018. Subject to certain exceptions, loans under the Amended Revolving Credit Facility may be borrowed, repaid and reborrowed at any time.

Interest rates

At Ferroglobe's option, loans under the Amended Revolving Credit Facility will bear interest based on LIBOR ("LIBOR Rate Loans") or the Administrative Agent's base rate ("Base Rate Loans") plus 4.00% (in the case of LIBOR Rate Loans) and 3.00% (in the case of Base Rate Loans). Interest on Base Rate Loans is payable quarterly in arrears. Interest on LIBOR Rate Loans is payable at the end of each applicable interest period (one, two, three or six month periods) (or at three month intervals if earlier).

Guarantees and security

The obligations of the Borrowers are guaranteed by certain subsidiaries of Ferroglobe. The obligations of the Loan Parties (as defined in the Amended Revolving Credit Facility), together with each secured bank product accepted or executed by a Loan Party, are or will be secured by security interests in certain equity interests of subsidiaries of the Loan Parties and certain assets of the Loan Parties.

Covenants

The Amended Revolving Credit Facility contains certain affirmative covenants relating to, among other things: (i) financial and collateral reporting; (ii) payment of taxes; (iii) continuation of business; (iv) notices of defaults, litigation and other material events and (v) additional guarantors and collateral. The Amended Revolving Credit Facility also contains certain negative covenants, relating to, among other things: (i) debt; (ii) liens; (iii) consolidation, merger or sales of assets; (iv) amendment of organizational documents; (v) restricted payments (including dividends, distributions, issuances of equity interests, redemptions and repurchases of equity interests); (vi) sale-leaseback transactions and (vii) further negative pledges. In addition, the Amended Revolving Credit Facility contains certain maintenance financial covenants, including: (i) maximum Consolidated Secured Net Leverage Ratio; (ii) maximum Consolidated Net Leverage Ratio and (iii) minimum Interest Coverage Ratio.

Senior Notes due 2022

On February 15, 2017, Ferroglobe and Globe (together, the "Issuers") issued $350 million aggregate principal amount of 9.375% Senior Notes due 2022 (the "Notes") pursuant to the Indenture. The interest on the Notes is payable semi-annually on March 1 and September 1 of each year, commencing on September 1, 2017. At any time prior to March 1, 2019, the Issuers may redeem all or a portion of the Notes at a redemption price based on a "make-whole" premium. At any time on or after March 1, 2019, the Issuers may redeem all or a portion of the Notes at redemption prices varying based on the period during which the redemption occurs. In addition, at any time prior to March 1, 2019, the Issuers may redeem up to 35% of the aggregate principal amount of the Notes with the net proceeds from certain equity offerings at a redemption price of 109.375% of the principal amount of the Notes, plus accrued and unpaid interest. The Issuers have agreed to pay certain additional amounts in respect of any withholdings or deductions for certain types of taxes in certain jurisdictions on payments to holders of the Notes. The Notes are senior unsecured obligations of the Issuers and are guaranteed on a senior basis by certain subsidiaries of Ferroglobe. The Notes are listed on the Irish Stock Exchange.

The Indenture contains certain negative covenants restricting, among other things, our ability to: (i) make certain advances, loans or investments; (ii) incur indebtedness or issue guarantees; (iii) create security; sell, lease, transfer or dispose of assets; (iv) merge or consolidate with other companies; (v) transfer all or substantially all of our assets; make a substantial change to the general nature of our business; (vi) pay dividends and make other restricted payments; (vii) create or incur liens; (viii) agree to limitations on the ability of our subsidiaries to pay dividends or make other distributions; (ix) engage in sales of assets and subsidiary stock; (x) enter into transactions with affiliates; (xi) amend organizational documents; (xii) enter into sale-leaseback transactions and (xiii) enter into agreements that contain a negative pledge.

REINDUS Loan

On September 8, 2016, FerroAtlántica, S.A., as borrower, and the Spanish Ministry of Industry, Tourism and Commerce (the "Ministry"), as lender, entered into two loan agreements under which the Ministry made available to the borrower loans in aggregate principal amount of € 44.9 million and €26.9 million, respectively, in connection with industrial development projects relating to our solar grade silicon project. See "Item 4.B.—Information on the Company—Business Overview—Research and Development (R&D)—Solar grade silicon." Each loan is to be repaid in seven installments over a 10-year period with the first three years as a grace period. Interest on outstanding amounts under each loan accrues at an annual rate of 2.29%. Both loans remain outstanding following the Refinancing.

The agreements governing the loans contain the following limitations on the use of the proceeds of the loans: (1) the investment of the proceeds must occur between January 1, 2016 and June 23, 2018; (2) the allocation of the proceeds must adhere to certain approved budget categories; (3) if the final investment cost is lower than the budgeted amount, the borrower must reimburse the Ministry proportionally; and (4) the borrower must comply with certain statutory restrictions regarding related party transactions and the procurement of goods and services.

Other material contracts

See also "Item 7.B.—Major Shareholders and Related Party Transactions—Related Party Transactions."

D. Exchange Controls

See "Item 3.D.—Key Information—Risk Factors—Risks Related to Our Ordinary Shares."

E. Taxation.

U.S. federal income taxation

The following is a discussion of the material U.S. federal income tax consequences to U.S. holders (as defined below) of the ownership and disposition of ordinary shares. The discussion is based on and subject to the Code, the U.S. Treasury Regulations promulgated thereunder, administrative rulings and court decisions in effect on the date hereof, all of which are subject to change, possibly with retroactive effect, and to differing interpretations. The discussion applies only to U.S. holders that acquire ordinary shares in exchange for cash in this offering and hold ordinary shares as "capital assets" within the meaning of Section 1221 of the Code (generally, property held for investment). The discussion also assumes that we will not be treated as a U.S. corporation under Section 7874 of the Code. The discussion does not address all aspects of U.S. federal income

taxation that may be relevant to particular U.S. holders in light of their personal circumstances, including any tax consequences arising under the Medicare contribution tax on net investment income, or to such shareholders subject to special treatment under the Code, such as:

- banks, thrifts, mutual funds, insurance companies, and other financial institutions,
- real estate investment trusts and regulated investment companies,
- traders in securities who elect to apply a mark-to-market method of accounting,
- brokers or dealers in securities or foreign currency,
- tax-exempt organizations or governmental organizations,
- individual retirement and other deferred accounts,
- U.S. holders whose functional currency is not the U.S. Dollar,
- U.S. expatriates and former citizens or long-term residents of the United States,
- "passive foreign investment companies," "controlled foreign corporations," and corporations that accumulate earnings to avoid U.S. federal income tax,
- persons subject to the alternative minimum tax,
- shareholders who hold ordinary shares as part of a straddle, hedging, conversion, constructive sale or other risk reduction transaction,
- "S corporations," partnerships or other entities or arrangements classified as partnerships for U.S. federal income tax purposes or other pass-through entities (and investors therein),
- persons that actually or constructively own 10% or more of our voting stock, and
- shareholders who received their ordinary shares through the exercise of employee stock options or otherwise as compensation or through a tax-qualified retirement plan.

The discussion does not address any non-income tax consequences or any foreign, state or local tax consequences. For purposes of this discussion, a U.S. holder means a beneficial owner of ordinary shares who is:

- an individual who is a citizen or resident of the United States;
- a corporation (or other entity taxable as a corporation for U.S. federal income tax purposes) created or organized in the United States or under the laws of the United States or any subdivision thereof, or that is otherwise treated as a U.S. tax resident under the Code;
- an estate the income of which is includible in gross income for U.S. federal income tax purposes regardless of its source; or
- a trust if (1) a court within the United States is able to exercise primary supervision over the administration of the trust and one or more U.S. persons have the authority to control all substantial decisions of the trust, or (2) the trust has a valid election in effect under applicable U.S. Treasury Regulations to be treated as a U.S. person for U.S. federal income tax purposes.

If a partnership, including for this purpose any entity that is treated as a partnership for U.S. federal income tax purposes, holds ordinary shares, the tax treatment of a partner in the partnership will generally depend upon the status of the partner and the activities of the partnership. A U.S. holder that is a partnership and the partners in such partnership should consult their tax advisors about the U.S. federal income tax consequences of the ownership and disposition of ordinary shares.

Prospective purchasers are urged to consult their tax advisors with respect to the U.S. federal income tax consequences to them of the purchase, ownership and disposition of ordinary shares, as well as the tax

consequences to them arising under U.S. federal tax laws other than those pertaining to income tax (including estate or gift tax laws), state, local and non-U.S. tax laws, as well as any applicable income tax treaty.

Dividends and other distributions on ordinary shares

Dividends will generally be taxed as ordinary income to U.S. holders to the extent that they are paid out of our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. As such, subject to the following discussion of special rules applicable to PFICs (as defined below) and, assuming that ordinary shares continue to be listed on NASDAQ and certain holding-period requirements are met, the gross amount of the dividends paid by us to U.S. holders may be eligible to be taxed at lower rates applicable to dividends paid by a "qualified foreign corporation." Dividends paid by us will not qualify for the dividends received deduction under Section 243 of the Code otherwise available to corporate shareholders. In general, and subject to the discussion below, the dividend income will be treated as foreign source passive income for U.S. federal foreign tax credit limitation purposes. The rules relating to the determination of the U.S. foreign tax credit are complex and U.S. holders should consult their tax advisors to determine whether and to what extent a credit would be available.

To the extent that the amount of any dividend exceeds our current and accumulated earnings and profits for a taxable year, the excess will first be treated as a tax-free return of capital, causing a reduction in the U.S. holder's adjusted basis in ordinary shares. The balance of any excess will be taxed as capital gain, which would be long-term capital gain if the U.S. holder has held the ordinary shares for more than one year at the time the dividend is received.

It is possible that we are, or at some future time will be, at least 50% owned by U.S. persons. Dividends paid by a foreign corporation that is at least 50% owned by U.S. persons may be treated as U.S. source income (rather than foreign source passive income) for foreign tax credit purposes to the extent the foreign corporation has more than an insignificant amount of U.S. source income. The effect of this rule may be to treat a portion of any dividends paid by us as U.S. source income, which may limit a U.S. holder's ability to claim a foreign tax credit with respect to foreign taxes payable or deemed payable in respect of the dividends or other foreign source passive income. The Code permits a U.S. holder entitled to benefits under the United Kingdom-United States Income Tax Treaty to elect to treat any dividends paid by us as foreign source income for foreign tax credit purposes if the dividend income is separated from other income items for purposes of calculating the U.S. holder's foreign tax credit with respect to U.K. taxes withheld, if any, on the distribution of such dividend income. U.S. holders should consult their own tax advisors about the desirability and method of making such an election.

We generally intend to pay dividends in U.S. Dollars. If we were to pay dividends in a foreign currency or other property, the amount of any such dividend will be the U.S. Dollar value of the foreign currency or other property distributed by us, calculated, in the case of foreign currency, by reference to the exchange rate on the date the dividend is includible in the U.S. holder's income, regardless of whether the payment is in fact converted into U.S. Dollars on the date of receipt. Generally, a U.S. holder should not recognize any foreign currency gain or loss if the foreign currency is converted into U.S. Dollars on the date the payment is received. However, any gain or loss resulting from currency exchange fluctuations during the period from the date the U.S. holder includes the dividend payment in income to the date such U.S. holder actually converts the payment into U.S. Dollars will be treated as ordinary income or loss. That currency exchange or loss (if any) generally will be income or loss from U.S. sources for foreign tax credit purposes.

Sale, exchange or other taxable disposition of ordinary shares

Subject to the following discussion of special rules applicable to PFICs, a U.S. holder will generally recognize taxable gain or loss on the sale, exchange or other taxable disposition of ordinary shares in an amount equal to the difference between the amount realized on such taxable disposition and the U.S. holder's tax basis in the ordinary shares. A U.S. holder's initial tax basis in ordinary shares generally will equal the cost of such ordinary shares.

The source of any such gain or loss is generally determined by reference to the residence of the holder such that it generally will be treated as U.S. source income for foreign tax credit limitation purposes in the case of a sale, exchange or other taxable disposition by a U.S. holder. However, the Code permits a U.S. holder entitled to benefits under the United Kingdom-United States Income Tax Treaty to elect to treat any gain or loss on the sale, exchange or other taxable disposition of ordinary shares as foreign source income for foreign tax credit purposes if the gain or loss is sourced outside of the United States under the United Kingdom-United States

Income Tax Treaty and such gain or loss is separated from other income items for purposes of calculating the U.S. holder's foreign tax credit. U.S. holders should consult their own tax advisors about the desirability and method of making such an election.

Gain or loss realized on the sale, exchange or other taxable disposition of ordinary shares generally will be capital gain or loss and will be long-term capital gain or loss if the ordinary shares have been held for more than one year. Non-corporate U.S. holders (including individuals) generally will be subject to U.S. federal income tax on long-term capital gain at preferential rates. The deduction of capital losses is subject to limitations.

Passive foreign investment company considerations

A foreign corporation is a "passive foreign investment company" (a "PFIC") if, after the application of certain "look-through" rules, (1) at least 75% of its gross income is "passive income" as that term is defined in the relevant provisions of the Code, or (2) at least 50% of the value of its assets (determined on the basis of a quarterly average) produce "passive income" or are held for the production of "passive income." The determination as to PFIC status is made annually. If a U.S. holder is treated as owning PFIC stock, the U.S. holder will be subject to special rules generally intended to reduce or eliminate the benefit of the deferral of U.S. federal income tax that results from investing in a foreign corporation that does not distribute all of its earnings on a current basis. These rules may adversely affect the tax treatment to a U.S. holder of dividends paid by us and of sales, exchanges and other dispositions of ordinary shares, and may result in other adverse U.S. federal income tax consequences.

We do not expect to be treated as a PFIC for the current taxable year, and we do not expect to become a PFIC in the future. However, there can be no assurance that the IRS will not successfully challenge this position or that we will not become a PFIC at some future time as a result of changes in our assets, income or business operations. U.S. holders should consult their own tax advisors about the determination of our PFIC status and the U.S. federal income tax consequences of holding ordinary shares if we are considered a PFIC in any taxable year.

Information reporting and backup withholding

In general, information reporting requirements may apply to dividends received by U.S. holders of ordinary shares and the proceeds received on the disposition of ordinary shares effected within the United States (and, in certain cases, outside the United States), paid to U.S. holders other than certain exempt recipients (such as corporations). Backup withholding may apply to such amounts if the U.S. holder fails to provide an accurate taxpayer identification number (generally on an IRS Form W-9) or is otherwise subject to backup withholding. The amount of any backup withholding from a payment to a U.S. holder will be allowed as a refund or credit against the U.S. holder's U.S. federal income tax liability, provided that the required information is timely furnished to the IRS.

Individuals that own "specified foreign financial assets" with an aggregate value of more than $50,000 (or higher threshold for some married individuals and individuals living abroad) may be required to file an information report (IRS Form 8938) with respect to such assets with their tax returns. Ordinary shares generally will constitute specified foreign financial assets subject to these reporting requirements, unless the ordinary shares are held in an account at a financial institution (which, in the case of a foreign financial account, may also be subject to reporting). Additionally, under recently finalized regulations, a domestic corporation, domestic partnership, or trust (as described in Section 7701(a)(30)(E) of the Code) which is formed or availed of for purposes of holding, directly or indirectly, specified foreign financial assets may be treated as an individual for purposes of these rules. U.S. holders should consult their own tax advisors regarding information reporting requirements relating to their ownership of ordinary shares, and the significant penalties to which they may be subject for failure to comply.

United Kingdom taxation

The following paragraphs are intended as a general guide to current U.K. tax law and HM Revenue & Customs published practice applying as at the date of this annual report (both of which are subject to change at any time, possibly with retrospective effect) relating to the holding of ordinary shares. They do not constitute legal or tax advice and do not purport to be a complete analysis of all U.K. tax considerations relating to the holding of ordinary shares. They relate only to persons who are absolute beneficial owners of ordinary shares (and where the ordinary shares are not held through an Individual Savings Account or a Self-Invested Personal Pension) and

who are resident for tax purposes in (and only in) the U.K. (except to the extent that the position of non-U.K. resident persons is expressly referred to).

These paragraphs may not relate to certain classes of holders of ordinary shares, such as (but not limited to):

- persons who are connected with the Company;
- insurance companies;
- charities;
- collective investment schemes;
- pension schemes;
- brokers or dealers in securities or persons who hold ordinary shares otherwise than as an investment;
- persons who have (or are deemed to have) acquired their ordinary shares by virtue of an office or employment or who are or have been officers or employees of the Company or any of its affiliates; and
- individuals who are subject to U.K. taxation on a remittance basis.

These paragraphs do not describe all of the circumstances in which holders of ordinary shares may benefit from an exemption or relief from U.K. taxation. It is recommended that all holders of ordinary shares obtain their own tax advice. In particular, non-U.K. resident or domiciled persons are advised to consider the potential impact of any relevant double tax agreements.

Dividends

Withholding tax

Dividends paid by the Company will not be subject to any withholding or deduction for or on account of U.K. tax, irrespective of the residence or particular circumstances of the shareholders.

Income tax

An individual holder of ordinary shares who is resident for tax purposes in the U.K. may, depending on his or her particular circumstances, be subject to U.K. tax on dividends received from the Company. An individual holder of ordinary shares who is not resident for tax purposes in the U.K. should not be chargeable to U.K. income tax on dividends received from the Company unless he or she carries on (whether solely or in partnership) any trade, profession or vocation in the U.K. through a branch or agency to which the ordinary shares are attributable (subject to certain exceptions for trading through independent agents, such as some brokers and investment managers).
A nil rate of income tax will currently apply to the first £5,000 of dividend income received by an individual shareholder in a tax year (the “Nil Rate Amount”), regardless of what tax rate would otherwise apply to that dividend income. Any dividend income received by an individual shareholder in a tax year in excess of the Nil Rate Amount will be subject to income tax at dividend rates determined by thresholds of income, as follows:

- at the rate of 7.5%, to the extent that the relevant dividend income falls below the threshold for the higher rate of income tax;
- at the rate of 32.5%, to the extent that the relevant dividend income falls above the threshold for the higher rate of income tax but below the threshold for the additional rate of income tax; and
- at the rate of 38.1%, to the extent that the relevant dividend income falls above the threshold for the additional rate of income tax.

Dividend income that is within the dividend Nil Rate Amount counts towards an individual's basic or higher rate limits, and will therefore potentially affect the level of savings allowance to which an individual is entitled, and the rate of tax that is due on any dividend income in excess of the Nil Rate Amount. In calculating into which tax band any dividend income over the nil rate falls, savings and dividend income are treated as the highest part of an individual's income. Where an individual has both savings and dividend income, the dividend income is treated as the top slice.

Corporation tax

Corporate holders of ordinary shares which are resident for tax purposes in the U.K. should not be subject to U.K. corporation tax on any dividend received from the Company so long as the dividends qualify for exemption (as is likely) and certain conditions are met (including anti-avoidance conditions).

Chargeable gains

A disposal of ordinary shares by a shareholder resident for tax purposes in the U.K. may, depending on the shareholder's circumstances and subject to any available exemptions or reliefs, give rise to a chargeable gain or an allowable loss for the purposes of U.K. capital gains tax and corporation tax on chargeable gains.

If an individual holder of ordinary shares who is subject to U.K. income tax at either the higher or the additional rate becomes liable to U.K. capital gains tax on the disposal of ordinary shares, the applicable rate will be 20% (2017/18). For an individual holder of ordinary shares who is subject to U.K. income tax at the basic rate and liable to U.K. capital gains tax on such disposal, the applicable rate would be 10% (2017/18), save to the extent that any capital gains exceed the unused basic rate tax band. In that case, the rate applicable to the excess would be 20% (2017/18). No indexation allowance will be available to an individual holder of ordinary shares in respect of any disposal of such shares. However, the capital gains tax annual exempt amount (which is £11,300 for individuals (2017/18)) may be available to exempt any chargeable gain, to the extent that the exemption has not already been utilized.

If a corporate holder of ordinary shares becomes liable to U.K. corporation tax on the disposal of ordinary shares, the main rate of U.K. corporation tax (currently 19%) would apply. An indexation allowance may be available to such a holder to give an additional deduction based on the indexation of its base cost in the shares by reference to U.K. retail price inflation over its holding period. An indexation allowance can only reduce a gain on a future disposal, and cannot create a loss.

A holder of ordinary shares which is not resident for tax purposes in the U.K. should not normally be liable to U.K. capital gains tax or corporation tax on chargeable gains on a disposal of ordinary shares. However, an individual holder of ordinary shares who has ceased to be resident for tax purposes in the U.K. for a period of less than five years and who disposes of ordinary shares during that period may be liable on his or her return to the U.K. to U.K. tax on any capital gain realized (subject to any available exemption or relief).

Stamp duty and Stamp Duty Reserve Tax ("SDRT")

The discussion below relates to holders of ordinary shares wherever resident.

Transfers of ordinary shares within a clearance service or depositary receipt system should not give rise to a liability to U.K. stamp duty or SDRT, provided that no instrument of transfer is entered into and that no election that applies to the ordinary shares is, or has been, made by the clearance service or depositary receipt system under Section 97A of the U.K. Finance Act 1986.

Transfers of ordinary shares within a clearance service where an election has been made by the clearance service under Section 97A of the U.K. Finance Act 1986 will generally be subject to SDRT (rather than U.K. stamp duty) at the rate of 0.5% of the amount or value of the consideration.

Transfers of ordinary shares that are held in certificated form will generally be subject to U.K. stamp duty at the rate of 0.5% of the consideration given (rounded up to the nearest £5). An exemption from U.K. stamp duty is available for a written instrument transferring an interest in ordinary shares where the amount or value of the consideration is £1,000 or less, and it is certified on the instrument that the transaction effected by the instrument does not form part of a larger transaction or series of transactions for which the aggregate consideration exceeds £1,000. SDRT may be payable on an agreement to transfer such ordinary shares, generally at the rate of 0.5% of the consideration given in money or money's worth under the agreement to transfer the ordinary shares. This charge to SDRT would be discharged if an instrument of transfer is executed

pursuant to the agreement which gave rise to SDRT and U.K. stamp duty is duly paid on the instrument transferring the ordinary shares within six years of the date on which the agreement was made or, if the agreement was conditional, the date on which the agreement became unconditional. The stamp duty would be duly accounted for if it is paid, an appropriate relief is claimed or the instrument is otherwise certified as exempt.

If ordinary shares (or interests therein) are subsequently transferred into a clearance service or depositary receipt system, U.K. stamp duty or SDRT will generally be payable at the rate of 1.5% of the amount or value of the consideration given (rounded up in the case of U.K. stamp duty to the nearest £5) or, in certain circumstances, the value of the shares (save to the extent that an election has been made under Section 97A of the U.K. Finance Act 1986). This liability for U.K. stamp duty or SDRT will strictly be accountable by the clearance service or depositary receipt system, as the case may be, but will, in practice, generally be reimbursed by participants in the clearance service or depositary receipt system.

F. Dividends and Paying Agents.

Not applicable.

G. Statements by Experts.

Not applicable.

H. Documents on Display.

We previously filed with the SEC our registration statement on Form F-1 on March 15, 2016 with file number 333-209595.

We have filed this annual report on Form 20-F with the SEC under the U.S. Exchange Act. Statements made in this annual report as to the contents of any document referred to are not necessarily complete. With respect to each such document filed as an exhibit to this annual report, reference is made to the exhibit for a more complete description of the matter involved, and each such statement shall be deemed qualified in its entirety by such reference.

We are subject to the informational requirements of the U.S. Exchange Act and file reports and other information with the SEC. Reports and other information which we filed with the SEC, including this annual report on Form 20-F, may be inspected and copied at the public reference room of the SEC at 450 Fifth Street N.W., Washington D.C. 20549.
You can also obtain copies of this annual report on Form 20-F by mail from the Public Reference Section of the Securities and Exchange Commission, 450 Fifth Street, N.W., Washington D.C. 20549, at prescribed rates. Additionally, copies of this material may be obtained from the SEC's Internet site at http://www.sec.gov. The Commission's telephone number is 1-800-SEC-0330.

As a foreign private issuer, we are exempt from the rules under the U.S. Exchange Act prescribing the furnishing and content of proxy statements and will not be required to file proxy statements with the SEC, and its officers, directors and principal shareholders will be exempt from the reporting and "short swing" profit recovery provisions contained in Section 16 of the U.S. Exchange Act.

I. Subsidiary Information.

Not applicable.

ITEM 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

Our activities are undertaken through our segments and are exposed to market risk, credit risk, liquidity risk and capital risk. Risk management is the responsibility of our financial department in accordance with mandatory internal management rules. The internal management rules provide written policies for the management of overall risk, as well as for specific areas, such as exchange rate risk, credit risk, interest rate risk, liquidity risk, use of hedging instruments and derivatives, and the investment of excess cash.

Market risk

We are exposed to market risk, such as movement in foreign exchange rates, interest rates, changes in the prices of assets and raw material purchased (principally coal and manganese). All of these market risks arise in the normal course of business and we do not carry out speculative operations.

Foreign exchange rate risk

Foreign exchange risks arise (i) from commercial transactions to be settled in the future, for which assets and liabilities are not denominated in the functional currency of the entity and (ii) from financial liabilities denominated in a different currency from the functional currency of the subsidiary.

Risks from commercial transactions

To manage foreign exchange risks arising from commercial transactions, we purchase forward purchase/sale contracts. Such contracts provide protection related to the fair value of future cash flow. Most projected transactions which are not denominated in our functional currency qualify as highly probable forecast transactions for hedge accounting purposes. The main exchange rate exposures relate to the U.S. Dollar and the Euro. Our foreign exchange risks mainly relate to our operations in connection with purchases and sales in a currency other than the functional currency, mostly affecting the U.S. Dollar against the Euro. These purchases and sales, other than in the functional currency, are hedged through our purchase of future currency sale/purchase contracts. Specifically, an appreciation of the U.S. Dollar against the Euro would result in a decrease/increase of our purchase costs/sale price in the Income Statement, which would be compensated by the derivatives purchased, to the extent that the transactions have been hedged. We would recognize a net gain or loss in the Income Statement from the net assets or liabilities that remain unhedged.

During the year ended December 31, 2016, the Company arranged forward foreign currency purchase and sale transactions with various banks amounting $4,018,000 and $29,836,000 respectively ($18,535,000, $28,679,000 and ZAR 371,973,000 in 2015).

The changes in the market value of the foreign currency derivatives arranged by the Company depend mainly on the changes in the U.S. Dollar/Euro spot rate and on the evolution of forward points curve. The fair market value of these derivatives was not significant at December 31, 2016 and 2015.

The details of the sensitivity analysis (changes in the market value at December 31, 2016) of the foreign currency derivatives is as follows:

	Millions of U.S. Dollars	
Sensitivity to the EUR/USD Exchange Rate	**2016**	**2015**
+10% (appreciation of the Euro)	2.5	1.1
−10% (depreciation of the Euro)	(2.5)	(0.4)

Foreign currency derivatives mainly cover monetary items in the statement of financial position and, therefore, the exchange differences are offset by the differences in value of the derivatives in profit or loss for the year.

Venezuela

In recent years, there have been various developments in the Venezuelan economy that have affected our FerroAtlántica division's financial results, including annual and cumulative inflation over the last three years, restrictions in the official foreign exchange markets and, lastly, the devaluations of the Venezuelan currency over the last three years.

Most of FerroVen, S.A.'s procurement and sale transactions are denominated in U.S. Dollars, which is FerroVen, S.A.'s functional currency. In effect, FerroVen, S.A.'s parent, FerroAtlántica, procures and imports into Venezuela most of FerroVen, S.A.'s key raw materials and equipment, which FerroVen, S.A. pays for in kind with its finished goods. FerroVen, S.A. exports finished products to other foreign clients as well, including other subsidiaries of our FerroAtlántica division, at prices denominated in U.S. Dollars. FerroVen, S.A. also makes sales to domestic clients in Venezuelan Bolívares, though at prices that are partly indexed to the U.S. Dollar. Further, though several of FerroVen, S.A.'s domestic expenses are in Venezuelan Bolívares, the price of the most important input, energy, is indexed to the U.S. Dollar.

As a result of the above, FerroVen, S.A. has a net short position with respect to Venezuelan Bolívares. The cash inflow of U.S. Dollars FerroVen, S.A. receives from exports is exchanged into Venezuelan Bolívares using the advantageous exchange rates available to exporting companies in Venezuela under the Complementary System for Administration of Foreign Currencies ("SICAD"), as well as the Marginal Currency System ("SIMADI"). Thus, the sharp decline in value of the Venezuelan Bolívar over the last three years has not had a direct negative impact on FerroVen, S.A.'s expenses and income. Rather, it has decreased FerroVen, S.A.'s expenses over this period.

On February 8, 2013, the Venezuelan Government announced the devaluation of the official Venezuelan Bolívar/U.S. Dollar exchange rate. The official exchange rate of VEF 4.30 to one U.S. Dollar was changed to VEF 6.30 to one U.S. Dollar, giving rise to an exchange loss in the consolidated income statement of approximately $4.7 million, as current assets valued in Bolívares were higher than current liabilities valued in Bolívares at the time of the devaluation. This 46% devaluation was insufficient to offset the impact of local inflation of 58.2% on domestic prices.

During 2014, SICAD II, a new exchange regime with a more widespread application, was put into place by the Venezuelan Government. The exchange rate at December 31, 2014 pursuant to SICAD II was 49.988 VEF per U.S. Dollar, giving rise to an exchange gain in our FerroAtlántica division's consolidated income statement of approximately $7.5 million, as current assets valued in Bolívares were lower than current liabilities valued in Bolívares at the time of the devaluation. The devaluation of 694% represented by the SICAD II exchange rate more than offset the impact of local inflation on domestic prices of 68.5%, resulting in positive impacts on staff costs and other operating expense, which, in turn, had a positive impact on cash flows, and a negative impact on tax expense, which had no impact on cash flows.

Our Venezuelan operations had assets of $18,861,000 and $96,337,000 in 2016 and 2015, respectively, which represented 0.9% and 4.0%, respectively, of our total assets. Our Venezuelan operations had sales of $30,430,000 in 2016, of which $5,993,000 were domestic sales and $24,437,000 were exports and $69,956,000 in 2015, of which $24,111,000 were domestic sales and $42,560,000 were.

In January 2014, Venezuela enacted the Organic Law on Fair Prices, which limits profit margins on the sale of goods and services to a maximum of 30% of operating costs for all persons engaging in economic activity in Venezuela. Since FerroVen, S.A. sells most of its finished goods for export, the Organic Law on Fair Prices has not had a material impact on our results.

In 2016, the Venezuelan government announced a new exchange rate for export companies of 199 VEF to one U.S. Dollar ("SIMADI"). For additional information, see "Item 5.B.—Operating and Financial Review and Prospects—Liquidity and Capital Resources."

Interest rate risk

Interest rate risks arise mainly from our financial liabilities at floating interest rates. Ferroglobe actively manages its risks exposure to interest rate risk, to mitigate its exposure to changes in interest rates arising from the borrowings arranged with floating interest rates. In corporate financing arrangements, hedges are generally arranged for the total amount and term of the respective financing, through option contracts and/or swaps. In this regard, the main exposure for Ferroglobe to interest rate risk is that relating to the floating interest rate tied to EURIBOR. To mitigate interest rate risk, the Ferroglobe primarily uses swaps, which, in exchange for a fee, offer protection against an increase in interest rates.

In relation to our interest rate swaps positions, an increase in EURIBOR above the contracted fixed interest rate would create an increase in our financial expense, which would be positively mitigated by our hedges, reducing our financial expenses to our contracted fixed interest rate. However, an increase in EURIBOR that does not exceed the contracted fixed interest rate would not be offset by our derivative position and would result in a net financial loss recognized in our consolidated net income statement. Conversely, a decrease in EURIBOR below the contracted fixed interest rate would result in lower interest expense on our variable rate debt, which would be offset by a negative impact from the mark-to-market of our hedges, increasing our financial expenses up to our contracted fixed interest rate, thus resulting in a likely neutral effect.

In addition to the above, our results of operations can be affected by changes in interest rates with respect to the unhedged portion of our indebtedness that bears interest at floating rates. Changes in the market value of the interest rate derivatives arranged by the Company depend on the changes in the EURIBOR yield curve and long-term swaps. The market value of these derivatives at December 31, 2016 was $699,000 ($7,549,000 in 2015).

The percentage of bank borrowings tied to fixed rates and percentage of bank borrowings secured with hedge is as follows:

	2016	2015
Percentage of bank borrowings tied to fixed rates	15%	1%
Percentage of bank borrowings secured with hedge	3%	32%

Since June 30, 2015, hedges became ineffective under hedge accounting and, as a result, the changes in market value of these derivatives are recognized in full in the consolidated income statement.

The Company performed a sensitivity analysis of the amounts of the floating rate borrowings as of March 31, 2017, as most of the gross debt as of December 31, 2016 were repaid in February, which indicated that an increase of 1% in interest rates would give rise to additional borrowing costs of $1,800,000 in 2017.

Credit risk

Trade and other receivables, current financial investments and cash are the main financial assets of the Company and present the greatest exposure to credit risk in the event that a third party does not comply with its obligations.

Most of our receivables relate to international companies operating in a range of industries and countries with high solvency. The Company sometimes insures its trade receivables with insurance companies to mitigate the credit risk of its clients whenever there is credit available in the insurance market. In addition, we rely on written confirmation for the non-recourse purchase of accounts receivable (factoring). In these arrangements, we pay a bank fee to assume the credit risk as well as interest charges for the financing component.

In this regard, derecognizing factored accounts receivable is taken only when all the requirements of IAS 39 Financial instruments; Recognition and Measurement are met. Therefore, we consider whether or not the risks and rewards inherent in the ownership of the asset have been transferred, including a comparison of our risk before and after the transfer, considering the amounts and timing of net cash payments to be received. Once the risk to the grantor company has been eliminated or is considered to be substantially reduced, it is considered that the financial asset in fact has been transferred.

The following table shows the percentage of accounts receivable secured through credit insurance for the years ended December 31, 2016 and 2015:

	2016	2015
Percentage of accounts receivable secured through credit insurance	74%	58%

Liquidity risk

The objective of our financing and liquidity policy is to ensure that we maintain sufficient funds to meet our financial obligations as they fall due.

To ensure there are sufficient funds available to repay its debt in relation to its cash-generating capacity, each year the Corporate Financial Department prepares and the Board of Directors reviews the financial budget that details all financing needs and how such financing will be provided. The budget projects the funds necessary for the most significant cash requirements, such as prepayments for capital expenditures, debt repayments and, where applicable, working capital requirements. Ferroglobe generally does not allocate its own equity in projects until the associated long-term financing is obtained.

Ferroglobe uses three main sources of financing:

- *Long-term financing arrangements*, which are generally used to finance the operations of any significant subsidiary. The debt repayment profiles are established based on the capacity of each business to generate funds, allowing for variability depending on the expected cash flows for each business. Each long-term contract usually provides for lines to finance working capital requirements at the operating subsidiary level. This ensures that sufficient financing is available to meet deadlines and maturities, which significantly mitigates liquidity risk.

- *Corporate financing*, which is mainly used to provide liquidity for the operations of the Company as a whole, and to finance start-up projects that require the initial support of the Parent Company.

- The Company arranges firm commitments from leading financial institutions to purchase the receivables through non-recourse factoring arrangements. Under these agreements, Ferroglobe's companies pay a fee to the bank for assuming its credit risk, plus interest on the financing received. In all cases, the company assumes liability for the validity of the receivables.

Accordingly, Ferroglobe diversifies its sources of financing in order to prevent concentrations that may expose its working capital to liquidity risk.

Capital risk

Ferroglobe manages capital risk to ensure the continuity of its subsidiaries from an equity standpoint by maximizing the return for the sole shareholder and optimizing the equity structure and borrowings on the liability side of the statement of financial position.

ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES.

A. Debt Securities.

Not applicable.

B. Warrants and Rights.

Not applicable.

C. Other Securities.

Not applicable.

D. American Depositary Shares.

Not applicable.

PART II

ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES.

None of these events occurred in any of the years ended December 31, 2016, 2015 and 2014.

ITEM 14. MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS.

Not applicable.

ITEM 15. CONTROLS AND PROCEDURES.

A. Evaluation of disclosure controls and procedures

We maintain disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) of the U.S. Exchange Act, that are designed to ensure that information required to be disclosed by the Company in reports that we file or submit under the U.S. Exchange Act is (i) recorded, processed, summarized and reported within the time period specified in the SEC's rules and forms, and (ii) accumulated and communicated to our management, including our Chief Executive Officer (principal executive officer) and Chief Financial Officer (principal financial officer), as appropriate, to allow timely decisions regarding required disclosure. Disclosure controls and procedures, no matter how well designed, can provide only reasonable assurance of achieving the desired control objectives.

Our principal executive officer and principal financial officer have conducted an evaluation of the effectiveness of our disclosure controls and procedures as of the end of the period covered by this annual report. Based on that evaluation, they have concluded that, as of the end of the period covered by this annual report, our disclosure controls and procedures were not effective due to the existence of material weaknesses, as described below under "–Management's annual report on internal control over financial reporting."

B. Management's annual report on internal control over financial reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rules 13a-15(f) and 15d-15(f) of the U.S. Exchange Act. Our internal control over financial reporting is designed by management to provide reasonable assurance regarding the reliability of financial reporting and the preparation and fair presentation of our published consolidated financial statements.

Under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, management conducted an assessment of the effectiveness of our internal control over financial reporting as of the end of the period covered by this annual report based on criteria established in the *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on those criteria, management concluded that, as of the end of the period covered by this annual report, our internal control over financial reporting is not effective due to the existence of the material weaknesses described below.

Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Material weaknesses in internal control over financial reporting

A material weakness is a control deficiency, or combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of annual or interim financial statements will not be prevented or detected on a timely basis. In connection with the preparation of the consolidated financial statements as of and for the year ended December 31, 2016, management identified several material weaknesses in our internal control over financial reporting, which we are in the process of remediating, as described below.

Control environment, control activities and monitoring

We did not maintain effective internal controls over financial reporting related to the control environment, control activities, and monitoring, as follows:

- Management did not effectively design and execute a strategy to ensure all employees responsible for our internal controls had an appropriate level of knowledge of and experience with those controls as well as the requirements of Section 404 of the Sarbanes-Oxley Act. As a result, the responsible employees were not sufficiently trained in internal control over financial reporting, which contributed to ineffective internal control activities at FerroAtlántica and its subsidiaries.

- The tone at all levels of management over the organizational control climate was not sufficient to ensure there were adequate mechanisms and oversight to ensure accountability for the performance of internal control over financial reporting responsibilities, including proper execution of control activities to ensure compliance with the Company's accounting policies and to ensure corrective actions were appropriately prioritized and implemented in a timely manner.

- The internal audit function at FerroAtlántica did not have the appropriate leadership or staffing and was not properly trained, which resulted in inadequate mechanisms to monitor and evaluate the operating effectiveness of internal controls and execute proper corrective actions to address any identified control issues in a timely manner. In addition, as a result of the Business Combination, there was no Director of Internal Audit at Ferroglobe and, therefore, no formal supervision mechanism in place to monitor the internal audit function at FerroAtlántica.

The above deficiencies resulted in misstatements in property, plant and equipment, inventories, trade and other receivables, bank borrowings, trade and other payables, other current liabilities and taxes, which were corrected in the financial statements as of December 31, 2016. While none of the misstatements were individually material, the aggregated impact of the deficiencies resulted in material weaknesses in the design and operating effectiveness of internal controls.

Revenue recognition related to cut-off

Management identified a material weakness regarding the operating effectiveness of internal controls over revenue recognition related to cut-off. Specifically, internal controls designed to ensure that sales are recorded in the appropriate period in accordance with contracted sales terms were not carried out effectively at two FerroAtlántica subsidiaries. As a result, revenue was incorrectly recognized in 2016 instead of 2017, resulting in a material misstatement which was corrected in the financial statements as of December 31, 2016.

While management corrected all misstatements identified in our consolidated financial statements for the year ended December 31, 2016, we concluded that these control deficiencies constitute material weaknesses and that our internal control over financial reporting was not effective as of December 31, 2016. Notwithstanding the material weaknesses in our internal control over financial reporting described above, management has concluded that the consolidated financial statements included in this annual report fairly present in all material respects our financial condition, results of operations and cash flows for the periods presented.

Our internal control over financial reporting as of December 31, 2016 has been audited by Deloitte S.L., an independent registered public accounting firm, as stated in their report which follows below.

Attestation report of the registered public accounting firm

The report of Deloitte, S.L., our Independent Registered Public Accounting Firm, on our internal control over financial reporting is included herein.

Remediation of material weaknesses in internal control over financial reporting

Management is actively engaged in the planning for, and implementation of, remediation efforts to address the material weaknesses identified above. Management has or intends to take the following actions to address the material weaknesses:

- Management is conducting a formal training program at each of our subsidiaries with all employees responsible for our internal controls to ensure they have an appropriate level of knowledge of and experience with those controls, specifically, those relating to monitoring, evaluation and accountability, to execute their control responsibilities.

- Management has communicated to all employees the need for effective internal control over financial reporting and has met in person with process owners to reinforce the purpose and importance of controls, review and analyze the identified deficiencies, and promote top-down ownership and accountability over the control environment.

- Management has engaged external consultants to review and update our internal control processes to ensure that we have the appropriate internal controls in place going forward.

- Management is in the process of recruiting a Director of Internal Audit. Management has identified several suitable candidates for this position and plans to fill the role and expand the internal audit department with sufficient time to plan and execute the Internal Audit Program for 2017.

- Management implemented new controls in the revenue process, including specific controls addressing revenue recognition related to cut-off. Management assigned a new control owner to review quarter-end sales, verifying that revenue is recognized in the proper period in accordance with the contracted sales terms. Management will monitor the design and operating effectiveness of the revenue controls throughout the year.

Management believes the measures described above, when fully implemented and operational, will remediate the material weaknesses identified in 2016 and strengthen our internal control over financial reporting going forward. As management continues to evaluate and work to improve our internal control over financial reporting, we may decide to take additional measures to address control deficiencies or determine to modify, or, in appropriate circumstances, not to complete, certain of the remediation measures described above.

Changes in internal control over financial reporting

Following completion of the Business Combination on December 23, 2015, the year ended December 31, 2016 was the first year in which Ferroglobe and its subsidiaries are subject to the requirements of Section 404 of the Sarbanes-Oxley Act. As a result, management implemented numerous internal controls and processes during the year ended December 31, 2016 in order to bring the internal control over financial reporting of Ferroglobe, and its subsidiary, FerroAtlántica, in line with the standards required pursuant to the Sarbanes-Oxley Act. In addition, during the year ended December 31, 2016, we adopted the *Internal Control—Integrated Framework (2013)* issued by COSO and made several changes to our internal controls that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 16. [RESERVED]

ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT.

See “Item 6.C.—Directors, Senior Management and Employees—Board Practices—Committees of board of directors—Audit Committee.” Our Board of Directors has determined that Mr. Greger Hamilton qualifies as an “audit committee financial expert” under applicable SEC rules.

ITEM 16B. CODE OF ETHICS.

Our Board of Directors has adopted a Code of Ethics for our employees, officers and directors to govern their relations with current and potential customers, fellow employees, competitors, government and regulatory agencies, the media, and anyone else with whom Ferroglobe PLC has contact. Our Code of Ethics is publicly available on our website at www.ferroglobe.com.

ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES.

The following table provides information on the aggregate fees billed by our principal accountant Deloitte and its worldwide affiliates or by other firms, (fees related to others than Deloitte amount to $225,000) to Ferroglobe PLC, classified by type of service rendered for the periods indicated, in thousands of U.S. Dollars:

	2016	2015
Audit Fees	4,805	3,457
Audit-Related Fees	164	27
Tax Fees	284	9
All Other Fees	17	81
Total	5,269	3,574

Audit Fees are the aggregate fees billed for professional services in connection with the audit of our consolidated annual financial statements and statutory audits of our subsidiaries' financial statements under the rules in which our subsidiaries are organized. Also included are quarterly limited reviews, audits of non-recurring transactions, consents and any audit services required for SEC or other regulatory filings.

Audit-Related Fees are fees charged for assurance and related services that are reasonably related to the performance of the audit or review of our financial statements, and are not restricted to those that can only be provided by the auditor signing the audit report. This category comprises fees billed for comfort letters and agreed upon procedures for grants and other financial compliance.

Tax Fees are fees billed for tax compliance, tax review and tax advice on actual or contemplated transactions.

All Other Fees comprises fees billed in relation to financial advisory services and other services which cannot be comprised under other categories.

Audit Committee's policy on pre-approval of audit and permissible non-audit services of the independent auditor

Subject to shareholder approval of the independent auditor, the Audit Committee has the sole authority to appoint, retain or replace the independent auditor. The Audit Committee is also directly responsible for the compensation and oversight of the work of the independent auditor. These policies generally provide that we will not engage our independent auditors to render audit or non-audit services unless the service is specifically approved in advance by the Audit Committee. The Audit Committee's pre-approval policy, which covers audit and non-audit services provided to us or to any of our subsidiaries, is as follows:

- The Audit Committee shall review and approve in advance the annual plan and scope of work of the independent external auditor, including staffing of the audit, and shall (i) review with the independent external auditor any audit-related concerns and management's response and (ii) confirm that any examination is performed in accordance with the relevant accounting standards.

- The Audit Committee shall pre-approve all audit services and all permitted non-audit services (including the fees and terms thereof) to be performed for us by the independent auditors, to the extent required by law. The Audit Committee may delegate to one or more Committee members the authority to grant pre-approvals for audit and permitted non-audit services to be performed for us by the independent auditor, provided that decisions of such members to grant pre-approvals shall be presented to the full Audit Committee at its next regularly scheduled meeting.

- The Audit Committee approved all services provided by Deloitte subsequent to the Business Combination.

ITEM 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES.

Not applicable.

ITEM 16E. PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS.

Not applicable.

ITEM 16F. CHANGE IN REGISTRANT'S CERTIFYING ACCOUNTANT.

Not applicable.

ITEM 16G. CORPORATE GOVERNANCE.

As a "foreign private issuer," as defined by the SEC, although we are permitted to follow certain corporate governance practices of England and Wales, instead of those otherwise required under the NASDAQ for domestic issuers, we intend to follow the NASDAQ corporate governance rules applicable to foreign private issuers. While we voluntarily follow most NASDAQ corporate governance rules, we intend to take advantage of the following limited exemptions:

- Exemption from filing quarterly reports on Form 10-Q or providing current reports on Form 8-K disclosing significant events within four days of their occurrence.

- Exemption from Section 16 rules regarding sales of ordinary shares by insiders, which will provide less data in this regard than shareholders of U.S. companies that are subject to the U.S. Exchange Act.

- Exemption from the NASDAQ rules applicable to domestic issuers requiring disclosure within four business days of any determination to grant a waiver of the code of business conduct and ethics to directors and officers. Although we will require board approval of any such waiver, we may choose not to disclose the waiver in the manner set forth in the NASDAQ rules, as permitted by the foreign private issuer exemption.

- Exemption from the requirement that our Board have a compensation committee that is composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities. Currently, our Compensation Committee is comprised entirely of independent directors, but we are not certain at this time that we would not take advantage of this exception in the future;

- Exemption from the requirements that director nominees are selected, or recommended for selection by our Board, either by (1) independent directors constituting a majority of our Board's independent directors in a vote in which only independent directors participate, or (2) a nominations committee comprised solely of independent directors, and that a formal written charter or board resolution, as applicable, addressing the nominations process is adopted.

Furthermore, NASDAQ Rule 5615(a)(3) provides that a foreign private issuer, such as us, may rely on home country corporate governance practices in lieu of certain of the rules in the NASDAQ Rule 5600 Series and Rule 5250(d), provided that we nevertheless comply with NASDAQ's Notification of Noncompliance requirement (Rule 5625), the Voting Rights requirement (Rule 5640) and that we have an audit committee that satisfies Rule 5605(c)(3), consisting of committee members that meet the independence requirements of Rule 5605(c)(2)(A)(ii). Although we are permitted to follow certain corporate governance rules that conform to England and Wales requirements in lieu of many of the NASDAQ corporate governance rules, we intend to comply with the NASDAQ corporate governance rules applicable to foreign private issuers. Accordingly, our shareholders will not have the same protections afforded to stockholders of companies that are subject to all of the corporate governance requirements of NASDAQ. We may utilize these exemptions for as long as we continue to qualify as a "controlled company" and foreign private issuer.

For additional information see "Item 6.C.—Directors, Senior Management and Employees—Board Practices."

ITEM 16H. MINE SAFETY DISCLOSURE

The information concerning mine safety violations and other regulatory matters required by Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act is included in Exhibit 16.1 to this annual report.

PART III

ITEM 17. FINANCIAL STATEMENTS.

We have elected to provide financial statements pursuant to Item 18.

ITEM 18. FINANCIAL STATEMENTS.

Our Consolidated Financial Statements are included at the end of this annual report.

ITEM 19. EXHIBITS.

Exhibit No.	Exhibit Description
1.1	Articles of Association of Ferroglobe PLC, dated as of December 23, 2015 (incorporated by reference to Exhibit 3.1 to the registration statement on Form F-1 filed by the Company on February 18, 2016)
3.1	Shareholder Agreement, dated as of December 23, 2015, between Grupo VM and Ferroglobe (incorporated by reference to Exhibit 4.1 to the registration statement on Form F-1 filed by the Company on February 18, 2016)
3.2	Amendment No. 1, dated February 10, 2016, to the Grupo VM Shareholder Agreement, between Grupo VM and Ferroglobe (incorporated by reference to Exhibit 4.2 to the registration statement on Form F-1 filed by the Company on February 18, 2016)
3.3	Shareholder Agreement, dated as of December 23, 2015, between Alan Kestenbaum, certain of his affiliates and Ferroglobe (incorporated by reference to Exhibit 4.3 to the registration statement on Form F-1 filed by the Company on February 18, 2016)
4.1	Amended and Restated Business Combination Agreement, dated as of May 5, 2015, by and between Globe, Grupo VM, FerroAtlántica, Ferroglobe and Merger Sub (incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K filed by Globe with the SEC on May 6, 2015)
4.2	Letter Agreement, dated November 11, 2015, by and among Globe, Grupo VM, FerroAtlántica, Ferroglobe and Merger Sub (incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K filed by Globe with the SEC on November 12, 2015)
4.3	First Amendment to Amended and Restated Business Combination Agreement, dated September 10, 2015 (incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K filed by Globe with the SEC on September 11, 2015)
4.4	Credit Agreement, dated as of August 20, 2013, among Globe, certain subsidiaries of Globe from time to time party thereto, Citizens Bank of Pennsylvania as Administrative Agent and L/C issuer, RBS Citizens, N.A., PNC Bank, National Association and Wells Fargo Securities, LLC as Joint Lead Arrangers and Joint Book Runners, PNC Bank, National Association and Wells Fargo Bank, National Association, as Co-Syndication Agents, and BBVA Compass Bank, as Documentation Agent, and the other lenders party thereto (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed by Globe with the SEC on August 21, 2013)
4.5	First Amendment to Credit Agreement and Waiver, dated as of February 11, 2016, by and among Globe, certain subsidiaries of Globe party thereto, the various financial institutions from time to time party thereto and Citizens Bank of Pennsylvania, as Administrative Agent (incorporated by reference to Exhibit 10.2 to the registration statement on Form F-1 filed by the Company on February 18, 2016)

Exhibit No.	Exhibit Description
4.6	Second Amendment to Credit Agreement and Limited Waiver Agreement, dated as of December 21, 2016, by and among Globe, certain subsidiaries of Globe party thereto, the various financial institutions from time to time party thereto and Citizens Bank of Pennsylvania, as Administrative Agent
4.7	Third Amendment to Credit Agreement, dated as of February 15, 2017, by and among Ferroglobe, Globe, certain subsidiaries of Ferroglobe party thereto, the subsidiary guarantors party thereto, the various financial institutions from time to time party thereto and Citizens Bank of Pennsylvania, as Administrative Agent
4.8†	Employment Agreement, dated January 27, 2011, between Globe and Alan Kestenbaum (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q filed by Globe with the SEC on May 12, 2011)
4.9†	Amendment, dated February 22, 2015, to the Employment Agreement, dated January 27, 2011, between Globe and Alan Kestenbaum (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed by Globe with the SEC on February 23, 2015)
4.10†	Service Agreement, dated June 21, 2016, between Ferroglobe and Javier López Madrid
4.11†	Amendment, dated February 7, 2017, to the Service Agreement, dated June 21, 2016, between Ferroglobe and Javier López Madrid
4.12†	2006 Employee, Director and Consultant Stock Plan (incorporated by reference to Exhibit 10.1 to the Registration Statement on Form S-1 filed by Globe with the SEC on July 25, 2008)
4.13†	Amendments to 2006 Employee, Director and Consultant Stock Plan (incorporated by reference to Exhibit 10.3 to the Quarterly Report on Form 10-Q filed by Globe with the SEC on February 11, 2011)
4.14†	2010 Annual Executive Bonus Plan (incorporated by reference to Exhibit 10.15 to the Annual Report on Form 10-K filed by Globe with the SEC on September 28, 2010)
4.15†	2011 Annual Executive Long-Term Incentive Plan (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q filed by Globe with the SEC on May 12, 2011)
4.16†	2012 Long-Term Incentive Plan (incorporated by reference to Exhibit B to Globe's Proxy Statement filed on October 28, 2011)
4.17†	Form Stock Option Agreement (incorporated by reference to Exhibit 10.13 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.18†	Form Stock Appreciation Right Agreement (incorporated by reference to Exhibit 10.14 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.19†	Form Restricted Stock Unit Grant Agreement (cash settled) (incorporated by reference to Exhibit 10.15 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.20†	Form Restricted Stock Unit Grant Agreement (stock settled) (incorporated by reference to Exhibit 10.16 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC

Exhibit No.	Exhibit Description
	on June 24, 2015)
4.21	IT Services Agreement, dated as of January 1, 2004, between FerroAtlántica and Espacio Information Technology S.A. (incorporated by reference to Exhibit 10.17 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.22	IT Outsourcing Agreement, dated as of June 26, 2014, between FerroAtlántica de Mexico and Espacio Information Technology S.A. (incorporated by reference to Exhibit 10.18 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.23	IT Services Agreement, in force since January 1, 2006, between FerroPem S.A.S. and Espacio Information Technology S.A. (incorporated by reference to Exhibit 10.19 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.24	Outsourcing Agreement, in force since January 1, 2009, between Silicon Smelters (Pty.) Ltd. and Espacio Information Technology S.A. (incorporated by reference to Exhibit 10.20 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.25	Advisory Services Agreement, dated as of April 15, 2013, between FerroAtlántica S.A.U. and Villar Mir Energía S.L. (incorporated by reference to Exhibit 10.21 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.26	Advisory Services Agreement, dated as of April 15, 2013, between Hidro Nitro Española S.A. and Villar Mir Energía S.L. (incorporated by reference to Exhibit 10.22 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.27	Framework agreement for the supply of electricity to the Boo de Guarnizo facility (Cantabria) executed on June 22, 2010, between FerroAtlántica, S.A.U. and Villar Mir Energía S.L., as amended by the amendments provided to Globe (incorporated by reference to Exhibit 10.23 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.28	Framework Agreement, dated as of December 27, 2012, between Hidro Nitro Española S.A. and Villar Mir Energía S.L. (incorporated by reference to Exhibit 10.24 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.29	Framework Agreement, dated as of December 29, 2010, between FerroAtlántica S.A.U. and Villar Mir Energía S.L. (incorporated by reference to Exhibit 10.25 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.30	Lease Agreement, dated as of August 9, 2007, between Torre Espacio Castellana S.A and FerroAtlántica S.L.U. (incorporated by reference to Exhibit 10.26 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.31	Lease Agreement, dated as of April 2, 2012, between Torre Espacio Castellana S.A and FerroAtlántica S.L.U. (incorporated by reference to Exhibit 10.27 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known

Exhibit No.	Exhibit Description
	as VeloNewco Limited) with the SEC on June 24, 2015)
4.32	Representation Contract, dated as of June 30, 2012, between Enérgya VM Generación S.L. and FerroAtlántica S.A.U. (incorporated by reference to Exhibit 10.28 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.33	Representation Contract, dated as of June 30, 2012, between Enérgya VM Generación S.L. and Hidro Nitro Española S.A. (incorporated by reference to Exhibit 10.29 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.34	Registration Rights Agreement, dated as of December 23, 2015, among Ferroglobe, Grupo VM and Alan Kestenbaum (incorporated by reference to Exhibit 10.27 to the registration statement on Form F-1 filed by the Company on February 18, 2016)
4.35	Indenture governing the $350,000,000 aggregate principal amount of 9.375% Senior Notes due 2022, dated as of February 15, 2017, among Ferroglobe and Globe, the Guarantors party thereto and Wilmington Trust, National Association
8.1	List of Significant Subsidiaries (incorporated by reference to Exhibit 21.1 to the registration statement on Form F-1 filed by the Company on February 18, 2016)
12.1	Certification of Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
12.2	Certification of the Principal Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
13.1	Certification of the Principal Executive Officers and Principal Financial Officer Pursuant to 18 U.S.C. 1350, as adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
16.1	Mine Safety and Health Administration Safety Data
23.1	Consent of Deloitte, S.L., Independent Registered Public Accounting Firm for Ferroglobe PLC

† Management contract or compensatory plan or arrangement

SIGNATURE

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

Date: May 1, 2017

Ferroglobe PLC
(Registrant)

By: /s/ Pedro Larrea Paguaga
Pedro Larrea Paguaga
Principal Executive Officer

By: /s/ Joseph Ragan
Joseph Ragan
Principal Accounting Officer

FERROGLOBE PLC

AUDITED CONSOLIDATED FINANCIAL STATEMENTS

Consolidated Financial Statements as of December 31, 2016 and 2015 and for each of the years ended December 31, 2016, 2015 and 2014

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of Ferroglobe PLC

We have audited the accompanying consolidated statement of financial position of Ferroglobe PLC and subsidiaries (the "Company") as of December 31, 2016 and 2015, and the related consolidated income statement, consolidated statement of comprehensive (loss) income, consolidated statement of changes in equity, and consolidated statement of cash flows for each of the three years in the period ended December 31, 2016. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of Ferroglobe PLC and subsidiaries as of December 31, 2016 and 2015, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of December 31, 2016, based on the criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated May 1, 2017 expressed an adverse opinion on the Company's internal control over financial reporting because of material weaknesses.

/s/ Deloitte, S.L.
Madrid, Spain

May 1, 2017

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of Ferroglobe PLC

We have audited the internal control over financial reporting of Ferroglobe PLC and subsidiaries (the "Company") as of December 31, 2016, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying *Management's Annual Report on Internal Control over Financial Reporting*. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on that risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed by, or under the supervision of, the company's principal executive and principal financial officers, or persons performing similar functions, and effected by the company's board of directors, management, and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the company's annual or interim financial statements will not be prevented or detected on a timely basis. The following material weaknesses have been identified and included in management's assessment: an ineffective control environment, control activities and monitoring, and ineffective controls over recording revenue in the proper period. These material weaknesses were considered in determining the nature, timing, and extent of audit tests applied in our audit of the consolidated financial statements as of and for the year ended December 31, 2016, of the Company and this report does not affect our report on such consolidated financial statements.

In our opinion, because of the effect of the material weaknesses identified above on the achievement of the objectives of the control criteria, the Company has not maintained effective internal control over financial reporting as of December 31, 2016, based on the criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements as of and for the year ended December 31, 2016 of

the Company and our report dated May 1, 2017, expressed an unqualified opinion on those consolidated financial statements.

/s/ Deloitte, S.L.

Madrid, Spain

May 1, 2017

FERROGLOBE PLC AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF FINANCIAL POSITION AS OF DECEMBER 31, 2016 AND 2015
Thousands of US dollars

	Notes	2016	2015 (*)
ASSETS			
Non-current assets			
Goodwill	Note 7	230,210	426,851
Other intangible assets	Note 8	62,839	71,619
Property, plant and equipment	Note 9	781,606	971,573
Non-current financial assets	Note 10	5,823	9,672
Non-current financial assets from related parties	Note 22	9,845	—
Deferred tax assets	Note 21	44,950	39,070
Non-current receivables from related parties	Note 22	2,108	—
Other non-current assets	Note 12	20,245	20,615
Total non-current assets		1,157,626	1,539,400
Current assets			
Inventories	Note 11	316,702	425,372
Trade and other receivables	Note 10	209,406	275,254
Current receivables from related parties	Note 22	11,971	10,950
Current income tax assets		19,869	9,273
Current financial assets	Note 10	4,049	4,112
Other current assets	Note 12	9,810	10,134
Cash and cash equivalents		196,931	116,666
Assets and disposal groups classified as held for sale	Note 27	92,937	—
Total current assets		861,675	851,761
Total assets		2,019,301	2,391,161
EQUITY AND LIABILITIES			
Equity			
Share capital		1,795	1,288,787
Reserves		1,332,428	143,170
Translation differences		(217,423)	(217,104)
Valuation adjustments		(11,887)	(18,435)
Result attributable to the Parent		(338,427)	(43,268)
Non-controlling interests		125,556	141,823
Total equity	Note 13	892,042	1,294,973
Non-current liabilities			
Deferred income		3,949	4,389
Provisions	Note 15	81,957	81,853
Bank borrowings	Note 16	179,473	223,676
Obligations under finance leases	Note 17	3,385	89,768
Other financial liabilities	Note 18	86,467	7,549
Other non-current liabilities	Note 20	5,737	4,517
Deferred tax liabilities	Note 21	139,535	191,748
Total non-current liabilities		500,503	603,500
Current liabilities			
Provisions	Note 15	19,627	9,010
Bank borrowings	Note 16	241,818	182,554
Obligations under finance leases	Note 17	1,852	13,429
Other financial liabilities	Note 18	1,592	—
Payables to related parties	Note 22	30,738	7,827
Trade and other payables	Note 19	157,706	147,073
Current income tax liabilities		961	10,887
Other current liabilities	Note 20	64,780	121,908
Liabilities associated with assets classified as held for sale	Note 27	107,682	—
Total current liabilities		626,756	492,688
Total equity and liabilities		2,019,301	2,391,161

(*)2015 consolidated statement of financial position has been recasted as described in Note 5 to the consolidated financial statements

Notes 1 to 28 and Appendix I are an integral part of the consolidated financial statements

FERROGLOBE PLC AND SUBSIDIARIES

CONSOLIDATED INCOME STATEMENT FOR 2016, 2015 AND 2014
Thousands of US dollars

	Notes	2016	2015 (*)	2014 (*)
Sales	Note 24.1	1,555,657	1,289,886	1,417,079
Cost of sales		(1,043,000)	(817,875)	(887,772)
Other operating income		25,712	15,500	6,694
Staff costs	Note 24.2	(293,032)	(202,585)	(213,829)
Other operating expense		(234,326)	(190,034)	(148,553)
Depreciation and amortization charges, operating allowances and write-downs	Note 24.3	(121,346)	(62,201)	(69,131)
Operating (loss) profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	Note 4.16	**(110,335)**	**32,691**	**104,488**
Impairment losses	Note 24.5	(267,449)	(52,042)	(399)
Net (loss) gain due to changes in the value of assets	Note 24.5	1,891	(912)	(9,472)
(Loss) gain on disposal of non-current assets	Note 24.6	340	(2,208)	555
Other loss		(40)	(347)	(60)
OPERATING (LOSS) PROFIT		**(375,593)**	**(22,818)**	**95,112**
Finance income	Note 24.4	1,534	1,095	4,596
Finance costs	Note 24.4	(24,585)	(23,738)	(28,415)
Exchange differences	Note 24.4	(3,513)	35,904	7,800
(LOSS) PROFIT BEFORE TAXES		**(402,157)**	**(9,557)**	**79,093**
Income tax benefit (expense)	Note 21	46,609	(48,719)	(57,652)
(LOSS) PROFIT FROM CONTINUING OPERATIONS		**(355,548)**	**(58,276)**	**21,441**
(Loss) Profit for discontinued operations	Note 27	(3,065)	(196)	10,290
(LOSS) PROFIT FOR THE YEAR		**(358,613)**	**(58,472)**	**31,731**
Loss attributable to non-controlling interests	Note 13	20,186	15,204	6,706
(LOSS) PROFIT ATTRIBUTABLE TO THE PARENT COMPANY		**(338,427)**	**(43,268)**	**38,437**

EARNINGS PER SHARE

From continued and discontinued operations

		2016	2015 (*)	2014 (*)
(Loss) profit attributable to the Parent company		(338,427)	(43,268)	38,437
Average number of shares outstanding		171,838,153	99,699,262	98,078,163
Basic (loss) earnings per share	Note 14	(1.97)	(0.43)	0.39
Effect of dilutive securities		—	—	—
Diluted (loss) earnings per share	Note 14	(1.97)	(0.43)	0.39

From continued operations

		2016	2015 (*)	2014 (*)
(Loss) profit attributable to the Parent company		(335,362)	(43,072)	28,150
Average number of shares outstanding		171,838,153	99,699,262	98,078,163
Basic (loss) earnings per share	Note 14	(1.95)	(0.43)	0.29
Effect of dilutive securities		—	—	—
Diluted (loss) earnings per share	Note 14	(1.95)	(0.43)	0.29

From discontinued operations

		2016	2015 (*)	2014 (*)
(Loss) profit attributable to the Parent company		(3,065)	(196)	10,287
Average number of shares outstanding		171,838,153	99,699,262	98,078,163
Basic (loss) earnings per share	Note 14	(0.02)	—	0.10
Effect of dilutive securities		—	—	—
Diluted (loss) earnings per share	Note 14	(0.02)	—	0.10

(*) Consolidated income statements have been recasted as described in Note 1 to the consolidated financial statements.

Notes 1 to 28 and Appendix I are an integral part of the consolidated financial statements

FERROGLOBE PLC AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF COMPREHENSIVE (LOSS) INCOME FOR 2016, 2015 AND 2014

Thousands of US dollars

	2016	2015	2014
NET (LOSS) INCOME	(358,613)	(58,472)	31,731
Items that will not be reclassified subsequently to income or loss:			
Defined benefit obligation	4,297	756	(3,143)
Total	**4,297**	**756**	**(3,143)**
Items that may be reclassified subsequently to income or loss:			
Arising from cash flow hedges	—	(990)	(6,624)
Translation differences	(319)	(18,435)	6,303
Tax effect	—	(189)	1,987
TOTAL INCOME AND EXPENSE RECOGNIZED DIRECTLY IN EQUITY	**(319)**	**(19,614)**	**1,666**
Items that have been reclassified to income or loss in the period:			
Arising from cash flow hedges	3,002	3,155	1,689
Tax effect	(751)	(884)	(506)
TOTAL TRANSFERS TO INCOME OR LOSS	**2,251**	**2,271**	**1,183**
OTHER COMPREHENSIVE INCOME (LOSS) FOR THE YEAR, NET OF INCOME TAX	**6,229**	**(16,587)**	**(294)**
TOTAL COMPREHENSIVE (LOSS) INCOME FOR THE YEAR	**(352,384)**	**(75,059)**	**31,437**
Attributable to the Parent	(332,198)	(59,855)	38,143
Attributable to non-controlling interests	(20,186)	(15,204)	(6,706)

Notes 1 to 28 and Appendix I are an integral part of the consolidated financial statements

FERROGLOBE PLC AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FOR 2016, 2015 AND 2014

Thousands of US dollars

	Total Amounts Attributable to Owners								
	Shares (Thousands)	Share Capital	Reserves	Translation Differences	Valuation Adjustments	Result for the Year	Interim Dividend	Non-controlling Interests	Total
BALANCE AT JANUARY 1, 2014	**200**	**285,760**	**531,060**	**(68,403)**	**(13,686)**	**28,448**	—	**20,787**	**783,966**
Comprehensive income (loss) for 2014	—	—	—	6,303	(6,597)	38,437	—	(6,706)	31,437
Dividends paid	—	—	(167,177)	—	—	—	(55,041)	—	(222,218)
Distribution of 2013 profit	—	—	28,448	—	—	(28,448)	—	—	—
Other changes	—	—	1,025	(90,430)	—	—	—	3,897	(85,508)
BALANCE AT DECEMBER 31, 2014	**200**	**285,760**	**393,356**	**(152,530)**	**(20,283)**	**38,437**	**(55,041)**	**17,978**	**507,677**
Comprehensive (loss) income for 2015	—	—	—	(18,435)	1,848	(43,268)	—	(15,204)	(75,059)
Business combination	171,638	553,200	244,838	—	—	—	—	144,533	942,571
FerroAtlantica share exchange	—	449,827	(449,827)	—	—	—	—	—	—
Share issuance costs	—	—	(9,414)	—	—	—	—	—	(9,414)
Dividends paid (Note 13)	—	—	(76,520)	—	—	—	55,041	—	(21,479)
Distribution of 2014 profit	—	—	38,437	—	—	(38,437)	—	—	—
Other changes	—	—	2,300	(46,139)	—	—	—	(5,484)	(49,323)
BALANCE AT DECEMBER 31, 2015	**171,838**	**1,288,787**	**143,170**	**(217,104)**	**(18,435)**	**(43,268)**	**—**	**141,823**	**1,294,973**
Comprehensive (loss) income for 2016	—	—	—	(319)	6,548	(338,427)	—	(20,186)	(352,384)
Share decrease (net effect)	—	(1,287,068)	1,287,068	—	—	—	—	—	—
Share issuance costs	—	—	(275)	—	—	—	—	—	(275)
Dividends paid (Note 13)	—	—	(54,988)	—	—	—	—	—	(54,988)
Distribution of 2015 loss	—	—	(43,268)	—	—	43,268	—	—	—
Other changes	—	76	721	—	—	—	—	3,919	4,716
BALANCE AT DECEMBER 31, 2016	**171,838**	**1,795**	**1,332,428**	**(217,423)**	**(11,887)**	**(338,427)**	**—**	**125,556**	**892,042**

Notes 1 to 28 and Appendix I are an integral part of the consolidated financial statements

FERROGLOBE PLC AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF CASH FLOWS FOR 2016, 2015 AND 2014
Thousands of US dollars

	2016	2015	2014
CASH FLOWS FROM OPERATING ACTIVITIES:	**121,169**	**145,449**	**191,420**
NET (LOSS) INCOME	**(358,613)**	**(58,472)**	**31,731**
Adjustments to reconcile net (loss) income to net cash provided by operating activities:	**377,108**	**163,597**	**167,652**
Income tax benefit (expense)	(46,695)	49,942	59,707
Depreciation and amortization charges, operating allowances and write-downs	125,677	67,050	74,752
Finance income	(1,554)	(1,096)	(4,771)
Finance costs	30,269	30,405	37,105
Exchange differences	3,513	(35,904)	(7,800)
Impairment losses	268,089	52,042	399
Net (loss) gain due to changes in the value of assets	(1,891)	912	9,472
(Loss) gain on disposals of non-current and financial assets	(340)	2,214	(555)
Other adjustments	40	(1,968)	(657)
Net increase in operating working capital:	**193,076**	**132,886**	**40,171**
Decrease (increase) in inventories	108,207	89,199	(30,521)
Decrease in trade receivables	56,297	60,715	550
(Decrease) increase in trade payables	28,572	(17,028)	70,142
Other amounts (paid) received due to operating activities	(50,001)	(20,189)	17,944
Income tax paid	(10,933)	(41,968)	(28,973)
Interest paid	(29,468)	(30,405)	(37,105)
CASH FLOWS FROM INVESTING ACTIVITIES:	**(84,281)**	**17,966**	**(155,293)**
Payments due to investments:	**(85,945)**	**(73,060)**	**(149,560)**
Other intangible assets	(4,914)	(4,539)	(8,663)
Property, plant and equipment	(71,119)	(68,521)	(45,383)
Non-current financial assets	(9,807)	—	(95,514)
Current financial assets	(105)	—	—
Disposals:	**110**	**15,267**	**11**
Intangible assets	—	8,140	—
Property, plant and equipment	—	5,446	—
Non-current financial assets	11	1,465	—
Current financial assets	99	216	11
Interest received	1,554	1,096	4,771
Other amounts received (paid) due to investing activities	—	(3,046)	(10,514)
Net cash inflow on acquisition of subsidiaries	**—**	**77,709**	**—**
CASH FLOWS FROM FINANCING ACTIVITIES:	**49,917**	**(87,593)**	**(50,913)**
Dividends paid	**(54,988)**	**(21,479)**	**(40,116)**
Payment for share issue and registration cost	**—**	**(9,414)**	**—**
Increase/(decrease) in bank borrowings:	**43,147**	**(55,390)**	**(10,737)**
Borrowings	124,384	84,229	180,053
Payments	(81,237)	(139,619)	(190,790)
Other amounts paid due to financing activities	**61,758**	**(1,310)**	**(60)**
TOTAL NET CASH FLOWS FOR THE YEAR	**86,805**	**75,822**	**(14,786)**
Beginning balance of cash and cash equivalents	116,666	48,651	62,246
Exchange differences on cash and cash equivalents in foreign currencies	(6,489)	(7,807)	1,190
Ending balance of cash and cash equivalents	**196,982**	**116,666**	**48,651**
Ending balance of cash and cash equivalents from continued operations	196,931	116,666	48,651
Ending balance of cash and cash equivalents from discontinued operations	51	—	—

Notes 1 to 28 and Appendix I are an integral part of the consolidated financial statements

Ferroglobe PLC and Subsidiaries

Notes to the Consolidated Financial Statements
December 31, 2016, 2015, and 2014
(U.S. Dollars in thousands, except share and per share data)

1. General information

Ferroglobe PLC and subsidiaries (the "Company" or "Ferroglobe") is among the world's largest producers of silicon metal and silicon-based alloys, important ingredients in a variety of industrial and consumer products. The Company's customers include major silicone chemical, aluminum and steel manufacturers, auto companies and their suppliers, ductile iron foundries, manufacturers of photovoltaic solar cells and computer chips, and concrete producers. Additionally, the Company has been operating hydroelectric plants (hereinafter "energy business") in Spain and France.

Ferroglobe PLC (the "Parent Company" or "the Parent") is a public limited company that was incorporated in the United Kingdom on February 5, 2015 (formerly named 'Velonewco Limited'). The Parent's registered office is 2nd Floor West Wing, Lansdowne House, 57 Berkeley Square, London (United Kingdom).

On December 23, 2015, Ferroglobe PLC consummated the acquisition ("Business Combination") of Globe Specialty Metals, Inc. and subsidiaries ("GSM" or "Globe") and Grupo FerroAtlántica, S.A. (Sole-Shareholder Company) ('Grupo FerroAtlántica' or "FerroAtlántica" or the "Predecessor"). FerroAtlántica is considered the Predecessor under applicable SEC rules and regulations.

For fiscal year 2015, Ferroglobe's consolidated financial statements contain the combined results of the Parent Company for the period from February 5, 2015 (inception of the Company) to December 31, 2015, FerroAtlántica as of and for the year ended December 31, 2015, and GSM for the period of eight days as of and ended December 31, 2015. The data and results of fiscal year 2014 correspond exclusively to the Predecessor, unless otherwise expressly stated.

As described in Note 27 of these financial statements, the Company signed an agreement for the sale of its Spanish energy business on December 12, 2016. The results of operations of the division are thus included in the consolidated financial statements as discontinued operations for the year ended December 31, 2016, 2015 and 2014, and the business was classified as held for sale in accordance with requirements of IFRS 5 Non-current Assets Held for Sale and Discontinued Operations as of December 31, 2016. In this regard, the consolidated income statement has been recasted for the years ended December 31, 2015 and 2014.

2. Organization and Subsidiaries

Business Segments

As a result of the Business Combination, the Company has a diversified production base consisting of production facilities across the North America, mainly in United States and Canada; Europe, mainly in Spain and France; South America, mainly in Venezuela; Africa, mainly in the Republic of South Africa; and Asia, mainly China. In this regards, Ferroglobe has five reportable business segments, which are: Electrometallurgy - North America, Electrometallurgy - Europe, Electrometallurgy - South Africa, Electrometallurgy - Venezuela and Other segments (see Note 6).

The subsidiaries of Ferroglobe as of December 31, 2016 (see Appendix I), classified by business activity, were as follows:

Subsidiaries				
Electrometallurgy – North America	**Electrometallurgy – Europe**	**Electrometallurgy – South Africa**	**Electrometallurgy - Venezuela**	**Other segments**
Alabama Sand and Gravel, Inc. (2)	Cuarzos Industriales, S.A.U.	Silicon Smelters (Pty.), Ltd.	Cuarzos Industriales de Venezuela (Cuarzoven), S.A.	Actifs Solaires Bécancour, Inc
Alden Resources, LLC (2)	Ferroatlántica, S.A.U. - Electrometallurgy (1)	Rebone Mining (Pty.), Ltd.	Ferroatlántica de Venezuela (FerroVen), S.A.	Emix, S.A.S.
Alden Sales Corporation, LLC (2)	FerroPem, S.A.S.	Samquarz (Pty.), Ltd.		Ferroatlántica Brasil Mineraçao Ltda.
Core Metals Group Holdings, LLC (2)	Grupo FerroAtlántica, S.A.U	Silicon Technology (Pty.), Ltd.		FerroAtlántica Canada Company Ltd
Core Metals Group, LLC (2)	Hidro-Nitro Española, S.A. - Electrometallurgy (1)	Thaba Chueu Mining (Pty.), Ltd.		Ferroatlántica de México, S.A. de C.V.
Gatliff Services, LLC (2)	Rocas, Arcillas y Minerales, S.A.			Ferroatlántica Deutschland, GmbH
GBG Holdings, LLC (2)				Ferroatlántica I+D, S.L.U.
Globe Metallurgical, Inc. (2)				FerroAtlántica India Private Limited
Globe Metals Enterprises, Inc. (2)				Ferroatlántica y Cía., F. de Ferroaleac. y Metales, S.C.
GSM Alloys I, Inc. (2)				Ferroatlántica, S.A.U. - Energy (1)
GSM Alloys II, Inc. (2)				FerroAtlántica International Ltd
GSM Enterprises Holdings, Inc. (2)				Ferroglobe Services plc
LF Resources, Inc. (2)				FerroManganese Mauritania SARL
Norchem, Inc. (2)				Ferroquartz Company Ltd
QSIP Canada ULC(2)				Ferroquartz Holdings, Ltd
QSIP Sales ULC (2)				FerroQuartz Mauritania SARL
Quebec Silicon LP (2)				FerroQuébec, Inc.
Tennessee Alloys Company, LLC (2)				FerroTambao, SARL
West Virginia Alloys, Inc. (2)				Ganzi Ferroatlántica Silicon Industry Company, Ltd.
WVA Manufacturing, LLC (2)				Globe Metales S.A. (2)
				Globe Specialty Metals, Inc. (2)
				Hidro-Nitro Española, S.A. - Energy (1)
				Mangshi FerroAtlántica Mining Industry Service Company Ltd
				MangShi Sinice Silicon Industry Company Limited
				Ningxia Yongvey Coal Industrial Co., Ltd. (2)
				Photosil Industries, S.A.S.
				Silicio FerroSolar, S.L.U
				Solsil, Inc. (2)
				Ultracore Energy, S.A. (2)

(1) FerroAtlántica, S.A.U. and Hidro Nitro Española, S.A. carry on business activities in both the “Electrometallurgy - Europe” and “Other segments”. As mentioned in Note 1, the energy businesses in Spain of both entities that are part of ‘Other segment’ have been recognized as a disposal group held for sale from December 12, 2016 and their operations classified as discontinued operations according to IFRS 5 (see Note 27).

(2) Entered to the scope of consolidation during 2015 as a result of teh business combination (GSM subsidiaries).

Subsidiaries

Subsidiaries are all companies over which Ferroglobe has control.

Control is achieved when the Company:

- has power over the investee;
- is exposed, or has rights, to variable returns from its involvement with the investee; and
- has the ability to use its power over the investee to affect the amount of the investor's returns.

The Company has power over the investee when the voting rights are sufficient to give it the practical ability to direct the relevant activities of the investee unilaterally. The Company considers all relevant facts and circumstances in assessing whether or not the Company's voting rights in an investee are sufficient to give it power, including:

- the total voting rights held by the Company relative to the size and dispersion of holdings of the other vote holders;
- potential voting rights held by the Company, other vote holders or other parties;
- rights arising from other contractual arrangements; and
- any additional facts and circumstances that indicate that the Company has, or does not have, the current ability to direct the relevant activities at the time these decisions need to be made, including voting patterns at previous shareholders' meetings.

Consolidation of a subsidiary begins when the Company obtains control over the subsidiary and ceases when the Company loses control of the subsidiary.

The Company uses the acquisition method to account for the acquisition of subsidiaries. According to this method, the consideration transferred for the acquisition of a subsidiary corresponds to the fair value of the assets transferred, the liabilities incurred and the equity interests issued by the Company. The consideration transferred also includes the fair value of any asset or liability resulting from a contingent consideration arrangement. Any contingent consideration transferred by the Company is recognized at fair value at the date of acquisition. Subsequent changes in the fair value of the contingent consideration classified as an asset or a liability are recognized in accordance with IAS 39 either in the income statement or the statement of comprehensive (loss) income. The costs related to the acquisition are recognized as expenses in the years incurred. The identifiable assets acquired and the liabilities and contingent liabilities assumed in a business combination are initially recognized at their fair value at the date of acquisition. The Company recognizes any non-controlling interest in the acquiree at the non-controlling interest's proportionate share of the acquiree's identifiable net assets.

Profit or loss for the period and each component of other comprehensive (loss) income are attributed to the owners of the Company and to the non-controlling interests. The Company attributes total comprehensive (loss) income to the owners of the Company and to the non-controlling interests even if the profit or loss of the non-controlling interests gives rise to a balance receivable.

When necessary, uniformity adjustments are made to the financial statements of subsidiaries to bring their accounting policies in line with those of the Company.

All assets and liabilities, equity, income, expenses and cash flows relating to transactions between subsidiaries are eliminated in full in consolidation.

3. Basis of presentation and basis of consolidation

3.1 Basis of presentation

These consolidated financial statements have been issued in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board and interpretations issued by the International Financial Reporting Interpretations Committee (hereinafter, "IFRS as issued by the IASB" and/or "IFRS-IASB" and/or "IFRS").

The consolidated financial statements have been authorized for issuance on May 1, 2017.

All accounting policies and measurement bases with effect on the consolidated financial statements were applied in their preparation.

The consolidated financial statements were prepared on a historical cost basis, with the exceptions disclosed in the notes to the consolidated financial statements, where applicable, and in those situations where IAS-IFRSs requires that financial assets and financial liabilities are valued at fair value.

3.2 International financial reporting standards

Application of new accounting standards

a) Standards, interpretations and amendments effective from January 1, 2016 under IFRS-IASB, applied by the Company in the preparation of these consolidated financial statements:

- IFRS 10 (Amendment) 'Consolidated financial statements, IFRS 12 'Disclosure of interests in Other Entities' and IAS 28 'Investments in associates and joint ventures' regarding the exemption from consolidation for investment entities.
- Annual Improvements to IFRSs 2012-2014 cycles.
- IAS 1 (Amendment) 'Presentation of Financial Statements' under the disclosure initiative.
- IAS 27 (Amendment) 'Separate financial statements' regarding the reinstatement of the equity method as an accounting option in separate financial statements.
- IAS 16 (Amendment) 'Property, Plant and Equipment' and IAS 38 'Intangible Assets', regarding acceptable methods of amortization and depreciation.
- IFRS 11 (Amendment) 'Joint Arrangements' regarding acquisition of an interest in a joint operation.
- IAS 16 'Property, Plant and Equipment' and 41 'Agriculture' (Amendment) regarding bearer plants.
- IFRS 14 'Regulatory Deferral Accounts'.

The applications of these amendments have not had any material impact on these consolidated financial statements.

b) Standards, interpretations and amendments published by the IASB that will be effective for periods beginning on or after January 1, 2017:

- IFRS 9 'Financial Instruments'. This Standard will be effective from January 1, 2018 under IFRS-IASB, earlier applications is permitted.
- IFRS 15 'Revenues from contracts with Customers'. IFRS 15 is applicable for annual periods beginning on or after January 1, 2018 under IFRS-IASB, earlier application is permitted.
- IFRS 16 'Leases'. This Standard is applicable for annual periods beginning on or after January 1, 2019 under IFRS-IASB, earlier application is permitted, but conditioned to the application of IFRS 15.
- IFRS 2 (Amendment) 'Share-based Payment'. This Standard is applicable for annual periods beginning on or after January 1, 2018 under IFRS-IASB, earlier application is permitted.
- IAS 12 (Amendment) 'Recognition for Deferred Tax for Unrealized Losses'. This amendment is mandatory for annual periods beginning on or after January 1, 2017 under IFRS-IASB, earlier application is permitted.
- IAS 7 (Amendment) 'Disclosure Initiative'. This amendment is mandatory for annual periods beginning on or after January 1, 2017 under IFRS-IASB, earlier application is permitted.

- IFRS 15 (Clarifications) 'Revenues from contracts with Customers'. This amendment is mandatory for annual periods beginning on or after January 1, 2018 under IFRS-IASB, earlier application is permitted.

- IFRS 2 (Amendment) 'Classification and Measurement of Share-based Payment Transactions'. This amendment is mandatory for annual periods beginning on or after January 1, 2018 under IFRS-IASB, earlier application is permitted.

- IFRS 4 (Amendment). Applying IFRS 9 'Financial Instruments' with IFRS 4 'Insurance Contracts'. This amendment is mandatory for annual periods beginning on or after January 1, 2018 under IFRS-IASB, earlier application is permitted.

- IFRIC Interpretation 22 'Foreign Currency Transactions and Advance Consideration', mandatory for annual periods beginning on or after January 1, 2018 under IFRS-IASB, earlier application is permitted.

- IAS 40 (Amendment) 'Transfers of Investments Property'. This amendment is mandatory for annual periods beginning on or after January 1, 2018 under IFRS-IASB, earlier application is permitted.

- Amended IFRS 10 – "Consolidated financial statements" and Amended IAS 28 - "Investments in Associates and Joint Ventures". These changes will be applicable to accounting periods beginning on the effective date, still to be determined, although early adoption is allowed.

- Annual improvements cycle to IFRSs 2014-2016, beginning on or after January 1, 2017.

The Company does not anticipate any significant impact on the consolidated financial statements derived from the application of the new standards and amendments that will be effective for annual periods beginning after December 31, 2016, although it is currently still in process of evaluating such application.

3.3 Currency

The Parent's functional currency is the Euro. The functional currencies of subsidiaries are determined by the primary economic environment in which each subsidiary operates.

The reporting currency of the Company is U.S. Dollars and as such the accompanying results and financial position have been translated pursuant to the provisions indicated in IAS 21.

All differences arising from the aforementioned translation are recognized in equity under "Translation differences".

Upon the disposal of a foreign operation, the translation differences relating to that operation deferred as a separate component of consolidated equity are recognized in the consolidated income statement when the gain or loss on disposal is recognized.

3.4 Responsibility for the information and use of estimates

The information in these consolidated financial statements is the responsibility of Ferroglobe's management.

Certain assumptions and estimates were made by management in the preparation of these consolidated financial statements, including:

- The impairment losses on certain assets, including property, plant and equipment and goodwill.

- The useful life of property, plant and equipment and intangible assets.

- The fair value of certain unquoted financial assets.

- The fair value of acquired assets and liabilities as a result of the Business Combination.

- The assumptions used in the actuarial calculation of pension liabilities.

- The discount rate used to calculate the present value of certain collection rights and payment obligations.

- Provisions for contingencies and environmental liabilities.

- The calculation of income tax and of deferred tax assets and liabilities.

The Company based its estimates and judgments on historical experience, known or expected trends and other factors that are believed to be reasonable under the circumstances. Actual results may differ materially from these estimates. Changes in accounting estimates are applied in accordance with IAS 8.

At the date of preparation of these consolidated financial statements no events had taken place that might constitute a significant source of uncertainty regarding the accounting effect that such events might have in future reporting periods.

3.5 Basis of consolidation

Consolidation methods

i. Full consolidation (Subsidiaries)

The financial statements of the subsidiaries are fully consolidated with those of the Parent. Accordingly, all balances and effects of the transactions between consolidated companies are eliminated in consolidation.

Non-controlling interests are presented in “Equity – Non-controlling interests” in the consolidated statement of financial position, separately from the consolidated equity attributable to the Parent’s sole shareholder. The share of non-controlling interests in the profit or loss for the year is presented under “Loss attributable to non-controlling interests” in the consolidated income statement.

ii. Uniformity of items

In order to present the consolidated financial statements using uniform measurement bases, the necessary adjustments and reclassifications were made during consolidation for subsidiaries that apply accounting policies and measurement bases that differ from those used by the Company.

4. Accounting policies

The principal accounting policies applied in preparing these consolidated financial statements, in accordance with the IFRSs issued by the IASB in effect at the date of preparation are described below. The Company did not early adopt any of the new standards described in Note 3.2.

4.1 Goodwill

Goodwill arising on consolidation represents the excess of the cost of acquisition over the Company’s interest in the fair value of the identifiable assets and liabilities of a subsidiary at the date of acquisition.

Any excess of the cost of the investments in the consolidated companies over the corresponding underlying carrying amounts acquired, adjusted at the date of first-time consolidation, is allocated as follows:

1. If it is attributable to specific assets and liabilities of the companies acquired, increasing the value of the assets (or reducing the value of the liabilities) whose market values were higher (lower) than the carrying amounts at which they had been recognized in their balance sheets and whose accounting treatment was similar to that of the same assets (liabilities) of the Company amortization, accrual, etc.

2. If it is attributable to specific intangible assets, recognizing it explicitly in the consolidated statement of financial position provided that the fair value at the date of acquisition can be measured reliably.

3. The remaining amount is recognized as goodwill, which is allocated to one or more specific cash-generating units.

Goodwill is only recognized when it has been acquired for consideration and represents, therefore, a payment made by the acquirer for future economic benefits from assets of the acquired company that are not capable of being individually identified and separately recognized.

On disposal of a subsidiary, the attributable amount of goodwill is included in the determination of the gain or loss on disposal.

4.2 Other intangible assets

Other intangible assets are assets without physical substance which can be individually identified either because they are separable or because they arise as a result of a legal or contractual right or of a legal transaction or were developed by the consolidated companies. Only intangible assets whose value can be measured reliably and from which the Company expects to obtain future economic benefits are recognized in the consolidated statement of financial position.

Intangible assets are recognized initially at acquisition or production cost. The aforementioned cost is amortized systematically over each asset's useful life. At each reporting date, these assets are measured at acquisition cost less accumulated amortization and any accumulated impairment losses, if any. The Company reviews amortization periods and amortization methods for finite-lived intangible assets at the end of each fiscal year.

The Company's main intangible assets are as follows:

Development expenditures

Development expenditures are capitalized if they meet the requirements of identifiability, reliability in cost measurement and high probability that the assets created will generate economic benefits. Developmental expenditures are amortized on a straight-line basis over the useful lives of the assets, which are between four and ten years, depending on the project.

Expenditures on research activities are recognized as expenses in the years in which they are incurred.

Power supply agreements

Power supply agreements are amortized on a straight-line basis over the term in which the agreement is effective. The Company amortizes power supply agreements over six years.

Rights of use

Rights of use granted are amortized on a straight-line basis over the term in which the right of use was granted from the date it is considered that use commenced. Rights of use are generally amortized over a period ranging from 10 to 20 years.

Computer software

Computer software includes the costs incurred in acquiring or developing computer software, including the related installation. Computer software is amortized on a straight-line basis over two to five years.

Computer system maintenance costs are recognized as expenses in the years in which they are incurred.

Other intangible assets

Other intangible assets includes:

- Supply agreements which are amortized in accordance with their estimated useful lives (see Note 8).

- CO_2 emissions allowances ("rights held emit greenhouse gasses") which are not amortized, but rather are expensed when used (see Note 4.20).

4.3 Property, plant and equipment

Cost

Property, plant and equipment for our own use are initially recognized at acquisition or production cost and are subsequently measured at acquisition or production cost less accumulated depreciation and any accumulated impairment losses.

When the construction and start-up of non-current assets require a substantial period of time, the borrowing costs incurred over that period are capitalized. In 2016, 2015 and 2014 no material borrowing costs were capitalized.

The costs of expansion, modernization or improvements leading to increased productivity, capacity or efficiency or to a lengthening of the useful lives of the assets are capitalized. Repair, upkeep and maintenance expenses are recognized in the consolidated income statement for the year in which they are incurred.

Mineral reserves are recorded at fair value at the date of acquisition. Depletion of mineral reserves is computed using the units-of-production method utilizing only proven and probable reserves (as adjusted for recoverability factors) in the depletion base.

Property, plant and equipment in the course of construction are transferred to property, plant and equipment in use at the end of the related development period.

Depreciation

The Company depreciates Property, plant and equipment using the straight-line method at annual rates based on the following years of estimated useful life:

	Years of Estimated Useful Life
Properties for own use	25-50
Plant and machinery	10-20
Tools	12.5-15
Furniture and fixtures	10-15
Computer hardware	4-8
Transport equipment	10-15

Land included within Property, plant and equipment is considered to be an asset with an indefinite useful life and, as such, is not depreciated, but rather it is tested for impairment annually. The Company reviews residual value, useful lives, and the depreciation method for Property, plant and equipment annually.

Environment

The costs arising from the activities aimed at protecting and improving the environment are accounted for as an expense for the year in which they are incurred. When they represent additions to property, plant and equipment aimed at minimizing the environmental impact and protecting and enhancing the environment, they are capitalized to non-current assets.

4.4 Impairment of property, plant and equipment, intangible assets and goodwill

In order to ascertain whether its assets have become impaired, the Company compares their carrying amount with their recoverable amount at the end of the reporting period, or more frequently if there are indications that the assets might have become impaired. Where the asset itself does not generate cash flows that are independent from other assets, the Company estimates the recoverable amount of the cash-generating unit to which the asset belongs.

Recoverable amount is the higher of:

- Fair value: the price that would be agreed upon by two independent parties, less estimated costs to sell, and

- Value in use: the present value of the future cash flows that are expected to be derived from continuing use of the asset and from its ultimate disposal at the end of its useful life, discounted at a pre-tax rate which reflects the time value of money and the risks specific to the business to which the asset belongs.

If the recoverable amount of an asset (or cash-generating unit) is less than its carrying amount, the carrying amount of the asset is reduced to its recoverable amount, and an impairment loss is recognized as an expense under “Impairment losses” in the consolidated income statement.

Where an impairment loss subsequently reverses (not permitted in the case of goodwill), the carrying amount of the asset is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset in prior years. A reversal of an impairment loss is recognized as “Other income” in the consolidated income statement.

The basis for depreciation is the carrying amount of the assets, deemed to be the acquisition cost less any accumulated impairment losses.

4.5 Financial instruments

Financial assets

The main financial assets held by the Company are assets representing collection rights as a result of investments or loans. These rights are classified as current or non-current on the basis of whether they are due to be settled within less than or more than twelve months, respectively, or, if they do not have a specific maturity date (as in the case of marketable securities or investment fund units), whether or not the Company has the intention to dispose of them within less than or more than twelve months.

The Company classifies financial assets based on the purpose for which they were initially acquired and it reviews the classification at the end of each reporting period.

The financial assets held by the Company are classified as:

- Loans and receivables:

  Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They arise when cash, goods or services are provided directly to a debtor. They are measured at the principal amount plus the accrued interest receivable. They are classified as non-current assets when they mature within more than twelve months after the end of the reporting period, and as current assets when they mature within less than twelve months from the end of the reporting period.

  Loans and receivables originated by the Company are measured at the principal amount plus the accrued interest receivable, less any impairment losses, i.e. they are measured at their amortized cost.

  The Company derecognizes a financial asset when the rights to the future cash flows from the financial asset expire or have been transferred and substantially all the risks and rewards of ownership of the financial asset have also been transferred, such as in the case of firm asset sales, factoring of trade receivables in which the Company does not retain any credit or interest rate risk, sales of financial assets under an agreement to repurchase them at fair value and the securitization of financial assets in which the transferor does not retain any subordinate debt, provide any kind of guarantee or assume any other kind of risk. However, the Company does not derecognize financial assets, and recognize a financial liability for an amount equal to the consideration received, in transfers of financial assets in which substantially all the risks and rewards of ownership are retained, such as in the case of note and bill discounting, recourse factoring and sales of financial assets in which the transferor retains a subordinated interest or any other kind of guarantee that absorbs substantially all the expected losses.

- Other financial assets:

These deposits and guarantees are restricted until such time as the conditions of each agreement or tender expire. Deposits and guarantees expiring within twelve months are classified as current items and those expiring in more than twelve months are classified as non-current items.

Financial liabilities

Amortized cost:

The main financial liabilities of the Company are held-to-maturity financial liabilities, which are measured at amortized cost. The financial liabilities held by the Company are classified as:

· Bank and other loans:

  Loans from banks and other lenders are recognized at the amount of proceeds received, net of transaction costs. They are subsequently measured at amortized cost. Borrowing costs are recognized in the consolidated income statement on an accrual basis using the effective interest method and are added to the carrying amount of the liability to the extent that they are not settled in the period in which they arise.

· Trade and other payables:

  Trade payables are initially recognized at fair value and are subsequently measured at amortized cost using the effective interest method.

Fair value:

The fair value of a financial instrument on a given date is determined to be the amount for which it could be bought or sold on that date by two knowledgeable, willing parties in an arm's length transaction acting prudently. The most objective and common reference for the fair value of a financial instrument is the price that would be paid for it on an organized market ("quoted price" or "market price"). If this market price cannot be determined objectively and reliably, fair value is estimated on the basis of the price established in recent transactions involving similar instruments or of the present value of all the future cash flows (collections or payments), applying as the discount rate the market interest rate for similar financial instruments (same term, currency, interest rate and equivalent risk rating).

Fair value measurements of assets and liabilities are classified according to the following hierarchy established in IFRS 13:

· Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities.

· Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices).

· Level 3: inputs for the asset or liability that are not based on observable market data.

Financial derivatives

The Company has determined that the majority of the inputs used to calculate the fair value of derivative financial instruments are in Level 2 of the above hierarchy.

The Company used mid-market prices as observable inputs from external sources of information recognized by the financial markets.

To determine the market value of interest rate derivatives (swaps or IRSs), the Company uses its own IRS pricing model using Euribor and Libor and long-term swaps market curves as inputs. Forwards were valued using spot and forward prices at the end of the reporting period. The techniques used to measure derivatives are based on discounting projected cash flows with market-related curves.

4.6 Inventories

Inventories comprise assets (goods) which:

- Are held for sale in the ordinary course of business (finished goods); or
- Are in the process of production for such sale (work in progress); or
- Will be consumed in the production process or in the rendering of services (raw materials and spare parts).

Inventories are stated at the lower of acquisition or production cost and net realizable value. The cost of each inventory item is generally calculated as follows:

- Raw materials, spare parts and other consumables and replacement parts: the lower of weighted average acquisition cost and net realizable value.
- Work in progress and finished and semi-finished goods: the lower of production cost (which includes the cost of materials, labor costs, direct and indirect manufacturing expenses) or net realizable value in the market.

Obsolete, defective or slow-moving inventories have been reduced to net realizable value.

Net realizable value is the estimated selling price less all the estimated costs of selling and distribution.

The amount of any write-down of inventories (as a result of damage, obsolescence or decrease in the selling price) to their net realizable value and all losses of inventories are recognized as expenses in the year in which the write-down or loss occurs. Any subsequent reversals are recognized as income in the year in which they arise.

The consumption of inventories is recognized as an expense in “Cost of sales” in the consolidated income statement in the period in which the revenue from their sale is recognized.

4.7 Biological assets

The Company recognizes biological assets when, and only when:

- It controls the asset as a result of past events;
- It is probable that future economic benefits associated with the asset will flow to the entity; and
- The fair value or cost of the asset can be measured reliably.

Biological assets are measured at fair value less estimated costs to sell.

The fair value of forestry plantations is based on a combination of the fair value of the land and of the timber plantations with reference to current timber market prices.

The gains or losses arising on the initial recognition of a biological asset at fair value less costs to sell are included in the consolidated income statement for the period in which they arise.

4.8 Cash and cash equivalents

The Company classifies under “Cash and cash equivalents” any liquid financial assets, such as for example cash on hand and at banks, deposits and liquid investments, that can be converted into cash within three months and are subject to an insignificant risk of changes in value.

4.9 Provisions and contingencies

When preparing the consolidated financial statements, the Parent’s directors made a distinction between:

- Provisions: present obligations, either legal, contractual, constructive or assumed by the Company, arising from past events, the settlement of which is expected to give rise to an outflow of economic benefits the amount and/or timing of which are uncertain; and

- Contingent liabilities: possible obligations that arise from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more future events not wholly within the control of the Company, or present obligations arising from past events the amount of which cannot be estimated reliably or whose settlement is not likely to give rise to an outflow of economic benefits.

The consolidated financial statements include all the material provisions with respect to which it is considered that it is more likely than not that the obligation will have to be settled. Contingent liabilities are not recognized in the consolidated financial statements, but rather are disclosed, as required by IAS 37 (see Note 23).

Provisions are classified as current or non-current based on the estimated period of time in which the obligations covered by them will have to be met. They are recognized when the liability or obligation giving rise to the indemnity or payment arises, to the extent that its amount can be estimated reliably.

“Provisions” includes the provisions for pension and similar obligations assumed; provisions for contingencies and charges, such as for example those of an environmental nature and those arising from litigation in progress or from outstanding indemnity payments or obligations, and collateral and other similar guarantees provided by the Company; and provisions for medium- and long- term employee incentives and the long-service bonus described in Note 15.

Provisions for litigation in progress

At the end of 2016 and 2015, certain court proceedings and claims were in process against the Company arising from the ordinary course of their business. The Company’s legal advisers and directors consider that the outcome of the court proceedings and claims will not have a material effect on the consolidated financial statements for the years in which they are settled.

Provisions for pensions and similar obligations

Certain subsidiaries have undertaken to supplement public retirement, disability and death benefits of those employees who fall into these categories and who have met certain conditions. The related obligations assumed are generally defined contribution plans.

Defined contribution plans

Certain employees have defined contribution plans which conform to the Spanish Pension Plans and Funds Law. The main features of these plans are as follows:

- They are mixed plans covering the benefits for retirement, disability and death of the participants.

- The sponsor undertakes to make monthly contributions of certain percentages of current employees’ salaries to external pension funds.

The annual cost of these plans is recognized under Staff costs in the consolidated income statement.

Defined benefit plans

IAS 19, Employee Benefits requires defined benefit plans to be accounted for:

- Using actuarial techniques to make a reliable estimate of the amount of benefits that employees have earned in return for their service in the current and prior periods.

- Discounting those benefits in order to determine the present value of the obligation.

- Determining the fair value of any plan assets.

- Determining the total amount of actuarial gains and losses and the amount of those actuarial gains and losses that must be recognized.

The amount recognized as a benefit liability arising from a defined benefit plan is the total net sum of:

- The present value of the obligations.
- Plus (minus) any unrecognized actuarial gain (loss).
- Minus any amount of past service cost not yet recognized.
- Minus the fair value of plan assets (if any) out of which the obligations are to be settled directly.

The Company recognizes provisions for these benefits as the related rights vest and on the basis of actuarial studies. These amounts are recognized under “Provisions” in the consolidated statement of financial position, on the basis of their expected due payment dates. The plan assets are separate from the rest of the Company’s assets and are managed by third parties.

Environmental provisions

Provisions for environmental obligations are estimated by analyzing each case separately and observing the relevant legal provisions. The best possible estimate is made on the basis of the information available and a provision is recognized provided that the aforementioned information suggests that it is probable that the loss or expense will arise and it can be estimated in a sufficiently reliable manner.

4.10 Leases

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership, which usually has the option to purchase the assets at the end of the lease under the terms agreed upon when the lease was arranged. All other leases are classified as operating leases.

Finance leases

At the commencement of the lease term, the Company recognizes finance leases as assets and liabilities in the consolidated statement of financial position at amounts equal to the fair value of the leased asset or, if lower, the present value of the minimum lease payments. To calculate the present value of the lease payments the interest rate stipulated in the finance lease is used.

The cost of assets acquired under finance leases is presented in the consolidated statement of financial position on the basis of the nature of the leased asset. The depreciation policy for these assets is consistent with that for Property, plant and equipment for own use.

Finance charges are recognized over the lease term on a time proportion basis.

Operating leases

In operating leases, the ownership of the leased asset and substantially all the risks and rewards relating to the leased asset remain with the lessor.

Lease income and expenses from operating leases are credited or charged to income on an accrual basis depending on whether the Company acts as the lessor or lessee.

4.11 Current assets and liabilities

In general, assets and liabilities are classified as current or non-current based on the Company’s operating cycle. However, in view of the diverse nature of the activities carried on by the Company, in which the duration of the operating cycle differs from one activity to the next, in general assets and liabilities expected to be settled or fall due within twelve months from the end of the reporting period are classified as current items and those which fall due or will be settled within more than twelve months are classified as non-current items.

4.12 Income taxes

Income tax expense represents the sum of current tax and deferred tax. Income tax is recognized in the income statement except to the extent that it relates to items recognized in other comprehensive income or directly in equity, in which case the related tax is recognized in other comprehensive income or directly in equity.

The current income tax expense is based on domestic and international statutory income tax rates in the tax jurisdictions where the Company operates related to taxable profit for the period. The taxable profit differs from net profit as reported in the income statement because it is determined in accordance with the rules established by the applicable taxation authorities which includes temporary differences, permanent differences, and available credits and incentives.

The Company's deferred tax assets and liabilities are provided on temporary differences at the balance sheet date between financial reporting and the tax basis of assets and liabilities, then applying enacted tax rates expected to be in effect for the year in which the differences are expected to reverse. Deferred tax assets are recognized for deductible temporary differences, carry-forward of unused tax credits and losses, to the extent that it is probably that taxable profit will be available against which the deductible temporary difference and carryforwards of unused tax credits and losses can be utilized. The deferred tax assets and liabilities that have been recognized are reassessed at the end of each reporting period in order to ascertain whether they still exist, and adjustments are made on the basis of the findings of the analyses performed.

Income tax payable is the result of applying the applicable tax rate in force to each tax-paying entity, in accordance with the tax laws in force in the country in which the entity is registered. Additionally, tax deductions and credits are available to certain entities, primarily relating to inter-company trades and tax treaties between various countries to prevent double taxation.

Income tax expense is recognized in the consolidated income statement, except to the extent that it arises from a transaction which is recognized directly to "consolidated equity", in which case the tax is recognized directly to "consolidated equity."

4.13 Foreign currency transactions

Foreign currency transactions are initially recognized in the functional currency of the subsidiary by applying the exchange rates prevailing at the date of the transaction.

Subsequently, at each reporting date, monetary assets and liabilities denominated in foreign currencies are translated to euros at the rates prevailing on that date.

Any exchange differences arising on settlement or translation at the closing rates of monetary items are recognized in the consolidated income statement for the year.

Note 4.17 details the Company's accounting policies for these derivative financial instruments. Also, Note 26 to these consolidated financial statements details the financial risk policies of Ferroglobe.

The subsidiary in Venezuela, FerroAtlántica de Venezuela, S.A. ("FerroVen"), makes most of its procurement and sale transactions in US dollars; a significant portion of the subsidiary's cash flows and balances are denominated in US dollars. Therefore, and in accordance with that established in IAS 21, the Company considers that the financial statements that most reasonably reflect the subsidiary's financial and equity position and the results of its operations in 2016, 2015 and 2014 are those expressed in the functional currency, the US dollar.

4.14 Revenue recognition

Revenue includes the fair value of the goods sold or services rendered, excluding any related taxes and deducting any discounts or returns as a reduction in the amount of the transaction. Income is recognized when all of the following conditions are met:

- the Company has transferred to the buyer the significant risks and rewards of ownership of the goods;
- the Company retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold;
- the amount of revenue can be measured reliably;
- it is probable that the economic benefits associated with the transaction will flow to the entity; and

- the costs incurred or to be incurred in respect of the transaction can be measured reliably.

In relation to transactions in the electrometallurgy business, ownership is considered to be transferred at the time agreed upon with customers based on the Incoterm clauses applicable to the transaction.

Income from the energy business is recognized based on the power generated and put on the market at regulated prices, being recognized income when the energy produced is transferred to the system.

Accordingly, interest income is recognized using the effective interest method. Dividend income is also recognized when the shareholder's rights to receive payment have been established.

4.15 Expense recognition

Expenses are recognized on an accrual basis, i.e. when the actual flow of the related goods and services occurs, regardless of when the resulting monetary or financial flow arises.

An expense is recognized in the consolidated income statement when there is a decrease in the future economic benefits related to a reduction of an asset, or an increase in a liability, which can be measured reliably. This means that an expense is recognized simultaneously with the recognition of the increase in a liability or the reduction of an asset. Additionally, an expense is recognized immediately in the consolidated income statement when a disbursement does not give rise to future economic benefits or when the requirements for recognition as an asset are not met. Also, an expense is recognized when a liability is incurred and no asset is recognized, as in the case of a liability relating to a guarantee.

4.16 Operating (loss) profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss

The Company, historically, has been providing to its Shareholders and to third parties, mainly financial institutions that offer financial support to the Company, the amounts presented in the consolidated income statement under the subtotal 'Operating (loss) profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss. Additionally, Management of the Company, has been using this subtotal in their analysis of the performance of the Company. In accordance with IAS 1.85a, modified in December 2014, when an entity presents subtotals, those subtotals shall (i) be comprised of line items made up of amounts recognized and measured in accordance with IFRS, (ii) be presented and labelled in a manner that makes the line items that constitute the subtotal clear and understandable, (iii) be consistent from period to period and (iv) not be displayed with more prominence than the subtotals and totals required in IFRS for the statement presenting profit or loss. Consequently, the Company, concluded that the presentation of this subtotal in the face of the consolidated income statement is essential for the understanding of the Company operations.

4.17 Financial derivative transactions

In order to mitigate the economic effects of exchange rate and interest rate fluctuations to which it is exposed as a result of its business activities, the Company uses derivative financial instruments, such as currency forwards and interest rate swaps.

The Company's transactions with financial derivatives are in keeping with the risk management policy described in Note 26 to the accompanying consolidated financial statements.

Therefore:

- the derivatives arranged are generally swaps, on the basis of which the Company and banks agree to exchange future interest or currency payments, or both simultaneously. In the case of an interest rate derivative, the usual commitment is to pay a fixed interest rate in exchange for receiving a floating interest rate ("interest rate swap", IRS); and,

- the usual obligation with respect to a foreign currency derivative was to pay or receive a certain amount of euros in exchange for a certain amount of another currency.

The information relating to financial derivatives is presented in accordance with IFRS 7, and the accounting treatment is as follows:

Derivatives are recognized, both initially and subsequent to the end of the reporting period, at fair value (market value) under other financial assets or liabilities, as appropriate, in the consolidated statement of financial position.

Financial derivatives are measured using methods and techniques defined on the basis of observable market inputs and, for such purpose, management uses the assessments conducted by experts in this matter.

The recognition of changes in the fair value of a derivative gives rise to a change in equity. The change in equity is recognized directly through “Equity – Valuation adjustments” or indirectly through consolidated profit or loss. The criteria applied in each case are described below.

The fair value of a derivative changes over its term. Changes in fair value arise: as a result of the passage of time; as a result of changes in yield curves; and, in the case of foreign currency derivatives, also as a result of changes in exchange rates.

Only certain derivatives can be considered to qualify for hedge accounting.

The requirements that must be met for a derivative to be considered to qualify for hedge accounting are basically as follows:

a. The underlying in relation to which the derivative is arranged to mitigate the economic effects that might arise therefrom as a result of fluctuations in exchange rates or in interest rates must initially be identified.

b. When the derivative is arranged, the reason why it was arranged must be appropriately documented and the hedged risk must be identified.

c. It must be demonstrated that the hedge is effective from the date of arrangement of the derivative to the date of its settlement, i.e. that it meets the objective initially defined. In order to assess this, the effectiveness of the hedge is tested, and certain levels of effectiveness must be obtained.

The Company verifies periodically over the term of the hedge (at least at the end of each reporting period), that the hedging relationship is effective, i.e. that it is prospectively foreseeable that the changes in the fair value or cash flows of the hedged item (attributable to the hedged risk) will be offset by significant changes in interest rates and that, retrospectively, the gain or loss on the hedge was within a range of 80-125% of the gain or loss on the hedged item.

When the derivative does not qualify for hedge accounting, or the Company voluntarily decides not to apply hedge accounting, the changes in its fair value must be recognized in the consolidated income statement.

For derivatives that qualify for hedge accounting, under the relevant accounting standards, changes in fair value are recognized directly in equity or indirectly through consolidated profit or loss on the basis of the type of hedged risk concerned.

The portion of the gain or loss on the hedging instrument that has been determined to be an effective hedge is recognized temporarily in equity and is recognized in the consolidated income statement in the same period during which the transaction was performed (for example when interest is accrued on a loan) or when it is no longer probable that the future transaction will be carried out.

Since June 30, 2015 the main cash-flow hedges have become ineffective and, consequently, subsequent changes in the hedge’s fair value have been recognized in the consolidated income statement.

4.18 Grants

Grants related to assets

Grants related to assets correspond primarily to non-refundable grants that are measured at the amount granted or at the fair value of the assets delivered, if they have been transferred for no consideration, and are classified as deferred income when it is certain that they will be received. Income from these grants is recognized on a straight-line basis over the useful life of the assets whose costs they are financing. The amount of the assets and of the grants received are presented separately as assets and liabilities, respectively, within the consolidated statement of financial position.

The amount of such grants was not material at December 31, 2016 and 2015.

Grants related to income

These are grants that become receivable by the Company as compensation for expenses or losses already incurred and are recognized as income for the period in which they become receivable. The amount of such grants was not material in 2016 and 2015.

4.19 Termination benefits

Under current labor legislation, the Company is required to pay termination benefits to employees whose employment relationship is terminated under certain conditions. The payments for termination benefits, when they arise, are charged as an expense when the decision to terminate the employment relationship is taken. At December 31, 2016 and 2015, the liabilities related to termination benefits were not material.

4.20 CO2 emission allowances

CO_2 emission allowances are measured at cost of acquisition. Allowances acquired free of charge under the National Allocation Plan pursuant to Law 1/2007 of March 9, 2007 are initially measured at market value at the date received. At the same time, a grant is recognized for the same amount under "deferred income".

Emissions allowances are not amortized, but rather are expensed when used.

At year end, the Company assesses whether the carrying amount of the allowances exceeds their market value in order to determine whether there are indications of impairment. If there are indications, the Group determines whether these allowances will be used in the production process or earmarked for sale, in which case the necessary impairment losses would be recognized. Provisions are released when the factors leading to the valuation adjustment have ceased to exist.

A provision for liabilities and charges is recognized for expenses related to the emission of greenhouse gases. This provision is maintained until the company is required to settle the liability by surrendering the corresponding emission allowances. These expenses are accrued as greenhouse gases are emitted.

When an expense is recognized for allowances acquired free of charge, the corresponding "deferred income" is taken to operating income. The Company derecognizes allowances surrendered at their carrying amount and recognizes those received at their fair value when received. The difference between both values is recognized as "deferred income".

4.21 Share-based compensation

The Company recognizes share-based compensation expense based on the estimated grant date fair value of share-based awards using a Black-Scholes option pricing model. Prior to vesting, cumulative compensation cost equals the proportionate amount of the award earned to date. The Company has elected to treat each award as a single award and recognize compensation cost on a straight-line basis over the requisite service period of the entire award. If the terms of an award are modified in a manner that affects both the fair value and vesting of the award, the total amount of remaining unrecognized compensation cost (based on the grant-date fair value) and the incremental fair value of the modified award are recognized over the amended vesting period.

4.22 Assets and disposal groups classified as held for sale, liabilities associated with assets held for sale and discontinued operations

Assets and disposal groups classified as held for sale include the carrying amount of individual items, disposal groups or items forming part of a business unit earmarked for disposal (discontinued operations), whose sale in their present condition is highly likely to be completed within one year from the reporting date. Therefore, the carrying amount of these items, which may or may not be of a financial nature, will likely be recovered through the proceeds from their disposal.

Liabilities associated with non-current assets held for sale include the balances payable arising from the assets held for sale or disposal groups and from discontinued operations.

Assets and disposal groups classified as held for sale are measured at the lower of fair value less costs to sell and their carrying amount at the date of classification in this category. Non-current assets held for sale are not depreciated as long as they remain in this category.

Results from operations qualifying as discontinued operations are presented separately as a single caption in the consolidated income statements. Results from operations qualifying as discontinued operations as of the reporting date for the latest period presented, that had previously been presented as results from continuing operations, are presented as results from discontinued operations for all comparative periods.

4.23 Consolidated statement of cash flows

The following terms are used in the consolidated statement of cash flows, prepared using the indirect method, with the meanings specified as follows:

1. Cash flows: inflows and outflows of cash and cash equivalents, which are short-term, highly liquid investments that are subject to an insignificant risk of changes in value.

2. Operating activities: activities constituting the object of the subsidiaries forming part of the consolidated Company and other activities that are not investing or financing activities.

3. Investing activities: the acquisition and disposal of long-term assets and other investments not included in cash and cash equivalents.

4. Financing activities: activities that result in changes in the size and composition of the equity and borrowings of the Company that are not operating or investing activities.

5. Business Combinations

On December 23, 2015, Ferroglobe PLC consummated the acquisition of 100% of the equity interests of Globe Specialty Metals, Inc. and subsidiaries and Grupo FerroAtlántica. After consummating this transaction, FerroAtlántica is considered the Predecessor under applicable SEC rules and regulations; and, therefore, all companies of Globe (see Appendix I) were considered additions to the scope of consolidation of Ferroglobe in 2015. FerroAtlántica is the deemed “accounting acquirer”.

This Business Combination was accounted for using the acquisition method of accounting for business combinations under IFRS 3 Business Combinations, with FerroAtlántica treated as the accounting acquirer and GSM as the acquiree. Under this method of accounting, any excess of (i) the aggregate of the acquisition consideration transferred and any non-controlling interest in Globe over (ii) the aggregate of the fair values as of the closing date of the Business Combination of the assets acquired and liabilities assumed was recorded as goodwill. The “Acquisition Consideration” is the fair value on the closing date of the Business Combination of the consideration given. In addition, the value of the Ferroglobe Ordinary Shares issued to Globe Shareholders pursuant to the Business Combination Agreement (“BCA”) was determined based on the trading price of the Globe Shares at the date of completion of the transactions.

The acquisition consideration was comprised of the fair value of the Ferroglobe Ordinary Shares issued to Globe Shareholders on the closing date of the Business Combination, plus the portion of the “Replacement awards” that are attributable to pre-combination service of Globe employees.

Under the terms of the BCA, share-based compensation awards that were issued by Globe and were outstanding and unexercised as of the date of the Business Combination were exchanged with Ferroglobe share-based awards (“Replacement Awards”) as follows (see Note 20—Other Liabilities, for further details regarding our share-based compensation awards):

- Stock Options – Each outstanding Globe stock option was converted into an option to purchase, generally on the same terms and conditions as were applicable to the Globe stock option prior to the Globe Merger, a number of Ferroglobe Ordinary Shares equal to the number of Globe Shares subject to such Globe stock option at an exercise price per Ferroglobe Ordinary Share equal to the exercise price per Globe share of such Globe stock option.

- Restricted Stock Units (“RSUs”) – Each outstanding RSU was assumed by Ferroglobe and was converted into a Ferroglobe RSU award, generally on the same terms and conditions as were applicable to the Globe RSUs prior to the Globe Merger, in respect of the number of Globe Shares equal to the number of Globe Shares underlying such Globe RSUs.

- Stock Appreciation Rights ("SARs") – Each outstanding SAR was assumed by Ferroglobe and was converted into a Ferroglobe SAR, generally on the same terms and conditions as were applicable to the Globe SARs prior to the Globe Merger, in respect of that number of Ferroglobe Ordinary Shares equal to the number of Globe Shares underlying such Globe SAR, at an exercise price per Ferroglobe Ordinary Share (rounded up to the nearest whole cent) equal to the exercise price per Globe share of such Globe SAR.

The issuance of the "Replacement Awards" was accounted for as a modification of Globe's Share-Based Awards, and the portion of the value of the Replacement Awards that was attributable to pre-combination services of Globe employees is included in the Acquisition Consideration transferred. Compensation expense related to post-combination services will be recognized over the individual vesting periods of the respective "Replacement Awards" and was not included in the combined financial information.

The value of Replacement Awards was added to the fair value of the Ferroglobe Ordinary Shares to determine the total Acquisition Consideration transferred as follows:

Globe common stock outstanding as of December 23, 2015 [1]	73,760
Exchange ratio	1.00
Ferroglobe Ordinary Shares issued as converted	73,760
Globe common stock per share price as of December 23, 2015	$ 10.80
Fair value of Ferroglobe Ordinary Shares issued pursuant to the Business Combination and estimated value	$796,608
Replacement Awards—equity settled awards	1,430
Acquisition Consideration	$798,038

[1] The number of shares of Globe common stock outstanding options was determined immediately prior to the effective time of the Business Combination.

In accordance with IFRS 3, the fair value of Ferroglobe Ordinary Shares issued to Globe Shareholders pursuant to the Business Combination Agreement was measured on the closing date of the Business Combination at the then-current market price of Globe's common stock.

The Business Combination was recorded as a business combination under IFRS 3 with identifiable assets acquired and liabilities assumed recorded at their estimated fair values on the acquisition date while costs associated with the acquisition are expensed as incurred. The Company utilized the services of third-party valuation consultants, along with estimates and assumptions provided by the Company, to estimate the fair value of the assets acquired. The third-party valuation consultants utilized several appraisal methodologies including income, market and cost approaches to estimate the fair value of the identifiable net assets acquired.

The following is the final fair value of assets acquired and the liabilities assumed by Ferroglobe in the Business Combination, reconciled to the value of the Acquisition Consideration pursuant to the Business Combination Agreement:

	Balances
ASSETS	
Non-current assets	
Goodwill	425,413
Other intangible assets	43,746
Property, plant and equipment	584,617
Non-current financial assets	2,521
Deferred tax assets	22,994
Other non-current assets	1,386
Total non-current assets acquired	**1,080,677**
Current assets	
Inventories	117,230
Trade and other receivables	73,753
Current financial assets	4,112
Other current assets	5,231
Cash and cash equivalents	77,709
Total current assets acquired	**278,035**
Total assets acquired	**1,358,712**
Non-current liabilities	
Provisions	33,877
Bank borrowings	100,048
Obligations under finance leases	3,283
Other non-current liabilities	4,451
Deferred tax liabilities	140,435
Total non-current liabilities acquired	**282,094**
Current liabilities	
Provisions	5,439
Bank borrowings	1,167
Obligations under finance leases	2,627
Trade and other payables	58,044
Other current liabilities	66,770
Total current liabilties acquired	**134,047**
Net assets acquired	**942,571**
Non-controlling interests	**(144,533)**
Acquisition consideration	**798,038**

Goodwill arose in the Business Combination as the acquisition consideration exceeded the fair value of the identifiable net assets acquired, including identifiable intangible assets. Goodwill is not deductible for tax purposes.

The purchase price allocation was not final at December 31, 2015 and subsequent changes were made to the fair value of the identifiable net assets acquired. As a result, acquired Property, plant and equipment decreased by $40,794. Deferred tax assets increased by $2,972 and Deferred tax liabilities decreased by $14,900, which resulted in an increase to Goodwill of $22,922. The Statement of Financial position as of December 31, 2015 has been recasted to reflect these adjustments to arrive at the final purchase price allocation.

GSM was included in the scope of consolidation as of December 23, 2015, as indicated above, contributed “2015 - Sales” of $10,898 and “2015 - Profit attributable to the Parent” of $68.

In the fiscal year ended December 31, 2015 if GSM had been included in the scope of consolidation from January 1, 2015, GSM would have contributed “2015 - Sales—pro-forma” of $733,916 and “2015 - Losses Attributable to the Parent – pro-forma” of $53,260. In determining unaudited “pro-forma” data, the Company calculated the depreciation of “Property, plant and equipment” based on the fair values determined in the initial accounting for the Business Combination rather than the carrying amounts recognized in the pre-acquisition financial statements.

Total expenditures incurred by the Predecessor and/or the Parent for the consummation of the Business Combination totaling $22,132 are included in “Other operating expenses” in the consolidated income statement for 2015 and other costs totaling $9,414 have been recorded as “Equity—Reserves”, under IFRS 3.

6. Segment reporting

During 2016, upon further evaluation of the management reporting structure as a result of the integration of the operations of FerroAtlántica and Globe we have concluded that our operating and reportable segments have changed since the prior year. The comparative prior periods have been restated to conform to the 2016 reportable segment presentation.

Operating segments are based upon the Company's management reporting structure. The Company's operating segments are primarily at a country level as this is how the Chief Operating Decision Maker (CODM) assesses performance and makes decisions about resource allocation. This is due to the integrated operations within each country and the ability to reallocate production based on the individual capacity of each plant. Additionally, economic factors that may impact our results of operations, such as currency fluctuations and energy costs, are also assessed at a country level. The Company's North America reportable segment is the result of the aggregation of the operating segments of the United States and Canada. These operating segments have been aggregated as they have similar long-term economic characteristics and there is similarity of competitive and operating risks and the political environment in the United States and Canada. The Company's Europe reportable segment is the result of the aggregation of the operating segments of Spain and France. Similar to our United States and Canada operating segments, our Spain and France operating segments are grouped together based on the relative similarity of the EBITDA margins, competitive risks, currency risks (i.e. risks relating to the Euro), operating risks and, given they are each part of the European Union and the European Economic Community, the political and economic environment.

The consolidated income statements at December 31, 2016, 2015 and 2014, by reportable segment, are as follows:

	2016						
	Thousands of US Dollars						
	Electrometallurgy – Noth America	Electrometallurgy – Europe	Electrometallurgy – South Africa	Electrometallurgy – Venezuela	Other segments	Adjustments/ Eliminations(**)	Total
Sales	521,192	949,547	142,160	30,430	59,907	(147,579)	**1,555,657**
Cost of sales	(325,254)	(672,026)	(99,124)	(34,643)	(45,269)	133,316	**(1,043,000)**
Other operating income	362	25,908	3,422	27	4,686	(8,693)	**25,712**
Staff costs	(82,032)	(132,440)	(23,589)	(5,656)	(52,921)	3,606	**(293,032)**
Other operating expense	(64,606)	(118,269)	(28,834)	(6,747)	(31,217)	15,347	**(234,326)**
Depreciation and amortization charges, operating allowances and write-downs	(73,530)	(31,730)	(4,732)	(4,118)	(8,700)	1,464	**(121,346)**
Operating (loss) profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**(23,868)**	**20,990**	**(10,697)**	**(20,707)**	**(73,514)**	**(2,539)**	**(110,335)**
Impairment losses	(193,000)	(1,077)	(8,147)	(57,430)	(1,818)	(5,977)	**(267,449)**
Net (loss) gain due to changes in the value of assets	—	—	1,896	—	—	(5)	**1,891**
(Loss) gain on disposal of non-current assets	—	—	21	—	446	(127)	**340**
Other loss	—	(32,655)	—	—	(2,514)	35,129	**(40)**
OPERATING (LOSS) PROFIT	(216,868)	(12,742)	(16,927)	(78,137)	(77,400)	26,481	**(375,593)**
Finance income	1	11,551	744	1	6,638	(17,401)	**1,534**
Finance costs	(3,249)	(16,540)	(6,038)	(1,814)	(11,815)	14,871	**(24,585)**
Exchange differences	(438)	2,436	(2,164)	4,297	(7,587)	(57)	**(3,513)**
(LOSS) PROFIT BEFORE TAXES	(220,554)	(15,295)	(24,385)	(75,653)	(90,164)	23,894	**(402,157)**
Income tax benefit (expense)	9,982	(10,505)	4,433	18,608	21,552	2,539	**46,609**
(LOSS) PROFIT FROM CONTINUING OPERATIONS	(210,572)	(25,800)	(19,952)	(57,045)	(68,612)	26,433	**(355,548)**
(Loss) Profit for discontinued operations	—	—	—	—	—	(3,065)	**(3,065)**
(LOSS) PROFIT FOR THE YEAR	**(210,572)**	**(25,800)**	**(19,952)**	**(57,045)**	**(68,612)**	**23,368**	**(358,613)**
Loss attributable to non-controlling interests	6,044	(93)	856	11,347	480	1,552	**20,186**
(LOSS) PROFIT ATTRIBUTABLE TO THE PARENT COMPANY	**(204,528)**	**(25,893)**	**(19,096)**	**(45,698)**	**(68,132)**	**24,920**	**(338,427)**

	2015 (*)						
	Thousands of US Dollars						
	Electrometallurgy – Noth America	Electrometallurgy – Europe	Electrometallurgy – South Africa	Electrometallurgy – Venezuela	Other segments	Adjustments/ Eliminations(**)	Total
Sales	10,062	1,174,968	219,890	69,956	59,167	(244,157)	**1,289,886**
Cost of sales	(6,200)	(811,114)	(134,978)	(57,647)	(30,394)	222,458	**(817,875)**
Other operating income	17	52,211	5,070	44	2,065	(43,907)	**15,500**
Staff costs	(1,983)	(148,652)	(24,663)	(20,922)	(9,652)	3,287	**(202,585)**
Other operating expense	(276)	(142,867)	(29,237)	(28,677)	(38,670)	49,693	**(190,034)**
Depreciation and amortization charges, operating allowances and write-downs	(1,183)	(35,255)	(7,744)	(9,396)	(13,096)	4,473	**(62,201)**
Operating (loss) profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**437**	**89,291**	**28,338**	**(46,642)**	**(30,580)**	**(8,153)**	**32,691**
Impairment losses	—	—	—	—	(52,042)	—-	**(52,042)**
Net (loss) gain due to changes in the value of assets	—	—	1,336	—	(2,249)	1	**(912)**
(Loss) gain on disposal of non-current assets	—	1,468	—	—	(3,681)	5	**(2,208)**
Other loss	—	(40,983)	—	(4)	9,261	31,379	**(347)**
OPERATING (LOSS) PROFIT	**437**	**49,776**	**29,674**	**(46,646)**	**(79,291)**	**23,232**	**(22,818)**
Finance income	6	36,206	501	7	4,862	(40,487)	**1,095**
Finance costs	(109)	(19,287)	(5,015)	(3,947)	(10,113)	14,733	**(23,738)**
Exchange differences	(44)	8,617	2,498	22,306	2,527	—	**35,904**
(LOSS) PROFIT BEFORE TAXES	**290**	**75,312**	**27,658**	**(28,280)**	**(82,015)**	**(2,522)**	**(9,557)**
Income tax benefit (expense)	—	(22,953)	(7,807)	(16,877)	297	(1,379)	**(48,719)**
(LOSS) PROFIT FROM CONTINUING OPERATIONS	290	52,359	19,851	(45,157)	(81,718)	(3,901)	**(58,276)**
(Loss) Profit for discontinued operations	—	—	—-	—	—	(196)	**(196)**

(LOSS) PROFIT FOR THE YEAR	**290**	**52,359**	**19,851**	**(45,157)**	**(81,718)**	**(4,097)**	**(58,472)**
Loss attributable to non-controlling interests	(41)	(61)	226	9,019	6,058	3	**15,204**
(LOSS) PROFIT ATTRIBUTABLE TO THE PARENT COMPANY	**249**	**52,298**	**20,077**	**(36,138)**	**(75,660)**	**(4,094)**	**(43,268)**

	2014 (*)						
	Thousands of US Dollars						
	Electrometallurgy – Noth America	Electrometallurgy – Europe	Electrometallurgy – South Africa	Electrometallurgy – Venezuela	Other segments	Adjustments/ Eliminations(**)	Total
Sales	—	1,275,497	239,023	97,718	93,552	(288,711)	**1,417,079**
Cost of sales	—	(880,851)	(149,800)	(62,857)	(36,382)	242,118	**(887,772)**
Other operating income	—	21,764	1,527	416	3,436	(20,449)	**6,694**
Staff costs	—	(165,796)	(30,974)	(11,517)	(9,756)	4,214	**(213,829)**
Other operating expense	—	(115,068)	(27,135)	(14,530)	(28,169)	36,349	**(148,553)**
Depreciation and amortization charges, operating allowances and write-downs	—	(43,080)	(6,993)	(9,322)	(14,797)	5,061	**(69,131)**
Operating (loss) profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**—**	**92,466**	**25,648**	**(92)**	**7,884**	**(21,418)**	**104,488**
Impairment losses	—	—	—	—	(399)	—	**(399)**
Net (loss) gain due to changes in the value of assets	—	—	5,646	—	(3,467)	(11,651)	**(9,472)**
(Loss) gain on disposal of non-current assets	—	—	—	—	555	—	**555**
Other loss	—	(22,231)	—	(163)	219	22,115	**(60)**
OPERATING (LOSS) PROFIT	—	70,235	31,294	(255)	4,792	(10,954)	**95,112**
Finance income	—	16,845	439	5	21,131	(33,824)	**4,596**
Finance costs	—	(22,950)	(5,905)	(4,365)	(12,829)	17,634	**(28,415)**
Exchange differences	—	20	1,198	2,158	4,424	—	**7,800**
(LOSS) PROFIT BEFORE TAXES	—	64,150	27,026	(2,457)	17,518	(27,144)	**79,093**
Income tax benefit (expense)	—	(21,449)	(6,584)	(36,268)	(1,536)	8,185	**(57,652)**
(LOSS) PROFIT FROM CONTINUING OPERATIONS	—	42,701	20,442	(38,725)	15,982	(18,959)	**21,441**
(Loss) Profit for discontinued operations	—	—	—	—	—	10,290	**10,290**
(LOSS) PROFIT FOR THE YEAR	**—**	**42,701**	**20,442**	**(38,725)**	**15,982**	**(8,669)**	**31,731**
Loss attributable to non-controlling interests	—	(736)	(311)	7,656	101	(4)	**6,706**
(LOSS) PROFIT ATTRIBUTABLE TO THE PARENT COMPANY	**—**	**41,965**	**20,131**	**(31,069)**	**16,083**	**(8,673)**	**38,437**

(*) Revised data reflect the results of Ferroglobe's energy business in Spain as discontinued operations (see Note 27).
(**) These amounts correspond to transactions between segments that are eliminated in the consolidation process.

The consolidated statements of financial position at December 31, 2016 and 2015, by reportable segment, are as follows:

	2016						
	Thousands of US Dollars						
	Electrometallurgy – Noth America	Electrometallurgy – Europe	Electrometallurgy – South Africa	Electrometallurgy – Venezuela	Other segments	Consolidation Adjustments/ Eliminations (*)	Total
Goodwill	230,210	—	—	—	—	—	**230,210**
Other intangible assets	33,243	18,946	1,355	—	9,295	—	**62,839**
Property, plant and equipment	540,794	154,379	58,559	—	111,807	(83,933)	**781,606**
Financial assets	—	113,157	—	—	17,329	(110,769)	**19,717**
Inventories	73,901	183,868	40,475	6,237	14,338	(2,117)	**316,702**
Receivables	50,000	275,823	34,852	12,024	205,283	(354,497)	**223,485**
Other assets	37,220	30,050	20,285	28	59,548	(52,257)	**94,874**
Cash and cash equivalents	38,389	87,997	15,195	571	54,831	(52)	**196,931**
Assets and disposal groups classified as held for sale (Note 27)	—	—	—	—	—	92,937	**92,937**
Total assets	**1,003,757**	**864,220**	**170,721**	**18,860**	**472,431**	**(510,688)**	**2,019,301**
Equity	646,397	220,948	59,756	(73,956)	67,158	(28,261)	**892,042**
Deferred income	—	2,229	—	—	1,719	1	**3,949**
Provisions	29,837	50,482	11,770	3,827	8,005	(2,337)	**101,584**
Bank borrowings and other financial liabilities (excluded finance leases)	—	313,910	29,620	—	171,395	(5,575)	**509,350**
Obligations under finance leases	3,181	—	2,055	—	81,383	(81,382)	**5,237**
Trade payables	193,128	237,286	49,667	87,035	85,195	(463,867)	**188,444**
Other non-trade payables	131,214	39,365	17,853	1,954	57,576	(36,949)	**211,013**
Liabilities associated with assets held for sale (Note 27)	—	—	—	—	—	107,682	**107,682**
Total equity and liabilities	**1,003,757**	**864,220**	**170,721**	**18,860**	**472,431**	**(510,688)**	**2,019,301**

	2015 Thousands of US Dollars						
	Electrometallurgy – Noth America	Electrometallurgy – Europe	Electrometallurgy – South Africa	Electrometallurgy – Venezuela	Other segments	Consolidation Adjustments/ Eliminations (*)	Total
Goodwill	426,851	—	—	—	—	—	**426,851**
Other intangible assets	43,747	19,444	1,193	69	6,754	412	**71,619**
Property, plant and equipment	579,660	165,476	55,282	60,355	107,369	3,431	**971,573**
Financial assets	—	121,388	3,705	4	6,602	(117,915)	**13,784**
Inventories	101,350	219,149	56,430	24,286	26,758	(2,601)	**425,372**
Receivables	64,809	360,580	48,272	11,463	367,625	(566,545)	**286,204**
Other assets	22,971	26,316	16,383	73	8,372	4,977	**79,092**
Cash and cash equivalents	24,814	16,904	10,751	365	63,834	(2)	**116,666**
Total assets	**1,264,202**	**929,257**	**192,016**	**96,615**	**587,314**	**678,243**	**2,391,161**
Equity	881,758	364,025	78,280	(15,574)	112,646	(126,162)	**1,294,973**
Deferred income	—	2,323	—	—	2,067	(1)	**4,389**
Provisions	33,195	34,880	12,089	3,399	5,337	1,963	**90,863**
Bank borrowings and other financial liabilities (excluded finance leases)	—	235,162	29,683	2,061	146,875	(2)	**413,779**
Obligations under finance leases	5,910	—	2,897	—	94,390	—	**103,197**
Trade payables	195,508	231,685	58,358	86,003	151,211	(567,865)	**154,900**
Other liabilities	147,831	61,182	10,709	20,726	74,788	13,824	**329,060**
Total equity and liabilities	**1,264,202**	**929,257**	**192,016**	**96,615**	**587,314**	**678,243**	**2,391,161**

(*) These amounts correspond to balances between segments that are eliminated at consolidation.

Other disclosures

Sales by product line

Sales by product line are as follows:

	2016	2015	2014
Silicon metal	751,508	592,458	596,207
Manganese alloys	223,451	260,371	316,461
Ferrosilicon	242,788	228,830	284,987
Other silicon based alloys	173,901	105,702	103,397
Silica fume	37,480	29,660	31,666
Other	126,529	72,865	84,361
Total	**1,555,657**	**1,289,886**	**1,417,079**

Information about major customers

Total sales of $656,907, $524,821, and $556,546 were attributable to the Company's top ten customers in 2016, 2015, and 2014 respectively. During 2016, sales corresponding to Dow Corning Corporation represented 13.7% of the Company's sales. The sales are to the Electrometallurgy - North America and Electrometallurgy - Europe segments. However, during 2015 and 2014, no single customer represented more than 10% of the Company's sales.

7. Goodwill

Changes in the carrying amount of goodwill during the years ended December 31, are as follows:

	January 1, 2015	Additions	Exchange differences	December 31, 2015	Impairment (Note 24.5)	Exchange differences	December 31, 2016
Thaba Chueu Mining (Pty.), Ltd.	2,642	—	(1,204)	1,438	(1,612)	174	—
Globe Specially Metals, Inc. (Globe) (see Note 5)	—	425,413	—	425,413	(193,000)	(2,203)	230,210
	2,642	**425,413**	**(1,204)**	**426,851**	**(194,612)**	**174**	**230,210**

In accordance with the requirements of IAS 36, goodwill is tested for impairment annually and is tested for impairment between annual tests if a triggering event occurs that would indicate the carrying amount of a cash-generating unit may be impaired. Impairment testing for goodwill is done at a cash-generating unit level, and the Company performs its annual impairment test at the end of the annual reporting period (December 31st). The estimate of the recoverable value of the cash-generating units requires significant judgment in the evaluation of overall market conditions, estimated future cash flows, discount rates and other factors, and is calculated based on business plans most recently approved by the Board of Directors.

During the year ended December 31, 2016, in connection with our annual goodwill impairment test, the Company recognized an impairment charge of $193,000 related to the partial impairment of goodwill at Globe, resulting from a sustained decline in sales prices that continued throughout 2016 and which caused the Company to revise its expected future cash flows from Globe's business operations. Ferroglobe operates in a cyclical market, and silicon and silicon-based alloy index pricing and foreign import pressure into the U.S. and Canadian markets impact the future projected cash flows used in our impairment analysis. The impairment charge is recorded within the Electrometallurgy – North America reportable segment, of which $178,900 is associated with U.S. cash-generating units and $14,100 is associated with Canadian cash-generating units. Recoverable value was estimated based on discounted cash flows and market multiples. Estimates under the Company's discounted income based approach involve numerous variables including anticipated sales price and volumes, cost structure, discount rates and long term growth that are subject to change as business conditions change, and therefore could impact fair values in the future. As of December 31, 2016, the remaining goodwill for the U.S and Canadian cash-generating units is $172,913 and $57,297, respectively.

Key assumptions used in the determination of recoverable value

In determining the asset recoverability through value in use, management makes estimates, judgments and assumptions on uncertain matters. For each cash-generating unit, the value in use is determined based on economic assumptions and forecasted operating conditions as follows:

	2016	
	U.S.	Canada
Weighted Average Cost of Capital	9.0%	9.5%
Long-Term Growth Rate	2.4%	3.0%
Normalized Tax Rate	40.0%	26.5%
Normalized Cash Free Net Working Capital	15.0%	15.0%

The Company has defined a financial model which considers the revenues, expenditures, cash flows, net tax payments and capital expenditures on a six year period (2017-2022), and perpetuity beyond this tranche. Six years of projections were utilized in order to project a normalized growth rate in the terminal year that was more closely aligned with year six versus year five. The financial projections to determine the net present value of future cash flows are modeled considering the principal variables that determine the historic flows of each group of cash-generating unit and the budgets approved by the Board of Directors.

Sensitivity to changes in assumptions

Changing management's assumptions, in particular the discount rate and the long-term growth rate, could significantly affect the evaluation of the value in use of our cash generating units and, therefore, the impairment result. The following changes to the assumptions used in the impairment test lead to the following:

		Excess of recoverable value over	Sensitivity on discount rate		Sensitivity on long-term growth rate		Sensitivity on revenue	
	Goodwill	carrying value	Decrease by 10%	Increase by 10%	Decrease by 10%	Increase by 10%	Decrease by 10%	Increase by 10%
	(in millions of US$)							
Electrometallurgy - U.S.	351.8	178.9	107.8	(78.4)	(9.8)	19.6	(58.8)	58.8
Electrometallurgy - Canada	71.4	14.1	29.4	(19.6)	—	9.8	(9.8)	19.6
Total	423.2							

During the year ended December 31, 2016, the Company recognized an additional goodwill impairment charge of $1,612 associated with its quartz mining business in South Africa, Thaba Chueu Mining (Pty.), Ltd. (Thaba Chueu), as a result of its expected future cash flows. In estimating the fair value of Thaba Chueu, we considered cash flow projections using assumptions about overall market conditions, expected domestic sales pricing, and cost reduction initiatives. The impairment charge represented a write-off of the entire goodwill balance at the cash-generating unit, and it is recorded within the Electrometallurgy – South Africa segment.

The addition to goodwill during 2015 is related to the Business Combination with Globe as a result of the purchase price allocation (see Note 5).

As of December 31, 2015 the Company performed its annual goodwill impairment tests which did not indicate any impairment of goodwill was required. Goodwill resulting from the business combination was reviewed as a part of the overall Globe purchase price allocation, and therefore was not considered impaired at December 31, 2015 (see Note 5).

Refer to Note 9 (Property, plant and equipment) for discussion of Management's impairment analysis of long-lived assets and impairments recognized during the year ended December 31, 2016 and 2015.

8. Other intangible assets

Changes in the carrying amount of other intangible assets during the years ended December 31 are as follows:

	Development Expenditure	Power Supply Agreements	Rights of Use	Computer Software	Other Intangible Assets	Accumulated Depreciation (Note 24.3)	Impairment (Note 24.5)	Total
Balance at January 1, 2015	**42,599**	**—**	**22,144**	**2,105**	**29,000**	**(42,001)**	**(3,398)**	**50,449**
Additions	3,301	—	—	—	7,895	(4,547)	(6,442)	207
Acquisitions through business combinations (Note 5)	—	37,836	—	3,984	1,926	—	—	43,746
Disposals	—	—	—	—	(11,899)	77	—	(11,822)
Transfers from/(to) other accounts and/or captions	—	—	—	—	(3,448)	—	—	(3,448)
Exchange differences	(5,364)	—	(2,287)	(208)	(3,945)	3,342	949	(7,513)
Balance at December 31, 2015	**40,536**	**37,836**	**19,857**	**5,881**	**19,529**	**(43,129)**	**(8,891)**	**71,619**
Additions	1,162	—	1,171	—	8,160	(12,649)	(230)	(2,386)
Disposals	—	—	—	—	(5,580)	—	—	(5,580)
Exchange differences	(1,344)	—	(683)	(66)	(325)	1,149	455	(814)
Balance at December 31, 2016	**40,354**	**37,836**	**20,345**	**5,815**	**21,784**	**(54,629)**	**(8,666)**	**62,839**

Development expenditure additions in 2016 and 2015 primarily relate to the development of the “Silicio Solar” project undertaken by several subsidiaries.

Other intangible asset additions in 2016 and 2015 primarily relate to the accounting of the rights held to emit greenhouse gasses by several Spanish subsidiaries (see Note 4.20).

As a result of the Business Combination with Globe in 2015, the Company acquired a power supply agreement which provides favorable below-market power rates to a United States production facility as well as the computer software system used at all United States subsidiaries.

The Company was granted certain rights of use on various assets that will have to be returned, free of charge, in successive years. The cost of the assets associated with these concessions is depreciated over the shorter of the useful life of the assets and the period for use and it is estimated that the costs, if any, to be incurred when the assets are handed over will not be significant.

Disposals during the year ended December 31, 2015 primarily relate to sales to third parties of certain intangible assets owned by the Chinese subsidiary Ganzi. The Company received approximately $8,100 for the sale of intangible assets, and recorded a loss of $3,350 in (Loss) Gain on disposals of non-current assets in 2015.

Refer to Note 9 (Property, plant and equipment) for discussion of Management’s impairment analysis of long-lived assets and impairments recognized during the years ended December 31, 2016 and 2015.

9. Property, plant and equipment

The detail of Property, plant and equipment, net of the related accumulated depreciation and impairment in 2016 and 2015 is as follows:

	Thousands of US Dollars								
	Land and Buildings	Plant and Machinery	Other Fixtures, Tools and Furniture	Advances and Property, Plant and Equipment in the Course of Construction	Mineral Reserves	Other Items of Property, Plant and Equipment	Accumulated Depreciation	Impairment	Total
Balance at January 1, 2015	**228,788**	**918,096**	**5,194**	**31,601**	**5,970**	**23,177**	**(732,916)**	**(364)**	**479,546**
Additions	767	2,282	52	58,464	-	7,386	(55,668)	(45,600)	(32,317)
Acquisitions through business combinations (see Note 5)	9,870	503,333	397	15,078	55,939	-	-	-	584,617
Disposals and other	(4,354)	(1,119)	(105)	-	-	-	2,034	-	(3,544)
Transfers from/(to) other accounts	5,415	18,676	215	(20,858)	-	-	-	(9,774)	(6,326)
Exchange differences	(18,024)	(101,865)	(653)	(3,257)	(1,920)	(504)	69,981	5,839	(50,403)
Balance at December 31, 2015	**222,462**	**1,339,403**	**5,100**	**81,028**	**59,989**	**30,059**	**(716,569)**	**(49,899)**	**971,573**
Additions	488	3,017	801	60,035	-	204	(105,695)	(67,624)	(108,774)
Disposals and other	(600)	(1,448)	-	(688)	-	(7)	1,980	-	(763)
Transfers from/(to) other accounts	4,106	57,345	116	(61,567)	-	-	-	-	-
Exchange differences	(3,015)	(11,594)	28	(2,114)	-	1,947	13,399	4,854	3,505
Transfer to assets and disposal groups classified as held for sale and discontinued operations (see Note 27)	(32,383)	(166,668)	(73)	(26,829)	-	-	141,378	640	(83,935)
Balance at December 31, 2016	**191,058**	**1,220,055**	**5,972**	**49,865**	**59,989**	**32,203**	**(665,507)**	**(112,029)**	**781,606**

During 2016 and 2015 the Company tested the long-lived assets for impairment of subsidiaries with uncertain cash flows.

In this regard, during 2016 as a result of the uncertainty of the cash flow generating capacity of FerroAtlántica de Venezuela (FerroVen), SA. ("FerroVen") , due to the economic, political and social instability of Venezuela, the Company's management decided to continue FerroVen operations, until free market conditions are reestablished, only at the local level, which will be generate nil or negative expected cash flows for coming years under those conditions. As a result, the Company impaired in 2016 the long-lived assets and took an impairment charge of $58,472 related to Property, plant and equipment.

Additionally, in 2016, the Company took an impairment charge of $9,176 comprised of $1,612 of goodwill, $230 of intangibles assets and $7,334 for Property, plant and equipment, due to the weak generation of expected cash flows of the South-African Group mining subsidiary, Thaba Chueu Mining (Pty.), Ltd., in the coming years, due to the unfavorable market conditions with third parties, mainly due to the low quartz prices in the local market.

Also, during 2016 the Company impaired other tangible assets amounting to $1,178 related to abandoned research and development projects.

On the other hand, the Company announced plans in December 2015 to abandon the development of a silicon metal factory in Quebec, Canada (FerroQuebec) as a result of unfavorable market conditions and management's decision to optimize production capacity at existing operations. As a result, the Company impaired in 2015 the long-lived assets and took an impairment charge of $4,707 related to $561 of intangibles assets and $4,146 for Property, plant and equipment.

During 2015, the Company abandoned plans comprised of the Ganzi project in China to build a silicon metal factory as a result of difficulty in obtaining the necessary permits and unfavorable market conditions. As such, the Company impaired in 2015 the long-lived assets and took an impairment charge of $9,282, comprised of $4,040 for intangibles assets and $5,242 for Property, plant and equipment.

During 2015, the Company idled its silicon metal production facility located in MangShi, China (MangShi). This decision was made as a result of a global decline in silicon metal demand and pricing. Chinese competitors are importing silicon metal, primarily into Europe, at sales prices lower than MangShi's cost of production. Therefore, management has determined that until such time as the output of MangShi can profitably compete in the global silicon market the facility should remain idle. Management has initiated plans to market the facility for sale. As the future cash flows are uncertain, management performed an impairment analysis with the assistance of an independent specialist, and determined that the highest and best use of the facility would be to scrap the assets and sell the land along with certain multipurpose buildings. Management used the following assumptions to estimate the impairment on these assets:

- *Land and building:* land fair value was estimated based on comparable recent land transaction in the proximity of MangShi. Building replacement cost was estimated based on the cost of new construction in the local market, adjusted for the age and remaining useful life of the Company's assets.

- *Machinery and equipment:* a scrap valuation analysis was used to determine the fair value of machinery and equipment. The impairment was estimated based on the replacement cost of new machinery and equipment less depreciation, marketability (80% in most of the assets) and cost to sell (15%). A 10% increase in cost to sell would increase impairment $670. A 10% increase in marketability would increase impairment in $2,750.

Therefore, the associated long-lived assets were impaired in 2015 by $36,985 ($773 for Intangibles assets and $36,212 for Property, plant and equipment). During 2016, there was no additional impairment on the aforementioned fixed assets at MangShi.

Disposals during the year ended December 31, 2015 relate to the sale to third parties of assets owned by the Chinese subsidiary Ganzi. The amount collected by that subsidiary for the sale to third parties of Property, plant and equipment totaled in 2015 $3,800, and the Company recognized a gain in 2015 of $306 recorded in (Loss) gain on disposals of non-current assets.

Property, plant and equipment acquired through the Business Combination with Globe were recorded at fair value in accordance with the purchase price allocation (see Note 5).

Other than those recorded during the year, there is no indication of impairment in the Company's Property, plant and equipment, as the recoverable amount of the assets is higher than their carrying amount, net of any depreciation.

The Company takes out insurance policies to cover the possible risks to which it's Property, plant and equipment are subject and against which claims might be filed in the pursuit of its business activities. These policies are considered to adequately cover the risks to which the related items were subject at December 31, 2016 and 2015.

Property, plant and equipment pledged as security

At December 31, 2016 and 2015, the Company has property, plant and equipment of $597,385 and $687,953, respectively, pledged as security for outstanding bank loans and other payables.

Finance leases

Finance leases held by the Company included in Plant and Machinery at December 31 are as follows:

	Life (Years)	Time Elapsed (Years)	Historical Cost (Euros)	Cost ($)	Accumulated Depreciation ($)	Carrying Amount ($)	Interest Payable ($)	Lease Payments Outstanding ($)
December 31, 2016 Hydroelectrical installations (*)	10	4.6	109,047	114,946	(73,866)	41,080	—	81,383
December 31, 2015 Hydroelectrical installations	10	3.6	109,047	118,719	(73,013)	45,706	—	94,390

(*) The balance of the assets and liabilities related to Hydroelectrical installations as of December 31, 2016 has been presented as a disposal group held for sale (see Note 27). Refer to Note 27 for minimum finance lease payments by year.

These assets will revert back to the Spanish State, free of charges, between 2038 and 2060. The costs incurred at the time of the reversal are not deemed to be significant.

Commitments

Continued operations

On December 20, 2016, Grupo FerroAtlántica, S.A.U., FerroAtlántica, S.A., a wholly-owned subsidiary of Grupo FerroAtlántica, S.A.U. and Silicio Ferrosolar, S.L.U., a wholly-owned subsidiary of Grupo FerroAtlántica, S.A.U., entered into a joint venture agreement (the "Solar JV Agreement") with Blue Power and Aurinka providing for the formation and operation of a joint venture with the purpose of producing UMG solar silicon. The entry into the joint venture pursuant to the Solar JV Agreement is subject to certain conditions precedent, including the satisfactory completion of an ex-ante verification procedure in relation to the ability of the technology to be contributed to the joint venture by Blue Power to meet certain technical and cost parameters and the authorization of the joint venture by Ferroglobe PLC, Blue Power and Aurinka's management bodies. All these conditions precendents were met during 2017 and the Solar JV Agreement is now fully binding. Under the Solar JV Agreement, FerroAtlántica will indirectly own 75% of the operating companies to be formed as part of the joint venture, one of which will own certain assets comprising, among others, constructions at Sabón and a UMG solar silicon plant at Puertollano, Spain, and 51% of the company to be formed as part of the joint venture to hold certain intellectual property rights and know-how contributed by Blue Power and FerroAtlántica, which will license such intellectual property rights and know-how to the aforementioned operating companies. Pursuant to the Solar JV Agreement, FerroAtlántica will incur capital expenditures, subject to the approval of the joint venture board, in connection with the joint venture of of a maximum of €118 million over an initial phase estimated for up to two years. Further investment in the joint venture will be determined as the joint venture progresses. In connection with the Solar JV Agreement, FerroAtlántica has obtained two loans, the principal amounts of which are approximately €45 million and approximately €27 million, respectively, from the Spanish Ministry of Industry and Energy for the purpose of building and operating the UMG solar silicon plant.

Discontinued operations – Spanish energy businesses

At December 31, 2016 and 2015, the Company has capital expenditure commitments totaling $12,493 and $22,600, respectively, primarily related to the addition of 19 mega watts of annual capacity to existing hydroelectric power plants in Spain.

10. Financial assets

Non-current and current financial assets comprise the following at December 31:

	2016		
	Non-Current	Current	Total
Financial assets held with third parties:			
Loans and receivables	2,388	—	2,388
Other financial assets	3,435	4,049	7,484
Total	**5,823**	**4,049**	**9,872**

	2015		
	Non-Current	Current	Total
Financial assets held with third parties:			
Loans and receivables	6,015	—	6,015
Other financial assets	3,657	4,112	7,769
Total	**9,672**	**4,112**	**13,784**

As of December 31, 2016, as a result of the impairment analysis of non-current financial assets, the Company has considered as non-recoverable financial assets recorded as 'Financial assets held with third parties - Loans and receivables', which correspond mainly to accounts receivable from non-controlling interest amounting to $4,547, and impaired other non-recoverable financial assets amounting $1,076 (see Note 24.5).

Trade and other receivables

Trade and other receivables comprise the following at December 31:

	2016	2015
Trade receivables	152,303	220,500
Trade notes receivable	725	746
Unmatured discounted notes and bills	719	783
Doubtful trade receivables	14,671	11,068
Tax receivables (1)	17,299	34,339
Employee receivables	456	187
Other receivables	37,904	18,699
Less – Impairment losses on uncollectible trade receivables	(14,671)	(11,068)
	209,406	**275,254**

(1) "Tax receivables" relates mainly to VAT borne, to be offset or refunded by the tax authorities in the countries in which the Company is located, mainly Spain (FerroAtlántica and Silicio FerroSolar), France (FerroPem), United States (GSM) and Venezuela (FerroVen).

The fair value of the balances included under this heading, which are expected to be settled within less than one year, does not differ substantially from their carrying amount and, therefore, these balances have not been adjusted to amortized cost.

The age of the past-due receivables for which no allowance had been recognized is as follows:

	2016	2015
0-90 days	54,428	70,849
90-180 days	9,011	8,154
180-360 days	1,061	253
	64,500	**79,256**
Average collection period (days)	**57**	**65**

The changes in impairment losses during 2016 and 2015 were as follows:

	Impairment
Balance at January 1, 2015	**7,220**
Charge for the year (Note 24.3)	5,305
Reversed	(623)
Exchange differences	(834)
Balance at December 31, 2015	**11,068**
Charge for the year (Note 24.3)	7,578
Amount in used	(3,425)
Exchange differences	(550)
Balance at December 31, 2016	**14,671**

The Company recognized the related valuation adjustments to cover the risk of possible bad debts that might arise (see Note 24.3).

As mentioned in Note 6, during 2016 sales corresponding to Dow Corning Corporation represented 13.7% of the Company's sales. During 2015, no single customer represented more than 10% of the Company's sales.

Factoring without recourse arrangements

The Company entered into factoring without recourse agreements for trade receivables. There were $100,827 and $99,477 of factored receivables outstanding as of December 31, 2016 and 2015, respectively.

Factoring arrangements transferring substantially all economic risks and rewards associated with accounts receivable to a third party are accounted for by derecognizing the accounts receivable upon receiving the cash proceeds of the factoring arrangement.

Transfer of financial assets (commercial discounting of accounts receivable)

In trade discount transactions (recourse factoring) carried out by the Company, it is understood that the risks and rewards associated with the discounted receivables have not been transferred, given that if these receivables are not collected on maturity, the bank has the right to claim the unpaid amount from the Company.

In this regard, the Company recognizes the amount receivable under "Trade notes receivable" with a credit to "Bank borrowings – Payables in relation to discounted notes and bills" (see Note 16), until they are collected or settled.

Loans and receivables

Loans and receivables comprise the following at December 31:

	2016		2015	
	Non-Current	**Current**	**Non-Current**	**Current**
Loans and receivables from third parties	2,388	—	6,015	—

These receivables primarily relate to payments to local public-sector entities pursuant to local legislation of various subsidiaries, which will be paid back to the subsidiaries or replaced with third-party loans. These accounts are valued at amortized cost.

The planned long-term maturity of these accounts receivable at December 31 is as follows:

	2016					
	2018	**2019**	**2020**	**2021**	**Other**	**Total**
Receivable from third parties	404	153	137	141	1,553	2,388

	2015					
	2017	**2018**	**2019**	**2020**	**Other**	**Total**
Receivable from third parties	228	193	187	167	5,240	6,015

11. Inventories

Inventories comprise the following at December 31:

	2016	**2015**
Finished industrial goods	116,629	238,729
Raw materials in progress and industrial supplies	176,568	148,871
Other inventories	23,708	40,800
Advances to suppliers	954	182
Less – Write-downs	(1,157)	(3,210)
	316,702	**425,372**

The changes in Write-downs during 2016 and 2015 were as follows:

	Write-downs
Balance at January 1, 2015	**5,715**
Charge for the year (Note 24.3)	917
Amount in used	(2,870)
Exchange differences	(552)
Balance at December 31, 2015	**3,210**
Charge for the year (Note 24.3)	—
Amount in used	(2,048)
Exchange differences	(5)
Balance at December 31, 2016	**1,157**

The write-downs in 2016 and 2015 were recognized to adjust the acquisition or production cost to the net realizable value of the inventories. When the Company considers non reversal inventory impairment, it registers this as a ‘Cost of sales’ in the consolidated income statement.

The Company’s purchase commitments totaled approximately $19,956 at December 31, 2016 and $11,700 at December 31, 2015.

The Company secured insurance policies to sufficiently cover the costs and expenses arising from possible future losses relating to inventories.

At December 31, 2016 and 2015, approximately $118,561 and $166,600, respectively, of inventories are secured as collateral for several outstanding loan agreements.

12. Other assets

Other non-current and current assets comprise the following at December 31:

	2016			2015		
	Non-Current	Current	Total	Non-Current	Current	Total
Guarantees and deposits given	1,139	—	1,139	3,680	—	3,680
Prepayments and accrued income	—	6,211	6,211	—	—	—
Biological assets	17,365	—	17,365	13,767	—	13,767
Other assets	1,741	3,599	5,340	3,168	10,134	13,302
	20,245	**9,810**	**30,055**	**20,615**	**10,134**	**30,749**

Biological assets includes the forest plantations of the South African subsidiary Silicon Smelters (Pty.), Ltd., which are used for the production of silicon metal. It should be noted that the plantations are measured at fair value less the incremental costs to be incurred until the related products are at the point of sale. The main assumptions used include the number of hectares planted, and the age and average annual growth of the plantations. The changes in value of this asset are recognized in Net (loss) gain due to changes in the value of assets in the consolidated income statement for the year (see Note 24.5).

In particular, the methods and assumptions used in determining the fair value are as follows:

- The arm's length price (market price) used by the market for wood of varying ages. It should be noted that Silicon Smelters does not normally use production cost to measure the wood.
- The wood pulp industry Mean Annual Increment (MAI) index of 15 for gum and 10.5 for pine is used to determine the annual growth rate of the plantations.
- The density index used to convert cubic meters of wood to metric tons is 0.94 for pine and 1 for wood pulp.
- Lastly, it should be noted that the foregoing assumptions were applied on a consistent basis in recent years.

Third parties have filed claims against this investee in respect of a portion of these plantations, but it is not possible to assess the financial exposure in this connection. The cost of the plantations that are the subject of claims amounts to $1,806 at December 31, 2016 and $1,604 at December 31, 2015. In this regard, the Company considers the risk of these claims to be remote and, therefore, no provision has been recognized in this connect.

Other current assets at December 31, 2015 includes an insurance receivable for $8,500 for reimbursement for the amount payable to third parties related to the complaint lodged by certain GSM shareholders in connection with the Business Combination. During 2016 the mentioned receivable has been settled.

13. Equity

Share capital

Ferroglobe PLC was incorporated on February 5, 2015 and issued one ordinary share with a face value of $1.00. The share was issued but uncalled. On October 13, 2015, the Company increased its share capital by £50,000 by issuing 50,000 sterling non-voting redeemable preference shares (the "Non-voting Shares") as well as 14 ordinary shares with a par value of $1.00.

Subsequently on October 13, 2015, the Company consolidated the 15 ordinary shares at a par value of $1.00 to two ordinary shares with a par value of $7.50, for a total amount of $15.00.

On December 23, 2015, the Company acquired all of the issued and outstanding ordinary shares from Grupo Villar Mir, S.A.U., par value €1,000 per share, of Grupo FerroAtlántica, S.A.U. in exchange for 98,078,161 newly-issued Ferroglobe Class A ordinary shares, nominal value $7.50 per share, making Grupo FerroAtlántica, S.A.U. a wholly-owned subsidiary of the Company. The company subsequently redeemed all Non-voting Shares.

Subsequently on December 23, 2015, Gordon Merger Sub, Inc., a wholly owned subsidiary of the Company, merged with Globe Specialty Metals, Inc., and all outstanding shares of GSM common stock, par value $0.0001 per share were converted to the right to receive one newly-issued Ferroglobe ordinary share, nominal value $7.50 per share. The ordinary shares were registered by the Company pursuant to a registration statement on Form F-4, which was declared effective by the SEC on August 11, 2015, and trade on the NASDAQ Global Select Market under the ticker symbol “GSM.”

On June 22, 2016 the Company completed a reduction of the share capital and as such the nominal value of each share has been reduced from $7.50 to $0.01, with the amount of the capital reduction being credited to a distributable reserve.

On November 18, 2016, Class A Ordinary Shares were converted into ordinary shares of Ferroglobe as a result of the distribution of beneficial interest units in the Ferroglobe Representation and Warranty Insurance Trust to certain Ferroglobe shareholders.

At December 31, 2016 there were 171,838,153 Class A ordinary shares outstanding with a par value of $0.01, for a total issued and outstanding share capital of $1,795. At December 31, 2016 main shareholders were as follows:

Name	Number of Shares Beneficially Owned	Percentage of Outstanding Shares
Grupo Villar Mir, S.A.U.	94,554,634	55.0%

Valuation adjustments

Valuation adjustments comprise the following at December 31:

	2016	2015
Actuarial gains and losses	(7,509)	(11,806)
Hedging instruments and other	(4,378)	(6,629)
Total	(11,887)	(18,435)

Capital management

The Company’s primary objective is to maintain a balanced and sustainable capital structure through the industry’s economic cycles, while keeping the cost of capital at competitive levels so as to fund the Company’s growth. The main sources of financing are as follows:

- Cash flows from continuing operations.
- Long-term corporate financing through each of the Company’s main subsidiaries in local currencies.
- Revolving credit facilities taken out by the Company to provide subsidiaries financing.

Given the complexity of the Venezuelan financial market and the restrictions on capital flows, long-term financing is structured through intercompany loan agreements for Venezuelan subsidiaries.

Management reviews the Company’s capital structure and position using the financial ratios discussed in Note 16 (Bank borrowings), including the leverage ratio, which management deemed adequate at December 31 as follows:

	2016	2015	2014
Consolidated equity	892,042	1,294,973	507,677
Gross financial debt (*) (**)	514,587	516,976	523,148
Cash and cash equivalents	(196,931)	(116,666)	(48,651)
Net financial debt	**317,656**	**400,310**	**474,497**
Net financial debt/Consolidated equity (***)	**35.61%**	**30.91%**	**93.46%**

(*) Including the carrying amount (fair value) of the hedging derivatives recognized, arranged by several subsidiaries.

(**) As of December 31, 2016 this caption, due to its classification as "held for the sales" the balances corresponding to the Spanish energy business (see Note 1), do not contain the "gross financial debt" nor "cash and cash equivalents" that amount to $86,959 and $51, respectively. Consequently, if these balances were included, the "Net financial debt" would be $404,564, and the ratio "Net financial debt/Consolidated equity" of 45.4%.

(***) Some bank borrowings require a leverage ratio lower than 100%.

The distribution of the Company's borrowings between non-current and current is as follows:

	2016(*)		2015		2014	
	Balance ($)	%	Balance ($)	%	Balance ($)	%
Non-current gross financial debt	269,325	52.34%	320,993	62.09%	364,287	69.63%
Current gross financial debt	245,262	47.66%	195,983	37.91%	158,861	30.37%
Gross financial debt	**514,587**	**100.00%**	**516,976**	**100.00%**	**523,148**	**100.00%**

(*) As of December 31, 2016 this caption, due to its classification as "held for sale" the balances corresponding to the Spanish energy business (see Note 1), do not contain the "non-current gross financial debt" nor "Current gross financial debt" amounted $76,452 and $10,507, respectively. Consequently, if these balances were taken, the "Gross financial debt" would be $601,546.

Dividends

Dividends distributed by Ferroglobe PLC during the year ended December 31, 2016, are as follows:

- The Board of Directors of Ferroglobe PLC resolved to four interim dividend payments during 2016 of $0.08 per share, paid on March 14, August 12, September 28, and December 29, and each totaling $13,747, respectively, distributed as cash payments through Reserves. As of December 31, 2016, all dividends declared were paid.

Dividends distributed by FerroAtlántica during the year ended December 31, 2015 to its former sole shareholder, Grupo Villar Mir, S.A.U., are as follows:

- The Board of Directors of FerroAtlántica resolved to distribute dividends on November 27, 2015, December 21, 2015 and December 22, 2015, totaling $15,870, $133, and $5,476, respectively, through cash payments from Reserves on those dates.

Non-controlling interests

The changes in Non-controlling interests in the consolidated statements of financial position in 2016 and 2015 were as follows:

	Balance ($)
January 1, 2014	**20,787**
Loss for the year	(6,706)
Translation differences and other	3,897
December 31, 2014	**17,978**
Loss for the year	(15,204)
Business combination (See Note 5)	144,533
Translation differences and other	(5,484)
December 31, 2015	**141,823**
Loss for the year	(20,186)
Translation differences and other	3,919
December 31, 2016	**125,556**

The stand-alone statutory information regarding the largest non-controlling interests, in accordance with IFRS 12 Disclosure of Interests in Other Entities, is as follow:

WVA Manufacturing, LLC (WVA) was formed on October 28, 2009 as a wholly-owned subsidiary of Globe. On November 5, 2009, Globe sold a 49% membership interest in WVA to Dow Corning Corporation ("Dow Corning"), an unrelated third party. As part of the sale of the 49% membership interest to Dow Corning, an operating agreement and an output and supply agreement were established. The output and supply agreement states that of the silicon metal produced by WVA, 49% will be sold to Dow Corning and 51% to Globe, which represents each member's ownership interest, at a price equal to WVA's actual production cost plus $100 per metric ton. The agreement will automatically terminate upon the dissolution or liquidation of WVA in accordance with the joint venture agreement between Globe and Dow Corning. As of December 31, 2016 and 2015, the balance of non-controlling interest related to WVA was $93,506 and $95,169, respectively.

Quebec Silicon Limited Partnership (QSLP), formed under the laws of the Province of Québec on August 20, 2010 is managed by its general partner, Quebec Silicon General Partner Inc., which is a wholly-owned subsidiary of Globe. QSLP owns and operates the silicon metal operations in Bécancour, Québec. QSLP's production output is subject to a supply agreement, which sells 51% of the production output to Globe and 49% to Dow Corning, which represents each member's ownership interest, at a price equal to QSLP's actual production cost plus 31 Canadian dollars per metric ton. As of December 31, 2016 and 2015, the balance of non-controlling interest related to QSLP was $45,349 and $49,404, respectively.

	2016	
Statement of Financial Position	**WVA**	**QSLP**
Non-current assets	69,329	30,410
Current assets	34,116	64,307
Non-current liabilities	4,226	12,276
Current liabilities	16,121	17,016
Income Statement		
Sales	165,640	96,869
Operating profit	6,197	833
Profit before taxes	6,209	886
Net Income	9,782	886
Cash Flow Statement		
Cash flows from operating activities	10,012	4,690
Cash flows from investing activities	(8,496)	(6,142)
Cash flows from financing activities	—	—
Exchange differences on cash and cash equivalents in foreign currencies	—	85
		—
Beginning balance of cash and cash equivalents	—	2,109
Ending balance of cash and cash equivalents	1,516	742

14. (Loss) earnings per share

Basic (loss) earnings per ordinary share are calculated by dividing the consolidated (loss) profit for the year attributable to Ferroglobe by the weighted average number of ordinary shares outstanding during the year, excluding the average number of treasury shares held in the year, if any.

From continued and discontinued operations

	2016	2015	2014
Basic(loss) earnings per share computation			
Numerator:			
(Loss) profit attibutable to Ferroglobe PLC	(338,427)	(43,268)	38,437
Denominator:			
Weighted average basic shares outstanding	171,838,153	99,699,262	98,078,163
Basic (loss) earnings per ordinary share (US Dollars)	**(1.97)**	**(0.43)**	**0.39**
Diluted (loss) earnings per share computation			
Numerator:			
(Loss) profit attibutable to Ferroglobe PLC	(338,427)	(43,268)	38,437

Denominator:			
Weighted average basic shares outstanding	171,838,153	99,699,262	98,078,163
Effect of dilutive securities	—	—	—
Weighted average diluted shares outstanding	171,838,153	99,699,262	98,078,163
Diluted (loss) earnings per ordinary share (US Dollars)	**(1.97)**	**(0.43)**	**0.39**

From continued operations

	2016	2015	2014
Basic(loss) earnings per share computation			
Numerator:			
(Loss) profit attibutable to Ferroglobe PLC	(335,362)	(43,072)	28,150
Denominator:			
Weighted average basic shares outstanding	171,838,153	99,699,262	98,078,163
Basic (loss) earnings per ordinary share (US Dollars)	**(1.95)**	**(0.43)**	**0.29**
Diluted (loss) earnings per share computation			
Numerator:			
(Loss) profit attibutable to Ferroglobe PLC	(335,362)	(43,072)	28,150
Denominator:			
Weighted average basic shares outstanding	171,838,153	99,699,262	98,078,163
Effect of dilutive securities	—	—	—
Weighted average diluted shares outstanding	171,838,153	99,699,262	98,078,163
Diluted (loss) earnings per ordinary share (US Dollars)	**(1.95)**	**(0.43)**	**0.29**

From discontinued operations

	2016	2015	2014
Basic(loss) earnings per share computation			
Numerator:			
(Loss) profit attibutable to Ferroglobe PLC	(3,065)	(196)	10,287
Denominator:			
Weighted average basic shares outstanding	171,838,153	99,699,262	98,078,163
Basic (loss) earnings per ordinary share (US Dollars)	**(0.02)**	**—**	**0.10**
Diluted (loss) earnings per share computation			
Numerator:			
(Loss) profit attibutable to Ferroglobe PLC	(3,065)	(196)	10,287
Denominator:			
Weighted average basic shares outstanding	171,838,153	99,699,262	98,078,163
Effect of dilutive securities	—	—	—
Weighted average diluted shares outstanding	171,838,153	99,699,262	98,078,163
Diluted (loss) earnings per ordinary share (US Dollars)	**(0.02)**	**—**	**0.10**

Potential ordinary shares of 96,236 (107,913 in 2015) were excluded from the calculation of diluted (loss) earnings per ordinary share in 2016 because their effect would be anti-dilutive due to a net loss position. The Company had no dilutive or anti-dilutive shares in 2014.

Due to the exchange in shares outstanding in which the Company acquired all 200,000 of the issued and outstanding ordinary shares from Grupo Villar Mir, S.A.U., of FerroAtlántica in exchange for 98,078,163 newly-issued Ferroglobe Class A ordinary shares in connection with the Business Combination (see Note 13 – Equity), the Company considered the 98,078,163 newly-issued shares related to FerroAtlántica, as the Predecessor, as the total shares outstanding for the period from January 1, 2015 to December 23, 2015 (date of Business Combination), and for 2014, for purposes of calculating average number of shares outstanding. As a result, the earnings per share calculations shown in the historical consolidated statements of operations for

2014, which reflect the historical results of the Predecessor, have been changed to restate the average number of shares outstanding and resulting basic and diluted earnings per share.

15. Provisions

Non-current and current provisions comprise the following at December 31:

	2016			2015		
	Non-Current	Current	Total	Non-Current	Current	Total
Provision for pensions	60,660	216	60,876	58,308	195	58,503
Environmental provision	2,778	305	3,083	2,373	352	2,725
Provisions for litigation	—	—	—	—	787	787
Provisions for third-party liability	5,822	13	5,835	5,323	1,965	7,288
Other provisions	12,697	19,093	31,790	15,849	5,711	21,560
	81,957	**19,627**	**101,584**	**81,853**	**9,010**	**90,863**

The changes in the various line items of provisions in 2016 and 2015 were as follows:

	Provision for Pensions	Environmental Provision	Provisions for Litigation in Progress	Provisions for Third-Party Liability	Other Provisions	Total
Balance at January 1, 2015	**44,927**	**1,903**	**807**	**8,909**	**120**	**56,666**
Charges for the year	5,208	139	331	2,270	4,003	11,951
Provisions reversed with a credit to income	(149)	(55)	(265)	(232)	—	(701)
Incorporation to the scope of consolidation	20,582	978	—	—	17,756	39,316
Amounts used	(2,928)	—	—	(4,356)	(275)	(7,559)
Provision against equity	(756)	—	—	—	—	(756)
Exchange differences and others	(8,381)	(240)	(86)	697	(44)	(8,054)
Balance at December 31, 2015	**58,503**	**2,725**	**787**	**7,288**	**21,560**	**90,863**
Charges for the year	6,009	272	—	—	6,777	13,058
Provisions reversed with a credit to income	—	—	—	(1,765)	(156)	(1,921)
Amounts used	(4,812)	(62)	—	(189)	(2,508)	(7,571)
Provision against equity	(4,297)	—	—	—	—	(4,297)
Transfers from/(to) other accounts	—	—	(787)	—	7,384	6,597
Exchange differences and others	5,473	148	—	501	61	6,183
Transfer to liabilities associated with assets held for sale (see Note 27)	—	—	—	—	(1,328)	(1,328)
Balance at 31 December 2016	**60,876**	**3,083**	**—**	**5,835**	**31,790**	**101,584**

The main provisions relating to employee obligations are as follows:

France

These relate to various obligations assumed by FerroPem, S.A.S. with various groups of employees relate to long-service benefits, medical insurance supplements and retirement obligations, all of which are defined benefit obligations, whose changes in 2016 and 2015 were as follows:

	2016	2015
Obligations at beginning of year	26,834	30,115
Current service cost	1,530	1,545
Borrowing costs	527	531
Actuarial differences	2,854	(846)
Benefits paid	(972)	(1,016)
Exchange differences	(1,040)	(3,495)
Obligations at end of year	**29,733**	**26,834**

At December 31, 2016 and 2015, the effect of a 1% change in the cost of this provision would have resulted in a change to the provision of approximately $1,926 and $1,912, respectively.

The following table reflects the gross benefit payments that are expected to be paid for the benefit plans for the year ended December 31, 2016:

	2016
2017	1,372
2018	1,189
2019	1,183
2020	1,431
2021	1,139
Years 2022-2026	8,792

The subsidiary recognized provisions in this connection based on an actuarial study performed by an independent expert.

South Africa

Defined benefit plans relate to Retirement medical aid obligations and Retirement benefits. Actuarial valuations are performed periodically by independent third parties and in the actuary's opinion the fund was in a sound financial position. The valuation was based upon the amounts as per the latest valuation report received from third party experts.

Retirement medical aid obligations

The Company provides post-retirement benefits by way of medical aid contributions for employees and/or dependents.

Retirement benefits

It is the policy of the Company to provide retirement benefits to all its employees and therefore membership of the retirement fund is compulsory. The Company has both defined contribution and defined benefit plans. The pension fund obligation is recognized in current provisions as the Company will contribute the difference to the plan assets within the next 12 months.

In this regard, the changes of this provision in 2016 and 2015 were as follows:

	2016	2015
Obligations at beginning of year	7,989	9,933
Current service cost	307	522
Borrowing costs	817	153
Actuarial differences	(998)	90
Benefits paid	(424)	(333)
Exchange differences	1,069	(2,376)
Obligations at end of year	**8,760**	**7,989**

At December 31, 2016 the effect of a 1% change in the cost of the medical aid would have resulted in a change to the provision of approximately $607 ($1,763 in 2015).

The breakdown, in percentage, of the plan assets are as follows:

	2016	2015
Cash	17.42%	10.15%
Equity	35.31%	39.45%
Bond	13.23%	15.98%
Property	2.76%	2.63%
International	25.47%	28.46%
Others	5.81%	3.33%
Total	**100.00%**	**100.00%**

As of December 31, 2016 and 2015 the Plan assets amounted to $3,532 and $2,703, respectively. Changes in the fair value of plan assets linked to the defined benefit plans in South Africa were as set forth in the following table:

	2016	2015
Fair value of plan assets at the beginning of the year	**2,703**	**3,676**
Interest income on assets	284	216
Benefits paid	—	(579)
Actuarial differences	(112)	69
Other	657	(679)
Fair value of plan assets at the end of the year	**3,532**	**2,703**
Actual return on assets	**165**	**285**

Venezuela

Benefit Plan

The company FerroVen has pension obligations to all of its employees who, once reaching retirement age, have accumulated at least 15 years of service to the company and receive a Venezuelan Social Security Institute (IVSS) pension. In addition to the pension paid by the IVSS, 80% of the basic salary accrued when the pension benefit is awarded is guaranteed and paid by means of a lifelong monthly pension.

The most recent of the present value of the defined benefit obligation actuarial valuation was determined at December 31, 2016 by independent actuaries. The present value of the obligation for defined benefit cost, the current service cost and past service cost were determined using the projected unit credit method.

In this regards, the changes of this provision in 2016 and 2015 were as follows:

	2016	2015
Obligations at beginning of year	**3,089**	**2,565**
Current service cost	89	613
Borrowing costs	535	3,953
Actuarial differences	2,262	—
Benefits paid	(135)	(303)
Exchange differences	(2,885)	(3,739)
Obligations at end of year	**2,955**	**3,089**

The summary of the main actuarial assumptions used to calculate the aforementioned obligations is as follows:

	France		**South Africa**		**Venezuela**	
	2016	**2015**	**2016**	**2015**	**2016**	**2015**
Salary increase	1.60%-6.10%	1.60%-6.10%	8.2%	8.3%	60%	60%
Discount rate	2%	2%	9.8%	9.5%	76.80%	66.40%
Expected inflation rate	1.60%	1.60%	7.2%	7.2%	200%	60%
Mortality	TGH05/TGF05	TGH05/TGF05	PA(90)	N/A	UP94	UP94
Retirement age	65	65	63	63	63	63

North America

a. Defined Benefit Retirement and Postretirement Plans

Globe Metallurgical Inc. (GMI) sponsors three non-contributory defined benefit pension plans covering certain employees, which were all frozen in 2003. Core Metals sponsors a non-contributory defined benefit pension plan covering certain employees, which was closed to new participants in April 2009.

Quebec Silicon, sponsors a contributory defined benefit pension plan and postretirement benefit plan for certain employees, based on length of service and remuneration. Post-retirement benefits consist of a group insurance plan covering plan members for life insurance, disability, hospital, medical, and dental benefits. The contributory defined benefit pension plan was closed to new participants in December 2013. On December 27, 2013, the Communications, Energy and Paper Workers Union of Canada ("CEP") ratified a new collective bargaining agreement, which resulted in a curtailment pertaining to the closure of the postretirement benefit plan for union employees retiring after January 31, 2016. The Company funding policy has been to contribute, as necessary, an amount in excess of the minimum requirements in order to achieve the Company's long-term funding targets.

Benefit Obligations and Funded Status – The following provides a reconciliation of the benefit obligations, plan assets and funded status of the North American plans as of December 31, 2016 and 2015:

	2016				2015			
	USA	Canada			USA	Canada		
	Pension Plans	Pension Plans	Post-retirement Plans	Total	Pension Plans	Pension Plans	Post-retirement Plans	Total
Benefit obligation	36,762	21,854	7,382	65,998	37,394	20,657	7,304	65,355
Fair value of plan assets	(29,711)	(16,859)	—	(46,570)	(29,427)	(15,346)	—	(44,773)
Provision for pensions	7,051	4,995	7,382	19,428	7,967	5,311	7,304	20,582

All North American pension and postretirement plans are underfunded. At December 31, 2016 and 2015, the accumulated benefit obligation was $58,616 and $58,051 for the defined pension plan and $7,382 and $7,304 for the postretirement plans, respectively.

The assumptions used to determine benefit obligations at December 31, 2016 and 2015 for the North American plans are as follows:

	North America – 2016			North America – 2015		
	USA	Canada		USA	Canada	
	Pension Plan	Pension Plan	Postretirement Plan	Pension Plan	Pension Plan	Postretirement Plan
Salary increase	N/A	2.75%-3.00%	N/A	N/A	2.75%-3.00%	N/A
Discount rate	3.75%-4.00%	3.95%	4.05%	3.75%-4.00%	4.15%	4.20%
Expected inflation rate	N/A	N/A	N/A	N/A	N/A	N/A
Mortality	SOA RP-2014 Total Dataset Mortality	CPM2014-Private	CPM2014-Private	RP-2014 Blue Collar	CPM2014 - Private	CPM2014-Private
Retirement age	65	65	55	65	60	60

The discount rate used in calculating the present value of our North American pension plan obligations is developed based on the BPS&M Pension Discount Curve for 2016 and the Citigroup Pension Discount Curve for 2015 both the GMI plans and Core Metals plan, and the Mercer Proprietary Yield Curve for 2016 and 2015 Quebec Silicon pension and postretirement benefit plans and the expected cash flows of the benefit payments.

The Company expects to make discretionary contributions of approximately $1,167 to the defined benefit pension and postretirement plans for the year ending December 31, 2017.

The following reflects the gross benefit payments that are expected to be paid for the benefit plans for the year ended December 31, 2016:

	Pension Plans	Non-pension Postretirement Plans
2017	3,077	216
2018	3,183	218
2019	3,253	220
2020	3,291	219
2021	3,315	226
Years 2022-2026	17,035	1,335

The accumulated non-pension postretirement benefit obligation has been determined by application of the provisions of the Company's health care and life insurance plans including established maximums, relevant actuarial assumptions and health care cost trend rates projected at 6.0% for 2017 and decreasing to an ultimate rate of 4.3% in fiscal 2033. At December, 31 2016 and 2015, the effect of a 1% increase in health care cost trend rate on the non-pension postretirement benefit obligation is $1,857 and $1,392, respectively. At December, 31 2016 and 2015 the effect of a 1% decrease in health care cost trend rate on the non-pension postretirement benefit obligation is ($1,451) and ($1,087), respectively.

The changes of this provision 2016 were as follows:

	2016			
	USA	Canada		
	Pension Plans	Pension Plans	Post-retirement Plans	Total
Obligations at beginning of year	**37,394**	**20,657**	**7,304**	**65,355**
Service cost	226	165	252	643
Borrowing cost	1,449	877	317	2,643
Actuarial differences	(503)	384	(594)	(713)
Benefits paid	(1,732)	(927)	(138)	(2,797)
Exchange differences	—	698	241	939
Expenses	(72)	—	—	(72)
Plan amendments	—	—	—	—
Obligations at end of year	**36,762**	**21,854**	**7,382**	**65,998**

The plan assets of the defined benefit and retirement and post retirement plans in North America are comprised of assets that have quoted market price in an active market. The breakdown as of as of December 31, 2016 and 2015 of the assets by class are:

	2016	2015
Cash	2%	1%
Equity Mutual Funds	46%	54%
Fixed Income Securities	50%	43%
Real Estate Mutual Funds	2%	2%
Total	**100%**	**100%**

As at December 31, 2016, the changes in plan assets were as follows:

	2016		
	USA	Canada	
	Pension Plans	Pension Plans	Total
Fair value of plan assets at the beginning of the year	29,427	15,346	44,773
Interest income on assets	1,130	663	1,793
Benefits paid	(1732)	(927)	(2,659)
Actuarial return (loss) on plan assets	936	444	1,380
Other	(50)	1,333	1,283
Fair value of plan assets at the end of the year	29,711	16,859	46,570

b. Other Benefit Plans

The Company administers healthcare benefits for certain retired employees through a separate welfare plan requiring reimbursement from the retirees.

The Company's subsidiary, GMI, provides two defined contribution plans (401(k) plans) that allow for employee contributions on a pretax basis. The Company agrees to match 25% of participants' contributions up to a maximum of 6% of compensation. Additionally, subsequent to the acquisition of Core Metals, the Company began sponsoring the Core Metals defined contribution plan. Under the plan the Company may make discretionary payments to salaried and non-union participants in the form of profit sharing and matching funds.

Other benefit plans offered by the Company include a Section 125 cafeteria plan for the pretax payment of healthcare costs and flexible spending arrangements.

Provisions for third-party liability

Provisions for third-party liability relate to current legal claims or obligations arising from past actions that involve a probable outflow of resources that can be reliably estimated. At the date of preparation of these consolidated financial statements, there were no lawsuits in progress the outcome of which could significantly affect the Company's equity position.

Other provisions

Other provisions relate to current obligations arising from past actions that involve a probable outflow of resources that can be reliably estimated and are not included in the previous sections of this Note to the consolidated financial statements, as 'Asset retirement obligations' amounting approximately $10.1 million (Non-current: $5.4 million and Current: $4.7 million), 'Retained acquisition contingencies" amounting approximately $5.7 million (Non-current: $5.2 million and Current: $0.5 million), 'Provision for liabilities related to the emission of greenhouse gases' approximately $5.5 million (Non-current: nil and Current: $5.5 million) and other provisions and accruals as of the date of the consolidated financial statements.

16. Bank borrowings

Non-current and current bank borrowings comprise the following at December 31:

	2016 (a)			
	Limit	Non-Current Amount Drawn Down	Current Amount Drawn Down	Total
Borrowings to finance investments	76,000	8,198	64,545	72,743
Credit facilities (b)	453,000	171,260	166,950	338,210
Discounted bills and notes	8,000	—	719	719
Other	10,000	15	9,604	9,619
Total	**547,000**	**179,473**	**241,818**	**421,291**

	2015 (a)			
	Limit	Non-Current Amount Drawn Down	Current Amount Drawn Down	Total
Borrowings to finance investments	153,000	57,278	50,641	107,919
Credit facilities (b)	579,000	154,001	114,089	268,090
Discounted bills and notes	7,000	—	783	783
Other	30,000	12,397	17,041	29,438
Total	**769,000**	**223,676**	**182,554**	**406,230**

(a) In February 2017, the Company issued Senior Notes in the amount of $350 million, which was primarily used to repay a majority of the amount drawn down as of December 31, 2016. See Note 28 for further detail about the refinancing arrangement.

(b) Includes a Revolving Credit Agreement acquired from the Business Combination. On August 20, 2013, GSM entered into a $300,000 five-year revolving multi-currency credit facility, which includes a $10,000 sublimit for swing line loans and a $25,000 sublimit letter of credit facility. The credit facility refinanced existing debt under the revolving multi-currency credit agreement dated May 31, 2012 and closing costs. At the GSM election, the credit facility may be increased by an amount up to $150,000 in the aggregate; such increase may be in the form of term loans or increases in the revolving credit line, subject to lender commitments and certain conditions as described in the credit agreement. The agreement contains provisions for adding domestic and foreign subsidiaries of the Company as additional borrowers under the credit facility. The agreement terminates on August 20, 2018 and requires no scheduled prepayments before that date. Therefore, the Company classifies borrowings under this credit facility as long-term liabilities.

Interest on borrowings under the multi-currency credit facility is payable, at the Company's election, at either (a) a base rate (the higher of (i) the U.S. federal funds rate plus 0.50% per annum, (ii) the Administrative Agent's prime rate or (iii) a Eurocurrency Rate for loans with a one month interest period plus 1.00% per annum plus a margin ranging from 0.50% to 1.50% per annum (such margin determined by reference to the leverage ratio set forth in the credit agreement), or (b) the Eurocurrency Rate plus a margin ranging from 1.50% to 2.50% per annum (such margin determined by reference to the leverage ratio set forth in the credit agreement). Certain commitment fees are also payable under the credit agreement. The credit agreement contains various covenants. They include, among others, a maximum net debt to earnings before income tax, depreciation and amortization ratio and a minimum interest coverage ratio. The credit facility is guaranteed by certain of the Company's domestic

subsidiaries (the “Guarantors”). Borrowings under the credit agreement are collateralized by the assets of the Company and the Guarantors, including certain real property, equipment, accounts receivable, inventory and the stock of certain of the Company’s and the Guarantors’ subsidiaries.

At December 21, 2016, the Company amended the Revolving Credit Agreement (Second Amendment to Credit Agreement and Limited Waiver Agreement), which among other matters, reduced the credit limit of the credit facility from $300,000 to $200,000. At December 31, 2016 and 2015, the undrawn balance was $75,000 and $198,978, respectively. In addition, this agreement served as a waiver of non-compliance of certain restrictive financial loan covenants as of December 31, 2016.

As part of the refinancing process mentioned above, on February 15, 2017, the Company entered into the Amended Revolving Credit Facility Agreement to amend the Revolving Credit Agreement (see Note 28).

The detail, by currency, of non-current and current bank borrowings, at December 31, is as follows:

	2016			
	Limit	Non-Current Amount Drawn Down	Current Amount Drawn Down	Total
Borrowings in euros	276,000	54,458	179,900	234,358
Borrowings in US Dollars	240,000	125,015	32,283	157,298
Borrowings in other currencies	31,000	—	29,635	29,635
Total	**547,000**	**179,473**	**241,818**	**421,291**

	2015			
	Limit	Non-Current Amount Drawn Down	Current Amount Drawn Down	Total
Borrowings in euros	319,000	109,056	149,179	258,235
Borrowings in US Dollars	320,000	100,048	3,080	103,128
Borrowings in other currencies	130,000	14,572	30,295	44,867
Total	**769,000**	**223,676**	**182,554**	**406,230**

The detail, by maturity, of the non-current bank borrowings at December 31 is as follows:

	2016	
	2018	Total
Borrowings to finance investments	8,198	8,198
Credit facilities	171,260	171,260
Other	15	15
Total	**179,473**	**179,473**

	2015					
	2017	**2018**	**2019**	**2020**	**Other**	**Total**
Borrowings to finance investments	18,271	20,399	4,536	—	14,072	57,278
Credit facilities	17,194	136,807	—	—	—	154,001
Other	1,502	998	998	998	7,901	12,397
Total	**36,967**	**158,204**	**5,534**	**998**	**21,973**	**223,676**

The average interest rate on the Company's financial borrowings during 2016 was 5.03%, including discontinued operations; and, 4.78%, excluding discontinued operations (5.44% in 2015, until the date of the Business Combination).

Borrowings to finance investments

Borrowings to finance investments include bank borrowings, secured by in real guarantee, arranged to finance investments in non-current assets, including most following at December 31:

Purpose	2016 Maturity	Limit	Non-Current	Current	Total
Corporate finance	2021	14,000	—	13,350	13,350
Sundry investments in South Africa	2018	25,000	—	23,840	23,840
Syndicated financing for sundry investments in France	2018	17,000	8,198	8,199	16,397
Investments in MangShi plant	2019	14,000	—	13,176	13,176
Acquisition of SamQuarz (Pty.), Ltd.	2018	6,000	—	5,781	5,781
Others		—	—	199	199
		76,000	**8,198**	**64,545**	**72,743**

Purpose	2015 Maturity	Limit	Non-Current	Current	Total
Corporate finance					
Sundry investments in South Africa	2016	21,000	—	20,616	20,616
Sundry investments in South Africa	2018	16,000	—	13,549	13,549
Syndicated financing for sundry investments in France	2026	36,000	6,772	3,472	10,244
Investments in MangShi plant	2018	42,000	16,935	8,468	25,403
Acquisition of SamQuarz (Pty.), Ltd.	2019	18,000	13,609	4,536	18,145
Corporate investment financing	2018	6,000	5,890	—	5,890
	2021	14,000	14,072	—	14,073
		153,000	**57,278**	**50,641**	**107,919**

Main bank borrowings to finance investments agreements include conditions relating to the achievement of certain financial and equity ratios associated with the separate financial statements of each company that is a party thereto, that had not been achieved as of year-end, except in the case of the syndicated credit facilities by granted to FerroPem, S.A.S.

As mentioned above, in February 2017, the Company issued Senior Notes in the amount of $350 million, which was primarily used to repay a majority of the amount drawn down as of December 31, 2016. See Note 28 for further detail about the refinancing arrangement.

17. Leases

Obligations under finance leases

Non-current and current obligations under finance leases comprise the following at December 31:

	2016 Non-Current	Current	Total	2015 Non-Current	Current	Total
Hydroelectrical installations (including power lines and concessions)	—	—	—	84,055	10,335	94,390
Other finance leases	3,385	1,852	5,237	5,713	3,094	8,807
	3,385	**1,852**	**5,237**	**89,768**	**13,429**	**103,197**

The most significant finance lease relates to the Company's rights to use certain hydroelectrical installations. The balance of this financial liability related to Spanish hydroelectrical installations as of December 31, 2016 has been recognized in the account "Liabilities associated with assets held for sale - obligations under financial leases" (see Note 27), and as of December 31, 2016 has a non-current and current balance amounting $70,876 and $10,507, respectively.

The detail, by maturity, of the non-current payment obligations under finance leases as of December 31, 2016 is as follows:

	2018	2019	2020	2021	Other	Total
Other finance leases	1,391	942	446	471	135	3,385
	1,391	**942**	**446**	**471**	**135**	**3,385**

Operating leases

The Company also enters into operating leases, the most significant of which relates to the Company's office leases. Expenses associated with operating leases are recorded in Other operating expenses in the consolidated income statement, and the minimum lease payments on operating leases at December 31 are as follows:

Minimum Operating Lease Payments	2016	2015
Within one year	1,788	2,067
Between one and five years	5,555	8,412
After five years	2,315	11,033
Total	**9,658**	**21,512**

18. Other financial liabilities

Other financial liabilities comprise the following at December 31:

	2016			2015		
	Non-Current	Current	Total	Non-Current	Current	Total
Financial loans with government agencies	85,768	1,592	87,360	—	—	—
Derivatives	699	—	699	7,549	—	7,549
	86,467	**1,592**	**88,059**	**7,549**	**—**	**7,549**

Financial loans with governments agencies

On September 8, 2016, FerroAtlántica, S.A., as borrower, and the Spanish Ministry of Industry, Tourism and Commerce (the 'Ministry'), as lender, entered into two loan agreements under which the Ministry made available to the borrower loans in aggregate principal amount of € 44.9 million and €26.9 million, respectively, in connection with industrial development projects relating to our solar grade silicon project. Each loan is to be repaid in 7 installments over a 10-year period with the first three years as a grace period. Interest on outstanding amounts under each loan accrues at an annual rate of 2.29%. This loan includes several, quantitative and qualitative in nature, restricted conditions. As of December 31, 2016, the amortized cost was €71,253 (equivalents to $75,108).

The remaining non-current and current balances of the 'Financial loans with governments agencies' included several loans granted mainly by French and Spanish government agencies.

Derivatives

'Other financial liabilities – derivatives are solely comprised of interest rate swaps ('IRS'), which hedge the risk of changes in interest rates on certain non-current and current obligations.

The following interest rate swaps were outstanding at December 31:

	2016					2015				
	Nominal Amount	Maturity	Fixed Interest Rate	Reference Floating Interest Rate	Market Value	Nominal Amount	Maturity	Fixed Interest Rate	Reference Floating Interest Rate	Market Value
Lease of hydroelectrical installations					—	130,644	2022	2.05%	6-month Euribor	(6,363)
Financing for investments in Chinese subsidiaries	26,353	2019	2.81%	6-month Euribor	(699)	27,218	2019	2.81%	6-month Euribor	(1,150)
Other Financing					—					(36)
					(699)					**(7,549)**

On February 15, 2017, the mentioned 'derivatives IRS' corresponding to the 'Financing for investments in Chinese subsidiaries' was paid together with the amount of the related loan, in the context of the Company's refinancing process described in Note 28.

At the date of issuance of this report, there is no derivative that is considered in accordance with IAS 39 as hedging accounting.

Foreign currency swaps (forwards)

As of December 31, 2016, the Company has arranged forward foreign currency purchase and sale transactions with various banks amounting $4,018 and $29,836, respectively, settled during 2017 ($18,535, and $28,679 and ZAR 371,973 in 2015, respectively). At December 31, 2016 and 2015, the fair value of these forwards was not significant.

Estimate of fair value

Assets and liabilities measured at fair value, based on the hierarchy levels mentioned in Note 4.5, at December 31 are as follows:

	2016			
	Total	**Level 1**	**Level 2**	**Level 3**
Non-current non-financial assets:				
Biological Assets (see Note 12)	**17,365**	—	—	17,365
Financial liabilities:				
Other financial liabilities – derivatives	**699**	—	699	—

	2015			
	Total	**Level 1**	**Level 2**	**Level 3**
Non-current non-financial assets:				
Biological Assets (see Note 12)	**13,767**	—	—	13,767
Financial liabilities:				
Other financial liabilities – derivatives	**7,549**	—	7,549	—

The changes in 2016 and 2015 in “assets and liabilities measured at fair value” classified in Level 3 were as follows:

	Level 3 Balance
January 1, 2015	**17,495**
Profit for the year (revaluation) (Note 24.5)	1,336
Translation differences and other	(5,064)
December 31, 2015	**13,767**
Profit for the year (revaluation) (Note 24.5)	1,891
Translation differences and other	1,707
December 31, 2016	**17,365**

19. Trade and other payables

Trade and other payables compose the following at December 31:

	2016	**2015**
Payable to suppliers	153,289	143,390
Trade notes and bills payable	4,417	3,683
	157,706	**147,073**

20. Other liabilities

Other non-current and current liabilities comprise the following at December 31:

	2016			2015		
	Non-Current	Current	Total	Non-Current	Current	Total
Payable to non-current asset suppliers	—	1,105	1,105	—	1,993	1,993
Guarantees and deposits	36	—	36	35	—	35
Remuneration payable	—	34,182	34,182	—	37,141	37,141
Tax payables	—	12,403	12,403	—	15,598	15,598
Other liabilities	5,701	17,090	22,791	4,482	67,176	71,658
	5,737	**64,780**	**70,517**	**4,517**	**121,908**	**126,425**

Tax payables

Tax payables comprise the following at December 31:

	2016			2015		
	Non-Current	Current	Total	Non-Current	Current	Total
VAT	—	1,853	1,853	—	464	464
Accrued social security taxes payable	—	3,940	3,940	—	6,605	6,605
Personal income tax withholding payable	—	855	855	—	909	909
Other	—	5,755	5,755	—	7,620	7,620
	—	**12,403**	**12,403**	—	**15,598**	**15,598**

Other liabilities

At December 31, 2015, Other current liabilities include the $32,500 accrual for a shareholder settlement, as well as $10,000 accrued for Plaintiff legal fees as ordered by the Court, in relation to litigation related to the Business Combination. $8,500 of the Plaintiff legal fees were recoverable by insurance and are recorded as a receivable in Other current assets (see Note 12). This matter was settled in early 2016 and no liability remains related to the shareholder lawsuit as of December 31, 2016.

Share-Based compensation

a. Stock plan

On May 29, 2016, the board of Ferroglobe PLC adopted the Ferroglobe PLC Equity Incentive Plan (the "Plan") and on June 29, 2016 the Plan was approved by the shareholders of the Company. The Plan is a discretionary benefit offered by Ferroglobe PLC for the benefit of selected employees of Ferroglobe PLC and members of its group (the "Company"). Its main purpose is to increase the interest of the employees in Ferroglobe PLC's long term business goals and performance through share ownership. The Plan is an incentive for the employees' future performance and commitment to the goals of Ferroglobe PLC.

The following share-based payment arrangements were in existence during the current and prior years:

Option Series	Number	Grant Date	Expiration	Exercise Price	Fair Value at Grant Date
Equity Incentive plan	264,933	November 24, 2016	November 24, 2019	nil	$ 11.81

All options vests when a plan participant's right to receive the share-based payment under the terms of the Plan is no more conditional on the satisfaction of any vesting conditions. Each of the share options granted on November 24, 2016 are subject to three performance conditions that can be summarized as follows:

Option Series	Date of Grant	Vesting Conditions
Equity Incentive plan	November 24, 2016	30% total shareholder return ("TSR") relative to a comparator group
		30% TSR relative to S&P Global 1200 Metals and Mining Index
		20% return on invested capital ("ROIC")
		20% net operating profit after tax ("NOPAT")

Fair Value

The weighted average fair value of the share options granted during the financial year is $11.94. The Company estimates the fair value of the stock options using the Stochastic and Black-Scholes option pricing model. Where relevant, the expected life used in the model has been adjusted for the remaining time from the date of valuation until options are expected to be received, exercise restrictions (including the probability of meeting market conditions attached to the option), and performance considerations. Expected volatility is calculated over the period commensurate with the remainder of the performance period immediately prior to the date of grant. The Company has recently listed; therefore, a proxy volatility figure was used for the purposes of the valuation. The following assumptions were used to estimate the fair value of Ferroglobe stock options:

	Equity Incentive plan – November 24, 2016
Grant date share price	$11.81
Exercise price	Nil – awards are free to the recipient therefore have an exercise price of nil.
Expected volatility	44.83%
Option life	3.00 years
Dividend yield	0%
Risk-free interest rate	1.39%
TSR performance conditions:	
Comparator companies – volatility	For each company in the TSR comparator group, we have calculated the volatility using the same method used to calculate the Company's volatility, using historical data (where available) which matches the length of the performance period remaining at grant date (i.e. 2.1 years).
Comparator companies – correlation	Correlations above 20% are considered significant and have been incorporated into the valuation model (100% represents perfect positive correlation and 0% represents no correlation)
TSR performance and averaging periods	The Company's TSR was 40.0% compared to a median comparator group TSR of 56.4% (Part A) and median index TSR of 45.65% (Part B). For both parts of the award this decreases the fair value of this part of the award compared to that of a value excluding this known data as the Company is starting from a disadvantaged position.

There were 264,933 options that were granted during the year under the plan. There were no shares that were exercised during the year. For the year ended December 31, 2016, share-based compensation expense related to this stock plan amounted to $106, which is recorded in Staff costs.

Share options outstanding at year end had a weighted average contractual life 2.92 years.

b. Options assumed under business combination

Prior to the business combination, shares of Globe Specialty Metals common stock were registered pursuant to Section 12(b) of the Exchange Act and listed on NASDAQ. As a result of the business combination (see Note 5), each share of Globe common stock was converted into the right to receive one Ferroglobe ordinary share. The shares of Globe common stock were suspended from trading on NASDAQ effective as of the opening of trading on December 24, 2015. Ferroglobe ordinary shares were approved for listing on The NASDAQ Global Market. At the effective time of the business combination, GSM stock and stock-based awards were replaced with stock and stock-based awards of Ferroglobe in a one to one exchange.

There were no options granted or exercised from the date of the business combination through December 31, 2015 or for the year ended December 31, 2016. There were 681,288 share options which expired during the year ended December 31, 2016.

A summary of options outstanding as of December 31, 2016:

	Number of Options	**Weighted-Average Exercise Price**	**Weighted-Average Remaining Contractual Term in Years**	**Aggregate Intrinsic Value**
Outstanding as of December 31, 2015	1,310,666	$ 16.80		
Expired	(681,288)	18.83		
Outstanding as of December 31, 2016	629,378	$ 14.59	1.75	$ 580
Exercisable as of December 31, 2016	588,545	$ 14.30	1.69	$ 580

The Company estimates the fair value of stock options using the Black-Scholes option pricing model. The following assumptions were used to estimate the fair value of Ferroglobe stock option replacement awards issued on the date of the business combination. No other stock options were granted from the date of the business combination through December 31, 2016 under the legacy Globe plan:

	2015
Risk-free interest rate	1.33 to 1.53%
Expected dividend yield	2.98%
Expected volatility	35.07 to 37.23%
Expected term (years)	3.00 to 5.00

The risk-free interest rate is based on the yield of zero coupon U.S. Treasury bonds with terms similar to the expected term of the options. The expected dividend yield is estimated over the expected life of the options based on our historical annual dividend activity. Volatility reflects movements in our stock price over the most recent historical period equivalent to the expected life of the options. The expected forfeiture rate is zero as anticipated forfeitures are estimated to be minimal based on historical data. The expected term is the average of the vesting period and contractual term.

As of December 31, 2016 there are total vested options of 588,545 and 40,833 unvested options outstanding.

From the date of the business combination through December 31, 2015, share-based compensation expense related to stock options was $1. For the year ended December 31, 2016, share based compensation expense related to stock options under this plan was ($69). The expense is reported within Staff costs in the consolidated income statement.

c. Executive bonus plan assumed under business combination

Prior to the business combination, the Company also issued restricted stock units under the Company's Executive Bonus Plan. The fair value of restricted stock units is based on quoted market prices of the Company's stock at the end of each reporting period. These restricted stock units proportionally vest over three years, but are not delivered until the end of the third year. The Company will settle these awards by cash transfer, based on the Company's stock price on the date of transfer. From the date of the business combination through December 31, 2015, no restricted stock units were granted and no restricted options were exercised. As of December 31, 2016 and 2015, 384,910 and 517,367 respectively, restricted stock units were outstanding.

From the date of the business acquisition through December 31, 2015, share-based compensation expense for these restricted stock units was $39 ($23 after tax). For the year ended December, 31 2016, share based compensation expense for these restricted stock units was $2,930 ($1,729 after tax). The expense is reported within Staff costs in the consolidated income statement. As of December 31, 2016 and 2015, the liability associated with the restricted stock option was $4,566 and $2,739, respectively; of which $997 and $57 are included in other current liabilities, respectively; and $3,569 and $2,682 included in other non-current liabilities, respectively.

d. Stock appreciation rights assumed under business combination

The Company issues cash-settled stock appreciation rights as an additional form of incentivized bonus. Stock appreciation rights vest and become exercisable in one-third increments over three years. The Company settles all awards by cash transfer, based on the difference between the Company's stock price on the date of exercise and the date of grant. The Company estimates the fair value of stock appreciation rights using the Black-Scholes option pricing model. From the date of the business combination through December 31, 2015, there were no stock appreciation rights issued and no stock appreciation rights exercised. During the year ended December 31, 2016 there were 16,510 stock appreciation rights granted, 35,725 stock appreciation rights cancelled and there were no exercises during the year. As of December 31, 2016, and 2015, there were 1,572,274 and 1,591,489 stock appreciation rights outstanding, respectively.

From the date of the business combination through December 31, 2015, pre-tax compensation expense for these stock appreciation rights was $27 ($16 after tax). For the year ended December, 31 2016, pre-tax compensation expense for these stock appreciation rights was $1,673 ($987 after tax). As of December 31, 2016 and 2015, the liability associated with the stock appreciation rights is $2,943 and $1,260, respectively; of which $2,698 and $991 are included in other current liabilities, respectively; and $245 and $269 are included in other non-current liabilities, respectively.

e. Unearned compensation expense

As of December 31, 2016, the Company has no unearned pre-tax compensation expense related to non-vested liability classified stock options as all awards were fully vested. Unearned compensation expense represents the minimum expense to be recognized over the grant date vesting terms or earlier as a result of accelerated expense recognition due to remeasurement of compensation cost for liability classified awards. Future expense may exceed the unearned compensation expense in the future due to the remeasurement of liability classified awards. As of December 31, 2016, and 2015, the Company has unearned pre-tax compensation expense of $5 and $35, respectively; and $0 and $585 related to non-vested equity classified stock options and restricted stock grants, respectively which will be recognized over a weighted average term of 0.04 and 1.31, respectively, and 0 and 4.90 years, respectively.

21. Tax matters

The components of current and deferred income tax expense (benefit) are as follows:

	2016	2015	2014
Current income tax expense	(14,799)	40,636	31,534
Deferred income tax expense	(33,030)	8,083	25,786
Prior year income tax and other	1,220	—	512
Total	(46,609)	48,719	57,652

The Company has significant business operations in Spain, France and the United States. The following is a reconciliation of a weighted blended statutory income tax rate to our effective tax rate for the years ended December 31, 2016, 2015, and 2014:

	2016	2015	2014
Profit before taxes	(402,157)	(9,557)	79,093
Blended statutory income tax rate	31%	31%	31%
Corporate income tax at statutory rate	(124,669)	(2,963)	24,519
Foreign rate differential	(22,949)	4,572	1,536
Permanent differences	5,196	(4,799)	(1,319)
Incentives and deductions	(1,161)	(2,938)	(2,820)
Tax rate change	—	—	(3,029)
Tax losses not recognized in deferred tax	15,326	35,754	4,645
Other non-taxable income/(expense)	81,648	19,093	34,120
Income tax expense	**(46,609)**	**48,719**	57,652
Effective tax rate	**12%**	**(510%)**	**73%**

Tax losses not recognised in deferred tax reflects the impact of excluding the benefit from certain jurisdictional pre-tax losses as the tax credit carryforward may not be recoverable.

In 2016 the Company impaired a substantial portion of FerroAtlantica de Venezuela S.A. which resulted in the removal of deferred tax liabilities on fixed assets that were impaired. The impact of the impairment on the deferred tax liability is $18,293 which is included in 2016 Other non-taxable income/(expense). In 2015 and 2014, the carrying amount of FerroAtlantica de Venezuela S.A.'s non-current assets and inventories was similar to that of previous years, while the tax value of these items decreased as a result of the currency devaluation. As the functional currency of the subsidiary FerroAtlántica de Venezuela, S.A. is the U.S. dollar (see Note 4.13) the difference between the carrying amounts and the tax values of the related deferred tax assets and liabilities results in income tax of $16,877 and $36,268. This impact is included in the 2015 and 2014 Other non-taxable income/(expense).

A tax benefit of $3,029 was recorded in 2014 due to a reduction in the Spanish statutory tax rate.

Deferred taxes

The changes in deferred tax assets and liabilities in 2016 and 2015 were as follows:

	Deferred Tax Assets	Deferred Tax Liabilities
Balance at December 31, 2014	**20,606**	**49,631**
Increases	1,080	9,542
Business combination (Note 5)	22,994	140,434
Decreases	(3,526)	(10,692)
Exchange differences	(2,084)	2,833
Balance at December 31, 2015	**39,070**	**191,748**
Increase	27,920	9,150
Business Combination (Note 5)	337	—
Decrease	(21,056)	(62,128)
Exchange differences	(1,321)	765
Balance at December 31, 2016	**44,950**	**139,535**

Significant components of the Company's deferred tax assets and liabilities at December 31, 2016, and 2015 consist of the following:

	2016	2015
Deferred tax assets:		
Non-current assets	8,822	17,423
Provisions	15,418	14,819
Depreciation and amortization charge	807	2,580
Hedging instruments	199	1,762
Tax losses, incentives, reductions and credits carryforwards	19,391	2,404
Other	313	82
Total	**44,950**	**39,070**
Deferred tax liabilities:		
Non-current assets	—	54,943
Provisions	—	—
Depreciation and amortization charge	132,481	126,442
Inventories	1,441	6,966
Other	5,613	3,396
Total	**139,535**	**191,748**

Under current legislation, tax returns cannot be deemed final until they have been audited by the tax authorities or until the statute-of-limitations has expired. The number of open tax years subject to examination varies depending on the tax jurisdiction. In general, the Company has the last four years open to review. The criteria that the tax authorities might adopt in relation to the years open for review could give rise to tax liabilities which cannot be quantified.

In 2016, the Company was under income tax audits in various taxing jurisdictions in which it has significant business operations. In Spain the Company was under an income tax audit for the 2010, 2011 and 2012 tax years. In France the Company was under an income tax audit for the 2012, 2013 and 2014 tax years. In the United States the Company was under an income tax audit for the 2012 and 2013 fiscal years. During 2016, the Company was able to conclude all of these audits with the tax authorities and the income tax expense from the conclusion of these audits is reflected in the total tax expense.

22. Related party transactions and balances

Balances with related parties – continued operations

Balances with related parties – continued operations at December 31 are as follows:

	2016			
	Receivables		Payables	
	Non-Current	Current	Non-Current	Current
Inmobiliaria Espacio, S.A.	—	2,664	—	1,751
Grupo Villar Mir, S.A.U.	—	6,743	—	—
Marco International	—	756	—	—
Enérgya VM Generación, S.L	—	—	—	23
Enérgya VM Gestión, S.L	—	1,765	—	—
Villar Mir Energía, S.L.U.	2,108	39	—	5,239
Espacio Information Technology, S.A.U.	—	—	—	130
Alloys International	—	—	—	918
Blue Power Corporation, S.L.	9,845	—	—	—
Key management personnel (Note 25)	—	—	—	22,672
Other related parties	—	4	—	5
	11,953	**11,971**	—	**30,738**

	2015			
	Receivables Comercial		Payables Comercial	
	Non-Current	Current	Non-Current	Current
Inmobiliaria Espacio, S.A.	—	8,383	—	447
Marco International	—	132	—	1,678
Enérgya VM Generación, S.L	—	2,376	—	—
Villar Mir Energía, S.L.U.	—	36	—	5,702
Other related parties	—	23	—	—
	—	**10,950**	—	**7,827**

The short-term loans granted by related parties to Grupo Villar Mir, S.A. (Sole-Shareholder Company) relate mainly to renewable cash loans earning interest at a market rate and maturing in the short term.

The loan granted to Inmobiliaria Espacio, S.A. accrues a market interest and has a maturity in the short-term that is renewed tacitly upon maturity, unless the parties agreed it is repaid until maturity, extended it automatically for one year..

A former member of the board of directors and current shareholder is affiliated with Marco International, from which the Company purchases certain raw materials and to whom the Company sells silicon-based alloys.

The loan granted to Blue Power Corporation, S.L. relates mainly to the financing of the new Spanish solar project (see Note 28). This loan accrues a market interest and will be repaid on a long-term basis.

The balance with the other related parties arose as a result of the commercial transactions performed with them (see explanation of main transactions below).

Current balances with related parties – discontinued operations

Current balances with related parties – discontinued operations (see Note 27) at December 31 are as follows:

	2016					
	Receivables			Payables		
	Financial	Comercial		Financial	Comercial	
	Non-Current	Non-Current	Current	Non-Current	Non-Current	Current
Enérgya VM Generación, S.L	—	—	2,792	—	—	—
Villar Mir Energía, S.L.U.	—	—	—	—	—	231
Other related parties	—	—	—	—	—	23
	—	—	**2,792**	—	—	**254**

These balances arose as a result of the commercial transactions (see explanation of main transactions below).

Transactions with related parties and other related parties – continued operations

Transactions with related parties – continued operations in 2016, 2015 and 2014 are as follows:

	2016				
	Sales and Operating Income	Cost of Sales	Staff costs	Other Operating Expenses	Finance Income (Note 24.4)
Inmobiliaria Espacio, S.A.	—	—	—	2	74
Grupo Villar Mir, S.A.U.	403	—	—	—	—
Villar Mir Energía, S.L.U.	45	69,083	—	525	—
Espacio Information Technology, S.A.U.	—	—	—	4,049	—
Enérgya VM Gestión, S.L	—	253	—	—	—
Marco International	765	5,212	—	—	—
Key management personnel (Note 25)	—	—	10,080	—	—
Other related parties	—	—	—	85	—
	1,213	**74,548**	**10,080**	**4,661**	**74**

	2015				
	Sales and Operating Income	Cost of Sales	Staff costs	Other Operating Expenses	Finance Income (Note 24.4)
Inmobiliaria Espacio, S.A.	—	—	—	3	170
Grupo Villar Mir, S.A.U.	—	—	—	—	255
Torre Espacio Castellana, S.A.U.	—	—	—	1,138	—
Villar Mir Energía, S.L.U.	66	85,511	—	587	—
Espacio Information Technology, S.A.U.	—	—	—	2,581	—
Marco International	—	360	—	—	—
Key management personnel (Note 25)	—	—	3,909		
Other related parties	1	—	—	156	—
	67	**85,871**	**3,909**	**4,465**	**425**

	2014				
	Sales and Operating Income	Cost of Sales	Staff costs	Other Operating Expenses	Finance Income (Note 24.4)
Inmobiliaria Espacio, S.A.	—	—	—	—	2,146
Grupo Villar Mir, S.A.U.	—	—	—	—	1,617
Torre Espacio Castellana, S.A.U.	—	—	—	1,511	—
Villar Mir Energía, S.L.U.	61	87,033	—	738	—
Espacio Information Technology, S.A.U.	—	—	—	2,928	—
Key management personnel (Note 25)	—	—	1,740	—	—
Other related parties	36	—	—	174	—
	97	**87,033**	**1,740**	**5,351**	**3,763**

“Cost of sales” of the related parties vis-à-vis Villar Mir Energía, S.L. (Sole-Shareholder Company) relates to the purchase of energy from the latter by the Company’s Electrometallurgy - Europe segment.

“Other operating expenses” relates mainly to service fees paid to Espacio Information Technology, S.A.U. for managing and maintenance services rendered related, mainly, to the enterprise resource planning (‘ERP’) that some Group entities use and other IT development projects.

Transactions with related parties and other related parties – discontinued operations

Transactions with related parties – discontinued operations (see Note 27) in 2016, 2015 and 2014 are as follows:

	2016				
	Sales and Operating Income	Cost of Sales	Staff costs	Other Operating Expenses	Finance Income
Enérgya VM Generación, S.L	20,553	—	—	503	
Villar Mir Energía, S.L.U.	—	—	—	3,101	—
Other related parties	—	—	—	7	—
	20,553	—	—	**3,611**	—

	2015				
	Sales and Operating Income	Cost of Sales	Staff costs	Other Operating Expenses	Finance Income
Enérgya VM Generación, S.L	28,881	—	—	306	—
Villar Mir Energía, S.L.U.	—	—	—	4,263	—
	28,881	—	—	**4,569**	—

	2014				
	Sales and Operating Income	Cost of Sales	Staff costs	Other Operating Expenses	Finance Income
Enérgya VM Generación, S.L	42,524	—	—	1,901	—
Villar Mir Energía, S.L.U.	—	—	—	7,056	—
Other related parties	—	—	—	9	—
	42,524	—	—	**8,966**	—

"Sales" relates to energy generated and sold to Enérgya VM Generación, S.L. at market prices.

"Other operating expenses" relates mainly to service fees paid to Villar Mir Energia, S.L.U. for managing and supervising the day-to-day operations of Company hydroelectric facilities in Spain.

23. Guarantee commitments to third parties and other contingent assets and liabilities

Guarantee commitments to third parties

As of December 31, 2016 and 2015, the Company has provided bank guarantees commitments to third parties amounting $43,944 and $62,279, respectively. Management believes that any unforeseen liabilities at December 31, 2016 that might arise from the guarantees given would not be material.

Contingent assets

In 2015, FerroAtlántica Group filed a claim to recover the initial joint venture contribution of approximately $17 million from its counterparty in relation to the Joint Venture Agreement between FerroAtlántica Group and Zeus Mineraçao Ltda., José Rubens Moretti Junior and Guilherme Moretti. There was an arbitration hearing in April 2015 and, on June 10, 2016, an award of $17 million, plus costs, was confirmed in favor of FerroAtlántica. This award is binding and FerroAtlántica is now seeking to enforce the award. While the Company continues to pursue recovery, the Company considers recovery against the claim unlikely due to the apparent financial condition of the respondents.

Contingent liabilities

In the ordinary course of its business, Ferroglobe is subject to periodic lawsuits, investigations, claims and proceedings, including, but not limited to, contractual disputes and employment, environmental, health and safety matters. Although Ferroglobe cannot predict with certainty the ultimate resolution of lawsuits, investigations, claims and proceedings asserted against it, Ferroglobe does not believe any currently pending legal proceeding to which it is a party will have a material adverse effect on its business, prospects, financial condition, cash flows, results of operations or liquidity.

Matters pertaining to Joint Ventures

In March 2017, we received a demand for mediation from our North American joint venture partner regarding a dispute in relation to the price of coal charged by our subsidiary, Alden, to our North American joint ventures. The non-binding mediation is scheduled for June 2017. Although our investigation of this matter is underway, the period that is reasonably in dispute, the amount in dispute, including the materiality of such amount, and the expected outcome of the mediation process are uncertain at this stage.

Asbestos claims

Certain maintenance employees of FerroPem, S.A.S. entities in France may have been exposed prior to the early 1990s to asbestos in furnaces located at FerroPem, S.A.S. plants before those plants were purchased by the FerroAtlántica Group. During the period in question, FerroPem, S.A.S. was wholly-owned by Pechiney Bâtiments, which has indemnification obligations to our FerroAtlántica Group division pursuant to the sale and purchase agreement under which ownership of FerroPem, S.A.S. was transferred to our FerroAtlántica Group division in 2005 by Río Tinto France. As of the date of this annual report, at least 35 claims for inexcusable negligence (“faute inexcusable”) are pending against FerroPem, S.A.S. for reasons of alleged injuries resulting from alleged asbestos exposure. The claims for inexcusable negligence are based either on the occurrence of work accidents (“accident du travail”) or on the recognition of an occupational disease (“maladie professionelle”). Additional cases claiming damages for injuries related to asbestos exposure may be filed in the future. FerroPem, S.A.S. has initiated an arbitration process according to the terms contained in the sale and purchase agreement to enforce its indemnification rights against Río Tinto France with respect to the asbestos claims. The arbitration hearing is currently being planned.

Environmental matters

On April 10, 2015, the Magistrate Court Number 2 of Santiago de Compostela notified our FerroAtlántica division of the opening of proceedings against the former Quality Control and Environmental Evaluation General Director for Galicia for an alleged criminal offense against the environment. Our FerroAtlántica division was alleged to have profited from the alleged offense, which involved a determination regarding the flow of a river on which certain of its hydroelectric facilities are located. In addition, our FerroAtlántica division was required to post a bond in the amount of €8.5 million to guarantee any civil financial responsibility that may be imposed on it as a result of the proceedings, which seek disgorgement of profits in the amount of approximately €6.4 million. The civil complaint against our FerroAtlántica division was dependent on the criminal proceeding against the public official. On February 2, 2017, the Magistrate Court Number 2 of Santiago de Compostela dismissed the case against our FerroAtlántica division as well as against the General Director because the statute of limitations for the alleged criminal offense had expired.

On August 31, 2016, the U.S. Department of Justice (the “DOJ”) requested a meeting with GMI to discuss potential resolution of a July 1, 2015 NOV/FOV that GMI received from the U.S. Environmental Protection Agency (the “EPA”) alleging certain violations of the Prevention of Significant Deterioration (“PSD”) and New Source Performance Standards provisions of the Clean Air Act associated with a 2013 project performed at GMI’s Beverly facility. Specifically, the July 2015 NOV/FOV alleges violations of the facility’s existing operating and construction permits, including allegations related to opacity emissions, sulfur dioxide and particulate matter emissions, and failure to keep necessary records and properly monitor certain equipment. On October 27, 2016, GMI met with the DOJ and the EPA to discuss the alleged violations, GMI’s preliminary assessment of those alleged violations, and its possible defenses to the NOV/FOV. As a result of that meeting, GMI has agreed to the government’s request that GMI prepare an assessment of Best Available Control Technologies (“BACT”) that could be applicable to the facility under the federal PSD program, to conduct a ventilation study to assess emissions at the facility, and to continue discussions with the government regarding an appropriate resolution of the NOV/FOV by consent. In February 2017, the EPA formally issued a request under Section 114 of the Clean Air Act, requiring GMI to conduct the ventilation study that GMI had previously agreed to conduct. On January 4, 2017, GMI received a second NOV/FOV dated December 6, 2016, arising from the same facts as the July 2015 NOV/FOV and subsequent EPA inspections. The second NOV/FOV alleges opacity exceedances at certain units, failure to prevent the release of particulate emissions through the use of furnace hoods at a certain unit, and the failure to install Reasonably Available Control Measures at certain emission units at the Beverly facility. As part of the on-going consent process to resolve the NOVs/FOVs, the government could demand that GMI install additional pollution control equipment and/or implement other measures to reduce emissions from the facility, as well as pay a civil penalty. At this time, however, GMI does not know the extent of potential injunctive relief or the amount of a civil penalty that could result from a negotiated resolution of this matter. Should the DOJ and GMI be unable to reach a negotiated resolution of the NOVs/FOVs, the government could institute formal legal proceedings for injunctive relief and civil penalties. The statutory maximum penalty is $93,750 per day per violation, from April 2013 to the present.

24. Income and expenses

24.1 Sales

Sales by segment for the years ended December 31 are as follows:

	2016	2015	2014

Electrometallurgy - North America	521,192	10,062	—
Electrometallurgy - Europe	949,547	1,174,968	1,275,497
Electrometallurgy - South Africa	142,160	219,890	239,023
Electrometallurgy - Venezuela	30,430	69,956	97,718
Other segments	59,907	59,167	93,552
Eliminations	(147,579)	(244,157)	(288,711)
	1,555,657	**1,289,886**	**1,417,079**

Sales by geographical area for the years ended December 31 are as follows:

	2016	2015	2014
Spain	181,023	194,854	257,039
Germany	241,046	230,996	238,576
Italy	90,267	120,016	146,166
Other EU Countries	236,746	314,078	302,214
USA	563,619	208,412	201,317
Rest of World	242,956	221,530	271,767
Total	**1,555,657**	**1,289,886**	**1,417,079**

24.2 Staff costs

Staff costs are comprised of the following for the years ended December 31:

	2016	2015	2014
Wages, salaries and similar expenses	209,653	131,512	149,686
Pension plan contributions	10,647	8,986	12,349
Employee benefit costs	72,732	62,087	51,794
	293,032	**202,585**	**213,829**

24.3 Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs are comprised of the following for the years ended December 31:

	2016	2015	2014
Amortization of intangible assets (Note 8)	12,649	4,547	6,767
Depreciation of property, plant and equipment (Note 9)	101,364	50,819	60,327
Change in impairment losses on uncollectible trade receivables (Note 10)	7,578	5,305	2,585
Change in inventory write-downs (Note 11)	—	917	(138)
Other	(245)	613	(410)
	121,346	**62,201**	**69,131**

24.4 Finance income and finance cost

Finance income is comprised of the following for the year ended December 31:

	2016	2015	2014
Finance income of related parties (Note 22)	74	425	3,763
Other finance income	1,460	670	833
	1,534	**1,095**	**4,596**

Finance costs is comprised of the following for the year ended December 31:

	2016	2015	2014
Interest on loans and credit facilities	18,629	15,296	19,454
Interest on note and bill discounting	1,503	1,697	2,234
Interest on interest rate swaps	449	87	—
Other	4,004	6,658	6,727
	24,585	**23,738**	**28,415**

Lastly, Exchange differences during the year ended December 31, 2016 are primarily due to the effect of the devaluation of the foreign exchange of VEF/USD in 2016 amounting $4,317 and the depreciation of the EUR/USD amounting $433, and the appreciation the EUR/ZAR amounting -$3,075, EUR/CNY amounting -$2,013 and CAN/USD amounting -$3,087 and other “exchange differences” amounting -$88.

24.5 Impairment losses and net (loss) gain due to changes in the value of assets

Impairment losses and Net (loss) gain due to changes in the value of assets are comprised of the following for the years ended December 31:

	2016	2015	2014
Goodwill (Note 7)	194,612	—	—
Impairment of intangible assets (Note 8)	230	6,442	—
Impairment of property, plant and equipment (Note 9)	66,984	45,600	399
Impairment of non-current financial assets (Note 10)	5,623	—	—
Impairment losses	**267,449**	**52,042**	**399**
Biological assets change in value (Note 18)	(1,891)	(1,336)	(4,352)
Financial investment gains /losses	—	2,248	3,467
Other value losses	—	—	10,357
Net gains/losses due to changes in the value of assets	**(1,891)**	**912**	**9,472**

24.6 (Loss) gain on disposal of non-current assets

(Loss) gain on disposal of non-current assets is comprised of the following for the years ended December 31:

	2016	2015	2014
Loss on disposal of Intangible assets	—	3,350	—
Gain on disposal of Property, plant and equipment	—	(1,773)	(555)
Loss on disposal of Property, plant and equipment	468	631	—
Gains on disposal of other non-current assets	(128)	—	—
	340	**2,208**	**(555)**

25. Remuneration and other benefits paid to key management personnel

Remuneration and other benefits paid to key management personnel during the years ended December 31 is as follows:

	2016	2015	2014
Fixed remuneration	4,494	2,054	1,283
Variable remuneration	3,258	1,658	377
Contributions to pension plans and insurance policies	281	152	46
Other remuneration	177	45	34
	8,210	**3,909**	**1,740**

In addition to the compensation information above, during 2016, fixed remuneration, variable remuneration, contributions to pension plans and insurances policies corresponding to the Company's former Executive Chairman amounted to $1,117, $749, and $4, respectively. In addition, as of December 31, 2016, severance benefits were accrued in the amount of $22,672, related to the resignation of the former Company's Executive Chairman (see Note 22).

During 2016, 2015 and 2014, no loans and advances were granted to key management personnel.

26. Financial risk management policy

The Company's activities are carried out through its operating segments and are exposed to several financial risks: market risk (including foreign currency risk, interest rate risk and price risk), credit risk, liquidity risk and capital risk.

The Company's management model aims to minimize the potential adverse impact of such risks on the Company's financial performance. Risk is managed by the Company's Corporate Finance Department, which is responsible for identifying and evaluating financial risks in conjunction with the Company's operating segments, quantifying these risks by project, region and subsidiary. Management provides written policies for global risk management, as well as for specific areas such as foreign currency risk, credit risk, interest rate risk, liquidity risk, the use of hedging instruments and derivatives, and investment of surplus liquidity.

Each of the financial risks to which the Company is exposed in carrying out its business activities is detailed as follows:

a) Market risk

Market risk arises when the Company's activities expose it to the financial risks of changes in foreign exchange rates, interest rates and the fair value of certain raw materials.

Until the date of the Business Combination with Globe, the Company hedged such exposure using forward foreign currency contracts and interest rate swaps.

- Foreign currency risk: the Company's international activity generates exposure to foreign currency risk. Foreign currency risk arises when future commercial transactions and assets and liabilities are denominated in a currency other than the functional currency of the Company that performs the transaction or recognizes the asset or liability. The main exposure for the Company to foreign currency risk is that relating to the US dollar against the euro.

Forward foreign currency contracts are used for the purpose of controlling foreign currency risk.

Details of the financial instruments related to foreign currency collections and payments at December 31, 2016 and 2015 are included in Note 18 to these consolidated financial statements.

After the Business Combination with Globe, the level of contracting of forward foreign currency contracts has been reduced, and at the date of issuance of these consolidated financial statements, the amount contracted is nil due to the decision of the Company's Corporate Finance Department, in accordance with the new conditions of the Company not to secure its positions in foreign exchange in respect of the commercial transactions.

- Interest rate risk: this risk arises mainly from financial liabilities at floating interest rates.

The Company actively manages its risk exposure to interest rate risk to mitigate its exposure to changes in interest rates arising from the borrowings arranged with floating interest rates.

In this regard, until the date of the Business Combination with Globe, regarding corporate financing arrangements, the Company generally arranged for hedges for the total amount and term of the relevant financing, through option contracts and/or swaps.

In this regard, the main exposure for the Company to interest rate risk is that relating to the floating interest rate tied to Euribor.

To mitigate interest rate risk, the Company primarily uses swaps, which, in exchange for a fee, offer protection against an increase in interest rates.

Details of the interest rate derivative financial instruments at December 31, 2016 and 2015 are included in Note 18 to these consolidated financial statements.

Since 2015 all the interest rate derivative financial instruments have been considered as non-hedging instruments, in accordance with IAS 39 Financial Instruments: Recognition and Measurement and, therefore the changes in its market value is recorded as a result of the year. As of the date of issuance of these financial statements and after completion of the financing (see Note 28) all derivative instruments have been settled. In this regards, the decision taken by the Company's Corporate Finance Department, is in accordance with the new conditions of the Company not to secure the interest rate risk for local facilities.

b) Credit risk

Credit risk arises when a third party fails to comply with its contractual obligations. In this regard, the Company's main credit risk exposure relates to the following items:

- Trade and other receivables.
- Investments considered to be cash and cash equivalents.

As mentioned above the new policy after the Company's Business Combination is not to secure its positions in foreign exchange in respect of commercial transactions.

c) Liquidity risk

The purpose of the Company's liquidity and financing policy is to ensure that the Company keeps sufficient funds available to meet its financial obligations. The Company uses three main sources of financing:

- Long term financing arrangements which are generally used to finance the operations of any significant subsidiary. The debt repayment profiles are established based on the capacity of each business to generate funds, allowing for variability depending on the expected cash flows for each business. Each long term contract usually provides for lines to finance working capital requirements at the operating subsidiary level. This ensures that sufficient financing is available to meet deadlines and maturities, which significantly mitigates liquidity risk.
- Parent company financing, which is mainly used to provide liquidity for the operations of the Company as a whole, and to finance start up projects that require the initial support of the parent company.
- The Company arranges firm commitments from leading financial institutions to purchase trade receivables through non-recourse factoring arrangements. Under these agreements, the Company pays a fee to the bank for assuming its credit risk, plus interest on the financing received.

  To ensure there are sufficient funds available to repay its debt in relation to its cash-generating capacity, each year the Company's Corporate Finance Department prepares a Financial Budget that is approved by the Board of Directors and details all financing needs and how such financing will be provided. The Budget projects the funds necessary for the most significant cash requirements, such as prepayments for capital expenditures, debt repayments and, where applicable, working capital requirements.

d) Capital risk

Refer to Note 13 (Equity) for information regarding share capital, capital management, dividends, and non-controlling interests.

e) Quantitative information

i. Credit risk:

	2016	2015
Percentage of accounts receivable secured through credit insurance	74%	58%

During 2016, sales corresponding to Dow Corning Corporation represented 13.7% of the Company's sales. The sales are to the Electrometallurgy - North America and Electrometallurgy - Europe segments. However, during 2015 and 2014, no single customer represented more than 10% of the Company's sales.

ii. Interest rate risk:

	2016 (*)	2015
Percentage of financial debt tied to fixed rates	15%	1%
Percentage of financial debt secured with hedge	3%	32%

(*) As of December 31, 2016, due to its classification as "held for the sale" the balances corresponding to the Spanish energy business (see Note 1) do not contain the 'financial debt' captions of that business. Consequently, if these balances were included, the ratio 'Percentage of bank borrowings tied to fixed rates' would be 13.2%, and the ratio 'Percentage of bank borrowings secured with hedge' would be 15.9%.

Analysis of sensitivity to interest rates

Since June 30, 2015, all of our hedges have been considered ineffective under hedge accounting, and as a result the changes in market value of these derivatives are recognized in the consolidated income statement.

Changes in the market value of the interest rate derivatives arranged by the Company depend on the changes in the Euribor yield curve and long-term swaps. The market value of these derivatives at December 31, 2016 and 2015 was $699 and $7,549, respectively.

The Company performed a sensitivity analysis of the amounts of the floating rate borrowings taking into account the refinancing discussed in Note 28, which indicated that an increase of 1% in interest rates would give rise to additional borrowing costs of $1.8 million in 2017.

iii. Foreign currency risk:

	2016	2015
Percentage of accounts receivable in currencies for which foreign currency swaps have been arranged	13.7%	25.3%
Percentage of accounts payable in currencies for which foreign currency swaps have been arranged	2.5%	21.5%

Analysis of sensitivity to exchange rates

The changes in the market value of the foreign currency derivatives arranged by the Company depend mainly on the changes in the USD/EUR spot rate and on the evolution of forward points curve. The market value of these derivatives at December 31, 2016 and 2015 was €(0.8) million for the EUR/USD position and €(0.9) million, respectively.

The detail of the sensitivity analysis (changes in the market value) of the foreign currency derivatives is as follows:

Sensitivity to the EUR/USD Exchange Rate	2016	2015
+10% (appreciation of the euro)	2.5	1.1
-10% (depreciation of the euro)	(2.5)	(0.4)

Foreign currency derivatives mainly cover monetary items in the statement of financial position and, therefore, the exchange differences are offset by the differences in value of the derivatives in profit or loss for the year.

27. Discontinued operations

Plan to dispose of the energy business

On December 12, 2016, the Company entered into a sale agreement to dispose of our Spanish energy business. The disposal of the energy business is consistent with the Group's long-term policy to focus its activities in the business of manufacturing and trading electrometallurgy products. The Company has not recognized any impairment losses in respect of the Spanish energy business, neither when the assets and liabilities of the operation were reclassified as held for sale nor at the end of the reporting period, since the proceeds of the sale substantially exceeded the carrying amount of the related net assets.

Completion of the transaction is subject to, among other conditions, the approval of certain Spanish public authorities and other Spanish bodies. In this regard, the Company is actively close the sale agreement and expects to complete the sale, upon obtaining the aforementioned approvals, before the fourth quarter of 2017.

Therefore, the Spanish energy business has been classified and accounted, as of December 31, 2016, as a disposal group held for sale and its operations qualified for the years 2016, 2015 and 2014 as discontinued operations.

Analysis of the result for the year from the discontinued operations

The results of the discontinued operations (i.e. Spanish energy business) included in the loss (profit) after taxes from discontinued operations are set out below. The comparative results and cash flows from discontinued operations have been re-presented to include those operations classified as discontinued.

(Loss) Profit after taxes from discontinued operations

The breakdown of our loss (profit) after taxes from discontinued operations for the years 2016, 2015 and 2014:

	2016	2015	2014
Sales	20,380	26,704	49,225
Cost of sales	(412)	(861)	(1,789)
Other operating income	503	251	197
Staff costs	(3,367)	(3,284)	(4,214)
Other operating expense	(9,620)	(10,262)	(16,938)
Depreciation and amortization charges, operating allowances and write-downs	(4,331)	(4,849)	(5,621)
Operating profit before impairment losses and losses on disposals of non-current assets	3,153	7,699	20,860
Impairment losses	(640)	—	—
Loss on disposal of non-current assets	—	(6)	—
OPERATING PROFIT	2,513	7,693	20,860
Finance income	2	1	175
Finance costs	(5,666)	(6,667)	(8,690)
(LOSS) PROFIT BEFORE TAXES FROM DISCONTINUED OPERATIONS	(3,151)	1,027	12,345
Income tax expense	86	(1,223)	(2,055)
(LOSS) PROFIT AFTER TAXES FROM DISCONTINUED OPERATIONS	(3,065)	(196)	10,290

Cash flows from discontinued operations

The breakdown of our cash flows from discontinued operations for the years 2016, 2015 and 2014 is as follow:

	2016	2015	2014
CASH FLOWS FROM OPERATING ACTIVITIES FROM DISCONTINUED OPERATIONS	23,719	24,188	26,757
CASH FLOWS FROM INVESTING ACTIVITIES FROM DISCONTINUED OPERATIONS	(13,211)	(11,625)	(9,217)
CASH FLOWS FROM FINANCING ACTIVITIES FROM DISCONTINUED OPERATIONS	(10,508)	(12,574)	(26,933)
TOTAL NET CASH FLOWS FOR THE YEAR FROM DISCONTINUED OPERATIONS	**—**	**(11)**	**(9,393)**

Assets and liabilities classified as held for sale

The details of assets held for sale and associated liabilities as of December 31, 2016, related to the sale of our energy segment, are shown below:

	2016
ASSETS	
Non-current assets	
Property, plant and equipment	83,935
Deferred tax assets	1,948
Other non-current assets	582
Total non-current assets	86,465
Current assets	
Inventories	32
Trade and other receivables	3,596
Current receivables from related parties	2,792
Other current assets	1
Cash and cash equivalents	51
Total current assets	6,472
Assets and disposal groups classified as held for sale	**92,937**
LIABILITIES	
Non-current liabilities	
Provisions	89
Obligations under finance leases	70,876
Other financial liabilities	5,576
Deferred tax liabilities	11,667
Total non-current liabilities	88,208
Current liabilities	
Provisions	1,265
Obligations under finance leases	10,507
Payables to related parties	254
Trade and other payables	3,651
Other current liabilities	3,797
Total current liabilities	19,474
Liabilities associated with assets held for sale	**107,682**

Assets held for sale and associated liabilities shown in the table above are presented after intercompany eliminations with the other Group entities of the Company.

Other financial liabilities

'Other financial liabilities' comprises an interest rate swap ('IRS'), which hedges the risk of changes in interest rates on 'Obligation under financial leases – hydroelectrical installation finance leases'. As mentioned in Note 26 caption e) ii, since June 30, 2015, all of our hedges have been considered ineffective under hedge accounting, and as a result the changes in market value of these derivatives are recognized in the consolidated income statement.

Obligation under financial leases

'Obligation under financial leases' comprises a finance lease relating to the Company's rights to use certain hydroelectrical installations, which expires in 2022, ten years from the date on which it was entered into.

As mentioned above, this lease bears interest at a market rate and the Company has entered into hedges ("IRSs") on the unaccrued interest on this lease.

The minimum lease payments on hydroelectrical installation finance leases at December 31, 2016 are as follows:

Minimum Finance Lease Payments	2016
Within one year	10,507
Between one and five years	47,510
After five years	23,366
	81,383

Other comprehensive income (loss) from discontinued operations

As of December 31, 2016, there is no accumulated amount included in the statement of other comprehensive income (loss) from discontinued operations.

28. Events after the reporting period

Amended Revolving Credit Facility

On February 15, 2017, Ferroglobe PLC and its subsidiary Globe Specialty Metals, Inc. (collectively, together with certain subsidiaries of Ferroglobe party thereto from time to time as co-borrowers, the "Borrowers"), certain subsidiaries of Ferroglobe party thereto as guarantors, the financial institutions party thereto as lenders (the "Lenders") and Citizens Bank of Pennsylvania, as administrative agent for the Lenders (the "Administrative Agent"), entered into the Revolving Credit Facility Amendment to amend the Existing Revolving Credit Facility Agreement.

The Amended Revolving Credit Facility provides for borrowings up to an aggregate principal amount of $200 million to be made available to the Borrowers in U.S. Dollars. Multicurrency borrowings under the Amended Revolving Credit Facility will be available in Euros, Pound Sterling and such other mutually agreeable currencies to be determined in an aggregate amount not to exceed $100 million. The Amended Revolving Credit Facility contains a sublimit for the issuance of letters of credit in an amount of up to $25 million (up to $10 million of which may be used for letters of credit denominated in foreign currencies to be determined). The borrowings under the Amended Revolving Credit Facility will mature on August 20, 2018. Subject to certain exceptions, loans under the Amended Revolving Credit Facility may be borrowed, repaid and reborrowed at any time.

Interest rates

At Ferroglobe's option, loans under the Amended Revolving Credit Facility will bear interest based on LIBOR ("LIBOR Rate Loans") or the Administrative Agent's base rate ("Base Rate Loans") plus 4.00% (in the case of LIBOR Rate Loans) and 3.00%

(in the case of Base Rate Loans). Interest on Base Rate Loans is payable quarterly in arrears. Interest on LIBOR Rate Loans is payable at the end of each applicable interest period (one, two, three or six month periods) (or at three month intervals if earlier).

Guarantees and security

The obligations of the Borrowers are guaranteed by certain subsidiaries of Ferroglobe. The obligations of the Loan Parties (as defined in the Amended Revolving Credit Facility), together with each secured bank product accepted or executed by a Loan Party, are or will be secured by security interests in certain equity interests of subsidiaries of the Loan Parties and certain assets of the Loan Parties.

Covenants

The Amended Revolving Credit Facility contains certain affirmative covenants.

Change of control

Under this Amended Revolving Credit Facility a change of control is an event of default. This means that the Administrative Agent can, upon the request of a lenders holding a majority of the revolving commitments, (1) declare all amounts outstanding (other than under hedging agreements) immediately due and payable, (2) terminate the revolving commitments and (3) require that all outstanding letters of credit be cash collateralized. Grupo Villar Mir S.A.U., owner of approximately 55% of our outstanding shares, has pledged all of its shares to secure its obligations to Crédit Agricole Corporate and Investment Bank, Banco Santander and HSBC. If Grupo Villar Mir S.A.U. defaults on the underlying loan we could experience a change in control.

Senior Notes due 2022

On February 15, 2017, Ferroglobe PLC and its Subsidiary Globe Specialty Metals, Inc. (together, the “Issuers”) issued $350 million aggregate principal amount of 9.375% Senior Notes due 2022 (the “Notes”). The portion corresponding to Ferroglobe PLC amounted to $150 million and portion corresponding to Globe Specialty Metals amounted to $200 million. The interest on the Notes is payable semi-annually on March 1 and September 1 of each year, commencing on September 1, 2017. At any time prior to March 1, 2019, the Issuers may redeem all or a portion of the Notes at a redemption price based on a “make-whole” premium. At any time on or after March 1, 2019, the Issuers may redeem all or a portion of the Notes at redemption prices varying based on the period during which the redemption occurs. In addition, at any time prior to March 1, 2019, the Issuers may redeem up to 35% of the aggregate principal amount of the Notes with the net proceeds from certain equity offerings at a redemption price of 109.375% of the principal amount of the Notes, plus accrued and unpaid interest. The Issuers have agreed to pay certain additional amounts in respect of any withholdings or deductions for certain types of taxes in certain jurisdictions on payments to holders of the Notes. The Notes are senior unsecured obligations of the Issuers and are guaranteed on a senior basis by certain subsidiaries of Ferroglobe. The Notes are listed on the Irish Stock Exchange. The indenture contains certain negative covenants. Additionally, if the Issuers experience a change of control the indenture requires the Issuers to offer to redeem the bonds at 101%. As noted above, Grupo Villar Mir S.A.U. owns 55% of our outstanding share and has pledged them to secure its obligations to certain banks. The Company would experience a change in control and would be required to offer redemption of bonds in accordance with the indenture if Grupo Villar Mir S.A.U. defaults on the underlying loan.

New development of the Spanish Solar Project

In 2016, FerroAtlántica entered into a project with Aurinka for a feasibility study and basic engineering for an upgraded metallurgical grade (“UMG”) solar silicon manufacturing plant. Purchases under this project were approximately €3.0 million for 2016. On December 20, 2016, Ferroglobe entered into an agreement with Aurinka and Blue Power Corporation, S.L. (the “Solar JV Agreement”) providing for the formation and operation of a joint venture with the purpose of UMG solar silicon, subject to the satisfaction of certain conditions precedent. On February 24, 2017 the parties signed-off the final JV agreement that launched the mentioned project (see Note 22). Under the Solar JV Agreement, Ferroglobe will indirectly own 75% of the operating companies to be formed which, at the date of issuance of this report, is the entity FerroSolar OpCo Group, S.L., as part of the joint venture; and, 51% of the company to be formed as part of the joint venture to hold the intellectual property rights and know how contributed by Aurinka and Ferroglobe to the joint venture which, at the date of issuance of this report, is the Group entity Silicio FerroSolar R&D, S.L.

Appendix I - As of December 31, 2016

	Percentage of Ownership			
	Direct	Total	Line of Business	Registered
Alabama Sand and Gravel, Inc. (2)	—	100.0	Electrometallurgy - North America	Delaware - USA
Alden Resources, LLC (2)	—	100.0	Electrometallurgy - North America	Delaware - USA
Alden Sales Corporation, LLC (2)	—	100.0	Electrometallurgy - North America	Delaware - USA
Core Metals Group Holdings, LLC (2)	—	100.0	Electrometallurgy - North America	Delaware - USA
Core Metals Group, LLC (2)	—	100.0	Electrometallurgy - North America	Delaware - USA
Gatliff Services, LLC (2)	—	100.0	Electrometallurgy - North America	Delaware - USA
GBG Holdings, LLC (2)	—	100.0	Electrometallurgy - North America	Delaware - USA
Globe Metallurgical, Inc. (2)	—	100.0	Electrometallurgy - North America	Delaware - USA
Globe Metals Enterprises, Inc. (2)	—	100.0	Electrometallurgy - North America	Delaware - USA
GSM Alloys I, Inc. (2)	—	100.0	Electrometallurgy - North America	Delaware - USA
GSM Alloys II, Inc. (2)	—	100.0	Electrometallurgy - North America	Delaware - USA
GSM Enterprises Holdings, Inc. (2)	—	100.0	Electrometallurgy - North America	Delaware - USA
LF Resources, Inc. (2)	—	100.0	Electrometallurgy - North America	Delaware - USA
Norchem, Inc. (2)	—	100.0	Electrometallurgy - North America	Florida - USA
QSIP Canada ULC (2)	—	100.0	Electrometallurgy - North America	Canada
QSIP Sales ULC (2)	—	100.0	Electrometallurgy - North America	Canada
Quebec Silicon LP (2)	—	51.0	Electrometallurgy - North America	Canada
Tennessee Alloys Company, LLC (2)	—	100.0	Electrometallurgy - North America	Delaware - USA
West Virginia Alloys, Inc. (2)	—	100.0	Electrometallurgy - North America	Delaware - USA
WVA Manufacturing, LLC (2)	—	51.0	Electrometallurgy - North America	Delaware - USA
Cuarzos Industriales, S.A.U.	—	100.0	Electrometallurgy - Europe	A Coruña - Spain
Ferroatlántica, S.A.U. - Electrometallurgy (1)	—	100.0	Electrometallurgy - Europe	Madrid - Spain
FerroPem, S.A.S.	—	100.0	Electrometallurgy - Europe	France
Grupo FerroAtlántica, S.A.U	100.0	100.0	Electrometallurgy - Europe	Madrid - Spain
Hidro-Nitro Española, S.A. - Electrometallurgy (1)	—	100.0	Electrometallurgy - Europe	Madrid - Spain
Rocas, Arcillas y Minerales, S.A.	—	66.7	Electrometallurgy - Europe	A Coruña - Spain
Rebone Mining (Pty.), Ltd.	—	100.0	Electrometallurgy - South Africa	Polokwane - South Africa
Samquarz (Pty.), Ltd.	—	74.0	Electrometallurgy - South Africa	Delmas - South Africa
Silicon Smelters (Pty.), Ltd.	—	100.0	Electrometallurgy - South Africa	Polokwane - South Africa
Silicon Technology (Pty.), Ltd.	—	100.0	Electrometallurgy - South Africa	South Africa
Thaba Chueu Mining (Pty.), Ltd.	—	74.0	Electrometallurgy - South Africa	Polokwane - South Africa
Cuarzos Industriales de Venezuela (Cuarzoven), S.A.	—	100.0	Electrometallurgy - Venezuela	Venezuela
Ferroatlántica de Venezuela (FerroVen), S.A.	—	80.0	Electrometallurgy - Venezuela	Venezuela
Actifs Solaires Bécancour, Inc	—	100.0	Other segments	Canada
Emix, S.A.S.	—	100.0	Other segments	France
Ferroatlántica Brasil Mineraçao Ltda.	—	70.0	Other segments	Brazil
FerroAtlántica Canada Company Ltd	—	100.0	Other segments	Canada
Ferroatlántica de México, S.A. de C.V.	—	100.0	Other segments	Nueva León - Mexico
Ferroatlántica Deutschland, GmbH	—	100.0	Other segments	Germany
Ferroatlántica I+D, S.L.U.	—	100.0	Other segments	Madrid - Spain
FerroAtlántica India Private Limited	—	100.0	Other segments	India
Ferroatlántica y Cía., F. de Ferroaleac. y Metales,	—	100.0	Other segments	Madrid - Spain

S.C.				
Ferroatlántica, S.A.U. - Other segments - Energy (1)	—	100.0	Other segments	Madrid - Spain
FerroAtlántica International Ltd	—	100.0	Other segments	United Kingdom
Ferroglobe Services plc	100.0	100.0	Other segments	United Kingdom
FerroManganese Mauritania SARL	—	10.0	Other segments	Mauritania
Ferroquartz Company Ltd	—	100.0	Other segments	Canada
Ferroquartz Holdings, Ltd	—	100.0	Other segments	Hong Kong
FerroQuartz Mauritania SARL	—	80.0	Other segments	Mauritania
FerroQuébec, Inc.	—	100.0	Other segments	Canada
FerroTambao, SARL	—	90.0	Other segments	Burkina Faso
Ganzi Ferroatlántica Silicon Industry Company, Ltd.	—	75.0	Other segments	Yuanyangba, Kanding Country (Sichuan) (China)
Globe Metales S.A. (2)	—	100.0	Other segments	Argentina
Globe Specialty Metals, Inc. (2)	100.0	100.0	Other segments	Delaware - USA
Hidro-Nitro Española, S.A. - Other segments - Energy (1)	—	100.0	Other segments	Madrid - Spain
Mangshi FerroAtlántica Mining Industry Service Company Ltd	—	100.0	Other segments	MangShi, Dehong (Yunnan) (China)
MangShi Sinice Silicon Industry Company Limited	—	100.0	Other segments	MangShi, Dehong (Yunnan) (China)
Ningxia Yongvey Coal Industrial Co., Ltd. (2)	—	98.0	Other segments	China
Silicio FerroSolar, S.L.U.	—	100.0	Other segments	Madrid - Spain
Solsil, Inc.	—	100.0	Other segments	Delaware - USA
Ultracore Energy, S.A.	—	100.0	Other segments	Argentina

(1) FerroAtlántica, S.A.U. and Hidro Nitro Española, S.A. carry on business activities in both the Electrometallurgy – Europe and Other segments – Energy.
(2) Entered to the scope of consolidation during 2015 as a result of the business combination (GSM subsidiary).

SECOND AMENDMENT TO CREDIT AGREEMENT AND LIMITED WAIVER AGREEMENT

THIS SECOND AMENDMENT TO CREDIT AGREEMENT AND LIMITED WAIVER AGREEMENT (this "Amendment"), dated as of December 21, 2016, is by and among Globe Specialty Metals, Inc., a Delaware corporation (the "Company"), certain Subsidiaries of the Company party hereto (together with Company, the "Borrowers" and each a "Borrower"), the Lenders (as defined below) party hereto and Citizens Bank of Pennsylvania, as Administrative Agent (the "Agent"). Capitalized terms used herein and not otherwise defined herein shall have the meanings ascribed thereto in the Credit Agreement (as defined below).

W I T N E S S E T H

WHEREAS, the Borrowers, the various financial institutions from time to time party thereto (the "Lenders") and the Agent are parties to that certain Credit Agreement dated as of August 20, 2013 (as amended, modified, extended, restated, replaced, or supplemented from time to time, the "Credit Agreement");

WHEREAS, the Company has informed the Agent that it may fail to comply with the requirements of (i) Section 7.6A of the Credit Agreement for the Fiscal Quarter ending December 31, 2016, (ii) Section 7.6B of the Credit Agreement for the Fiscal Quarter ending December 31, 2016 and (iii) Section 1.1(b) of that certain Limited Waiver Agreement, dated as of October 6, 2016 (collectively, the "Potential Defaults");

WHEREAS, the Company has requested that the Required Lenders (a) waive the Potential Defaults and (b) agree to certain amendments of the Credit Agreement; and

WHEREAS, the Required Lenders are willing to waive the Potential Defaults and agree to such amendments in accordance with and subject to the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the agreements hereinafter set forth, and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the parties hereto agree as follows:

ARTICLE I
WAIVER

1.1 Waivers. Notwithstanding the provisions of the Credit Agreement to the contrary, the Required Lenders hereby waive the Potential Defaults (the "Waiver"); provided, that the Company shall deliver a Compliance Certificate (along with the corresponding financial statements) to the Agent on or before April 1, 2017 (the "Interim Compliance Certificate") demonstrating that, as of the most recent month end prior to such date for which financial statements are available (provided that such month end shall not be earlier than September 30, 2016), (i) the ratio of (A)(1) Consolidated Total Debt as at such date minus (2) unrestricted cash and Cash Equivalents on the balance sheet of the Company and its Subsidiaries; provided, however, credit shall only be given for 66% of cash and Cash Equivalents not held by the Company or a Domestic Subsidiary that is a Loan Party to (B) Consolidated EBITDA for the twelve month period ending on such date does not exceed 3.25 to 1.00 and (ii) the ratio of (A) Consolidated EBITDA for the twelve month period ending on such date to (B) Consolidated Interest Expense for such period is not less than 3.00 to 1.00. The failure to comply with the provisos contained in the foregoing sentence shall result in an immediate Event of Default under the Credit Agreement. For

avoidance of doubt, nothing contained herein shall waive, diminish, or otherwise affect the Company's obligation to be in compliance with Sections 7.6A and 7.6B of the Credit Agreement on the last day of each Fiscal Quarter for the Fiscal Quarters ending March 31, 2017 and thereafter.

1.2 Effectiveness of Waiver. This Waiver shall be effective only to the extent specifically set forth herein and shall not (a) be construed as a waiver of any breach, Default or Event of Default other than the Potential Defaults nor as a waiver of any breach, Default or Event of Default of which the Lenders have not been informed by the Loan Parties, (b) affect the right of the Lenders to demand compliance by the Loan Parties with all terms and conditions of the Loan Documents, except as specifically modified or waived by this Waiver, (c) be deemed a waiver of any transaction or future action on the part of the Loan Parties requiring the Lenders' or the Required Lenders' consent or approval under the Loan Documents, or (d) except as waived hereby, be deemed or construed to be a waiver or release of, or a limitation upon, the Agent's or the Lenders' exercise of any rights or remedies under the Credit Agreement or any other Loan Document, whether arising as a consequence of any Default or Event of Default (other than with respect to the Potential Defaults) which may now exist or otherwise, all such rights and remedies hereby being expressly reserved.

ARTICLE II
AMENDMENTS TO CREDIT AGREEMENT

2.1 New Definitions. The following definitions are hereby added to Section 1.1 of the Credit Agreement in the appropriate alphabetical order.

"Energy Assets" means the hydroelectric plants, and the assets associated with such business, owned by Ferroglobe and its Subsidiaries and located at each of the locations set forth on Schedule 1.1D attached hereto.

"**Second Amendment Effective Date**" means December 21, 2016.

2.2 Amendments to Section 2.1A(ii). Section 2.1A(ii) of the Credit Agreement is amended by:

(a) replacing "The original amount of each Revolving Lender's Revolving Loan Commitment is set forth opposite the name of such Lender on Schedule 2.1A and the original Revolving Loan Commitment Amount is $300,000,000" appearing in the second sentence of such Section with "The amount of each Revolving Lender's Revolving Loan Commitment as of the Second Amendment Effective Date is set forth opposite the name of such Lender on Schedule 2.1A and the Revolving Loan Commitment Amount as of the Second Amendment Effective Date is $200,000,000"; and

(b) adding the following sentence at the end of such subsection: "Notwithstanding anything herein to the contrary, during the period from the Second Amendment Effective Date through March 31, 2017, the Total Utilization of Revolving Loan Commitments shall not exceed $150,000,000 and solely for purposes of calculating the amount of the Commitment Fee under Section 2.3A, the Revolving Loan Commitment Amount shall be deemed to be $150,000,000 for such period."

2.3 Amendment to Section 2.2A(i). The proviso appearing at the end of Section 2.2A(i) of the Credit Agreement is hereby amended and restated in its entirety to read as follows:

provided that during the period from the Second Amendment Effective Date through March 31, 2017, the applicable margin for Eurocurrency Rate Loans shall be 4.00% per annum and for Base Rate Loans shall be 3.00% per annum.

2.4 Amendment to Section 2.3A. The proviso appearing at the end of Section 2.3A of the Credit Agreement is hereby amended and restated in its entirety to read as follows:

provided that at all times following the Second Amendment Effective Date, the Commitment Fee shall be 0.50% per annum.

2.5 Amendment to Section 6. Section 6 of the Credit Agreement shall be amended by adding new Section 6.12 and Section 6.13 at the end of such section to read as follows:

6.12 Energy Assets. No later than the fifth Business Day following the date of receipt by Ferroglobe or any of its Subsidiaries of any net cash proceeds in respect of the sale of Energy Assets, the Company shall obtain and receive such net cash proceeds, which shall be retained by the Company and used for working capital and other general corporate purposes; provided, however, that the Company shall not be required under this Section 6.12 to obtain and receive proceeds from the sale of Energy Assets in an aggregate amount in excess of $28,750,000.

6.13 Investment Banker. On or before January 15, 2017, the Company shall have retained an investment banker (the "Investment Banker") to assess the Company's capital structure and assist the Company in raising additional debt and/or equity investment, and the Company shall have delivered to the Administrative Agent an executed copy of an engagement letter with such investment banker (or other evidence of engagement) in form and substance reasonably satisfactory to the Administrative Agent. The Company shall continue to retain the Investment Banker through April 1, 2017, pursuant to terms that are reasonably acceptable to the Administrative Agent and, for the avoidance of doubt, the failure to do so shall constitute an Event of Default. In the event that the Company terminates or otherwise modifies the terms of the Investment Banker's engagement, the Company shall provide the Administrative Agent with written notice within two (2) Business Days of such termination or modification. On February 15, 2017 and March 15, 2017, the Company shall provide (and shall use its commercially reasonable efforts to cause the Investment Banker to also provide) an update (in form and substance satisfactory to the Administrative Agent) to the Administrative Agent regarding the Investment Banker's and the Company's efforts to raise additional debt and/or equity investment for the Company.

2.6 Amendment to Section 7.5. Section 7.5 of the Credit Agreement shall be amended by adding the following sentence at the end of such section:

Notwithstanding anything to the contrary contained in this Credit Agreement (including, without limitation, any exceptions set forth in Section 7.3 or this Section 7.5), no Restricted Junior Payments, Investments, distributions, or any other payments shall be made by the Borrowers or any of their Subsidiaries to Ferroglobe at any time following the Second Amendment Effective Date.

2.7 Amendment to Section 8.3. Section 8.3 of the Credit Agreement shall be amended and restated in its entirety to read as follows:

Failure of Company to perform or comply with any term or condition contained in subsection 2.4B(iii)(f), 2.5B, 2.5C, 6.1(i), 6.2, 6.12, 6.13 or any of Sections 7.1, 7.2A, 7.3, 7.4, 7.5, 7.6, 7.7, 7.10, 7.11(b) or 7.12 (solely with respect to subordinated Indebtedness) of this Agreement; or

2.8 Amendment to Schedule 2.1A. Schedule 2.1A to the Credit Agreement is replaced with Schedule 2.1A attached hereto. Each of the parties hereto agrees that, after giving effect to this Amendment, the revised Revolving Loan Commitment of each Lender (as of the Second Amendment Effective Date) shall be as set forth on Schedule 2.1A attached hereto. In connection with this Amendment, the outstanding Revolving Loans and participation interests in Letters of Credit shall be reallocated by causing such fundings and repayments (which shall not be subject to any processing and/or recordation fees) among the Lenders of the Revolving Loans as necessary such that, after giving effect to the decreases pursuant to this Amendment, each Lender will hold Revolving Loans based on its Revolving Loan Commitment (after giving effect to such decreases). The Borrowers shall be responsible for any costs arising under Section 2.6 of the Credit Agreement resulting from such reallocation and repayments.

2.9 Addition of Schedule 1.1D. A new Schedule 1.1D in the form attached as Schedule 1.1D to this Amendment is hereby added to the Credit Agreement.

ARTICLE III
CONDITIONS TO EFFECTIVENESS

3.1 Closing Conditions. This Amendment shall be deemed effective as of the date set forth above (the "Effective Date") upon satisfaction of the following conditions (in form and substance reasonably acceptable to the Agent):

(a) Executed Amendment. The Agent shall have received a copy of this Amendment duly executed by each of the Borrowers, the other Loan Parties, the Agent and the Required Lenders.

(b) Other Documents. The Agent shall have received:

(i) A file-stamped termination statement in form and substance satisfactory to the Agent with respect to UCC-1 Financing Statement No. 2012 2531806 filed on June 29, 2012 with the Delaware Secretary of State;

(ii) A list of all of the Loan Parties' Deposit Accounts with banks other than the Agent in form and substance satisfactory to the Agent; and

(iii) All other documents from the Loan Parties as reasonably requested by the Agent prior to the date hereof.

(c) Fees and Expenses.

(i) The Agent shall have received from the Borrowers, for the account of each Lender that executes and delivers a signature page to this Amendment to the Agent by 5:00 p.m. (EST) on or before December 20, 2016 (each such Lender, a "Consenting Lender", and collectively, the "Consenting Lenders"), a consent fee in an amount equal to 10 basis points on the aggregate Revolving Loan Commitments of such Consenting Lender, determined immediately prior to giving effect to this Amendment.

(ii) The Agent shall have received from the Borrowers such other fees and reasonable and documented out-of-pocket expenses that are payable in connection with the consummation of the transactions contemplated hereby, and King & Spalding LLP shall have received from the Borrowers payment of all reasonable and documented fees and expenses incurred prior to the date hereof or in connection with this Amendment.

ARTICLE IV
MISCELLANEOUS

4.1 **Amended Terms**. On and after the Effective Date, all references to the Credit Agreement in each of the Loan Documents shall hereafter mean the Credit Agreement as amended by this Amendment. Except as specifically amended hereby or otherwise agreed, the Credit Agreement is hereby ratified and confirmed and shall remain in full force and effect according to its terms.

4.2 **Representations and Warranties of Borrowers**. Each of the Loan Parties represents and warrants as follows:

(a) Such Loan Party has taken all necessary action to authorize the execution, delivery and performance of this Amendment.

(b) Such Loan Party has duly executed and delivered the Amendment and the Amendment constitutes such Loan Party's legal, valid and binding obligation, enforceable in accordance with its terms, except as such enforceability may be subject to (i) bankruptcy, insolvency, reorganization, fraudulent conveyance or transfer, moratorium or similar laws affecting creditors' rights generally and (ii) general principles of equity (regardless of whether such enforceability is considered in a proceeding at law or in equity).

(c) No approval is required to be obtained by such Loan Party or any of its Subsidiaries in connection with the execution, delivery or performance by such Loan Party of this Amendment; except for such approvals which have been issued or obtained by such Loan Party or any of its Subsidiaries which are in full force and effect.

(d) The representations and warranties set forth in Section 5 of the Credit Agreement are (i) with respect to representations and warranties that contain a materiality qualification, true and correct as of the date hereof (except for those which expressly relate to an earlier date) and (ii) with respect to representations and warranties that do not contain a materiality qualification, true and correct in all material respects as of the date hereof (except for those which expressly relate to an earlier date).

(e) After giving effect to this Amendment, no event has occurred and is continuing which constitutes a Default or an Event of Default.

4.3 **Reaffirmation of Obligations**. Each Loan Party acknowledges and agrees that: (a) as of November 30, 2016, the aggregate principal balance of the outstanding Loans under the Credit Agreement is at least $125,000,000; (b) the outstanding amount of Letters of Credit issued under the Credit Agreement is at least $382,436.82; (c) in addition to the outstanding principal amount of the Loans, the Loan Parties are further indebted under the Credit Agreement for all other interests, costs, fees and expenses due and owing under the Credit Agreement and the Loan Documents in accordance with the terms thereof; and (d) all Obligations constitute the valid and binding obligations of such Loan Party enforceable against such Loan Party without setoff, counterclaim, or defense, except as enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting creditors' rights generally and by general principles of equity. Each Loan Party hereby ratifies the Credit Agreement and acknowledges and reaffirms that: (y) that it is bound by all terms of the Credit Agreement applicable to it and (z) it is responsible for the observance and full performance of its respective Obligations.

4.4 Loan Document. This Amendment shall constitute a Loan Document under the terms of the Credit Agreement.

4.5 Expenses. The Borrowers agree to pay all reasonable and documented costs and expenses of the Agent in connection with the preparation, execution and delivery of this Amendment (including, without limitation, the reasonable and documented fees and expenses of the Agent's legal counsel).

4.6 Entirety. This Amendment and the other Loan Documents embody the entire agreement among the parties hereto and supersede all prior agreements and understandings, oral or written, if any, relating to the subject matter hereof.

4.7 Counterparts; Telecopy. This Amendment may be executed in any number of counterparts, all of which taken together shall constitute one agreement, and any of the parties hereto may execute this Amendment by signing any such counterpart. This Amendment shall be effective when it has been executed by the Borrowers, the Agent and the Consenting Lenders constituting the Required Lenders and each party has transmitted executed signature pages by telefacsimile or in 'PDF' format by electronic mail.

4.8 GOVERNING LAW. THIS AMENDMENT AND ANY CLAIMS, CONTROVERSY OR DISPUTE ARISING OUT OF OR RELATING TO THIS AMENDMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO CHOICE OF LAW RULES (OTHER THAN SECTION 5-1401 OF THE GENERAL OBLIGATIONS LAW OF THE STATE OF NEW YORK).

4.9 Successors and Assigns. This Amendment shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

4.10 Consent to Jurisdiction; Service of Process; Waiver of Jury Trial. The consent to jurisdiction and waiver of jury trial provisions set forth in Sections 10.16 and 10.17 of the Credit Agreement, respectively, are hereby incorporated by reference, *mutatis mutandis*.

4.11 General Release. In consideration of the Agent's and Consenting Lenders' willingness to enter into this Amendment, each Loan Party hereby releases and forever discharges the Agent, the Issuing Lender, the Swing Line Lender, the Lenders and the Agent's, the Issuing Lender's, the Swing Line Lender's, and each of the Lender's respective predecessors, successors, assigns, officers, managers, directors, employees, agents, attorneys, representatives, and affiliates (hereinafter all of the above collectively referred to as the "Bank Group"), from any and all claims, counterclaims, demands, damages, debts, suits, liabilities, actions and causes of action of any nature whatsoever, including, without limitation, all claims, demands, and causes of action for contribution and indemnity, whether arising at law or in equity, whether known or unknown, whether liability be direct or indirect, liquidated or unliquidated, whether absolute or contingent, foreseen or unforeseen, and whether or not heretofore asserted, which any Loan Party may have or claim to have against any of the Bank Group.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF the parties hereto have caused this Amendment to be duly executed on the date first above written.

GLOBE SPECIALTY METALS, INC.

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: CFO

ALABAMA SAND AND GRAVEL, INC., a Delaware corporation
GLOBE METALLURGICAL INC., a Delaware corporation
GLOBE METALS ENTERPRISES, INC., a Delaware corporation
GSM ALLOYS I INC., a Delaware corporation
GSM ALLOYS II INC., a Delaware corporation
GSM FINANCIAL, INC., a Delaware corporation
GSM SALES, INC., a Delaware corporation
L F RESOURCES, INC., a Delaware corporation
SOLSIL, INC., a Delaware corporation
GSM ENTERPRISES HOLDINGS INC., a Delaware corporation

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: CFO

CORE METALS GROUP HOLDINGS LLC, a Delaware limited liability company
By: **GLOBE METALS ENTERPRISES, INC.,** as sole member

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: CFO

CORE METALS GROUP LLC, a Delaware limited liability company
By: **CORE METALS GROUP HOLDINGS LLC,** as sole member
By: **GLOBE METALS ENTERPRISES, INC.,** as sole member

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: CFO

GBG FINANCIAL, LLC, a Delaware limited liability company
GBG HOLDINGS, LLC, a Delaware limited liability company
By: **GSM ENTERPRISES LLC**, as sole member
By: **GLOBE SPECIALTY METALS, INC.**, as sole member

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: CFO

GLOBE ARGENTINA HOLDCO LLC, a Delaware limited liability company
By: **GLOBE SPECIALTY METALS, INC.,** as sole member

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: CFO

GLOBE REALTY LLC, a New York limited liability company
By: **GLOBE SPECIALTY METALS, INC.,** as sole member

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: CFO

GSM ENTERPRISES LLC, a Delaware limited liability company
By: **GLOBE SPECIALTY METALS, INC.,** as sole member

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: CFO

METALLURGICAL PROCESS MATERIALS, LLC,
a Delaware limited liability company

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: CFO

TENNESSEE ALLOYS COMPANY LLC,
a Delaware limited liability company

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: CFO

ALDEN RESOURCES LLC, a Delaware limited liability company
GATLIFF SERVICES, LLC, a Delaware limited liability company

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: CFO

ALDEN SALES CORP, LLC, a Delaware limited liability company
By: **GBG HOLDINGS, LLC**, as sole member
By: **GSM ENTERPRISES LLC**, as sole member
By: **GLOBE SPECIALTY METALS, INC**., as sole member

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: CFO

ALDEN RESOURCES LLC, a Delaware limited liability company
By: **ALDEN RESOURCES, LLC,** as sole member

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: CFO

NORCHEM, INC, a Florida corporation

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: CFO

CITIZENS BANK OF PENNSYLVANIA,
as Agent and a Lender

By: /s/ David W. Stack
David W. Stack
Its Duly Authorized Signatory

Compass Bank d/b/a BBVA Compass, as a Lender

By: /s/ Cameron D. Gateman
Name: Cameron D. Gateman
Title: Senior Vice President

Branch Banking and Trust Company _____,
as a Lender

By: /s/ Max Greer
Name: Max Greer
Title: Senior Vice President

PNC BANK, NATIONAL ASSOCIATION, as a Lender

By: /s/ Mahir J. Desai
Name: Mahir J. Desai
Title: Assistant Vice President

WELLS FARGO BANK, NATIONAL ASSOCIATION,
as a Lender

By: /s/ Harry E. Ellis
Name: Harry E. Ellis
Title: Senior Vice President

Fifth Third Bank, as a Lender

By: /s/ Jim Schmalz
Name: Jim Schmalz
Title: Vice President

Schedule 2.1A
Commitments and Pro Rata Shares

Revolving Lender	Revolving Loan Commitment
Citizens Bank of Pennsylvania	$ 36,666,666.66
PNC Bank, N.A.	$ 31,666,666.67
Wells Fargo Bank, N.A.	$ 31,666,666.67
Compass Bank d/b/a BBVA Compass	$ 23,333,333.33
Branch Banking & Trust Company	$ 16,666,666.67
Citibank, N.A.	$ 16,666,666.67
Fifth Third Bank	$ 16,666,666.67
Capital One, National Association	$ 13,333,333.33
HSBC Bank USA, N.A.	$ 13,333,333.33
Total	**$200,000,000.00**

Schedule 1.1D

Plant	Location
FerroAtlántica S.A.	
Castrelo	A Coruña (Castrelo) / Xallas river
Sta. Eugenia I	A Coruña (Ezaro) / Xallas river
Sta. Eugenia II	A Coruña (Ezaro) / Xallas river
Nuevo Pindo	A Coruña (Ezaro) / Xallas river
Fervenza	A Coruña (A Reboira) / Xallas river
Puente Olveira	A Coruña (Castrelo) / Xallas river
Carantoña	A Coruña (Pasarela) / Rio Grande
Hidro Nitro Española S.A.	
Barasona	Huesca (Graus) / Esera river
El Ciego	Huesca (Estada) / Cinca river
Arias I	Huesca (Somontano de Barbastro) / Cinca river
Arias II	Huesca (Somontano de Barbastro) / Cinca river
Ariéstolas	Huesca (Somontano de Barbastro) / Cinca river
FerroPem S.A.S.*	
Saint-Béron	Saint-Béron / Rhône-Alpes region
Villelongue	Pierrefite / Hautes-Pyrénées region

THIRD AMENDMENT TO CREDIT AGREEMENT

THIS THIRD AMENDMENT TO CREDIT AGREEMENT (this "Amendment"), dated as of February 15, 2017, is by and among Ferroglobe PLC, a public limited company incorporated under the laws of England and Wales with registered address at 5 Fleet Place, London EC4M 7RD, United Kingdom and registered number 09425113 ("Company"), Globe Specialty Metals, Inc., a Delaware corporation ("Globe"), certain Subsidiaries of the Company party hereto (together with Company and Globe, the "Borrowers" and each a "Borrower"), the Subsidiary Guarantors party hereto, the Lenders (as defined below) party hereto and Citizens Bank of Pennsylvania, as Administrative Agent (the "Agent"). Capitalized terms used herein and not otherwise defined herein shall have the meanings ascribed thereto in the Credit Agreement (as defined below).

W I T N E S S E T H

WHEREAS, Globe, the various financial institutions from time to time party thereto (the "Lenders") and the Agent are parties to that certain Credit Agreement dated as of August 20, 2013 (as amended, modified, extended, restated, replaced, or supplemented from time to time, the "Credit Agreement");

WHEREAS, the Loan Parties have requested that the Requisite Lenders amend certain provisions of the Credit Agreement and certain other Loan Documents; and

WHEREAS, the Requisite Lenders are willing to make such amendments to the Credit Agreement and certain other Loan Documents, in accordance with and subject to the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the agreements hereinafter set forth, and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the parties hereto agree as follows:

ARTICLE I
AMENDMENTS TO CREDIT AGREEMENT

1.1 Amendments to Credit Agreement. From and after the Effective Date (as hereinafter defined), the Credit Agreement is amended to read in the form of the Credit Agreement attached hereto as Exhibit A to this Amendment (the "Amended Credit Agreement").

1.2 Amendments to Schedules. Those certain Schedules attached as Exhibit B to this Amendment shall replace the corresponding Schedules to the Credit Agreement. All other Schedules to the Credit Agreement shall not be modified or otherwise affected.

1.3 Amendments to Exhibits. Those certain Exhibits attached as Exhibit C to this Amendment shall replace the corresponding Exhibits to the Credit Agreement. All other Exhibits to the Credit Agreement shall not be modified or otherwise affected.

1.4 Waiver of Deliverables. By execution of this Amendment, the Requisite Lenders hereby waive the requirement that Globe deliver the information set forth in the proviso contained in Section 1.1 of that certain Second Amendment to Credit Agreement and Limited Waiver Agreement, dated as of December 21, 2016, by and among Globe, certain Subsidiaries of Globe party thereto, the Lenders party thereto and the Agent.

1.5 **Waiver of Voluntary Prepayment Requirements and Minimum Borrowing Amounts**. By execution of this Amendment, the Requisite Lenders hereby waive, on a one-time basis, (a) solely with respect to the borrowing of Revolving Loans on the Effective Date, the requirement set forth in Section 2.1B of the Credit Agreement that Eurocurrency Rate Loans be in multiples of $1,000,000 and (b) solely with respect to the voluntary prepayment made on the Effective Date, the notice and prepayment amount requirements set forth in Section 2.4B(i) of the Credit Agreement.

ARTICLE II
COMPANY JOINDER

2.1 **Joinder to the Credit Agreement**. Company hereby acknowledges, agrees and confirms that, by its execution of this Amendment, Company will be deemed to be "Company", a Borrower and a Loan Party under the Credit Agreement and shall have all of the obligations of "Company", a Borrower and a Loan Party thereunder as if it had executed the Credit Agreement. Company hereby ratifies, as of the date hereof, and agrees to be bound by, all of the terms, provisions and conditions contained in the Credit Agreement and the other applicable Loan Documents, including without limitation all of the covenants set forth in Sections 6 and 7 of the Credit Agreement. Company hereby represents and warrants as to itself that all representations and warranties contained in Section 5 of the Credit Agreement are true and correct with respect to Company.

2.2 **Receipt of Loan Documents**. Company acknowledges and confirms that it has received a copy of the Credit Agreement and the schedules and exhibits thereto and the other Loan Documents and the schedules and exhibits thereto. The information on the schedules to the Credit Agreement is hereby supplemented (to the extent permitted under the Credit Agreement) to reflect the information shown on the attached Exhibit B.

2.3 **Patriot Act Information**. Company represents and warrants that the information on Exhibit D to this Amendment is true and correct as of the date hereof.

2.4 **Effectiveness of Loan Documents**. Each Loan Party confirms that the Credit Agreement is, and upon Company becoming "Company", a Borrower and a Loan Party under the Credit Agreement, shall continue to be, in full force and effect. The parties hereto confirm and agree that immediately upon Company becoming "Company", a Borrower and a Loan Party under the Credit Agreement and a Chargor (as defined in the U.K. Collateral Documents) under the U.K. Collateral Documents, the term "Obligations"," as used in the Credit Agreement, and the term "Guarantied Obligations," as used in the Subsidiary Guaranty and the Company Guaranty, shall include all obligations of Company under the Credit Agreement and under each other Loan Document.

ARTICLE III
AMENDMENTS TO OTHER LOAN DOCUMENTS

3.1 **Amendment to Introductory Paragraph of the Company Guaranty**. The first paragraph of the Company Guaranty is amended and restated in its entirety to read as follows:

> This **COMPANY GUARANTY** (this "**Guaranty**") is entered into as of August 20, 2013 by **GLOBE SPECIALTY METALS, INC.**, a Delaware corporation ("**Globe**" and "**Guarantor**") in favor of and for the benefit of **CITIZENS BANK OF PENNSYLVANIA,** as Administrative Agent (in such capacity, the "**Administrative Agent**") for each of the Secured Parties. All capitalized terms used but not otherwise defined herein shall have the meanings ascribed to such terms in the Credit Agreement referred to below. As used herein, "**Company**" shall mean **FERROGLOBE PLC**, a public limited company incorporated under the laws of England and

Wales with registered number 09425113. As used herein, "**Co-Borrower**" shall mean all Borrowers other than Guarantor. All references to a Subsidiary or Subsidiaries of the Guarantor shall mean a Subsidiary or Subsidiaries of Company, as applicable.

3.2 **Amendment to Recitals of the Company Guaranty**. The recitals of the Company Guaranty are hereby amended and restated in their entirety to read as follows:

A. Pursuant to that certain Credit Agreement dated as of the date hereof among Company, Globe and certain other Subsidiaries of the Company from time to time party thereto, as Borrowers thereunder, and the Administrative Agent, and the lenders now or hereafter party thereto (the "**Lenders**") (as amended, restated, supplemented or otherwise modified, the "**Credit Agreement**"), the Lenders have agreed to provide the Borrowers with certain credit facilities;

B. Certain additional extensions of credit may be made from time to time for the benefit of the Loan Parties and their Subsidiaries pursuant to certain Secured Cash Management Agreements and Secured Hedge Agreements (each as defined in the Credit Agreement, collectively, "**Related Credit Arrangements**").

C. It is a condition precedent to the Secured Parties' obligations to make and maintain such extensions of credit that the Guarantor shall have executed and delivered this Guaranty to the Administrative Agent.

3.3 **Amendment to the Subsidiary Guaranty**. Recital "A" of the Subsidiary Guaranty is amended and restated in its entirety to read as follows:

A. Pursuant to that certain Credit Agreement dated as of the date hereof among Globe Specialty Metals, Inc., a Delaware corporation ("Globe"), certain Subsidiaries of the Company from time to time party hereto (collectively the "Co-Borrower"), and, pursuant to Section 2.1 of that certain Third Amendment to Credit Agreement dated as of February 15, 2017, Ferroglobe PLC, a public limited company incorporated under the laws of England and Wales with registered number 09425113 ("Company" and together with Co-Borrower and Globe, collectively the "Borrowers"), as Borrowers thereunder, and the Administrative Agent, and the lenders now or hereafter party thereto (the "Lenders") (as amended, restated, supplemented or otherwise modified, the "Credit Agreement"), the Lenders have agreed to provide the Borrowers with certain credit facilities;

3.4 **Release of Released Subsidiary Guarantors**. Company hereby confirms that each of the Released Subsidiary Guarantors (as defined below) are not Material Subsidiaries. On the Effective Date, (a) each Released Subsidiary Guarantor shall be released as a Subsidiary Guarantor and Guarantor (as defined in the Subsidiary Guaranty) and shall be discharged from all of its obligations as a Subsidiary Guarantor and Guarantor, and have no liability as a Subsidiary Guarantor or Guarantor under the Subsidiary Guaranty or any of the other Loan Documents and (b) all Collateral owned by each Subsidiary Guarantor shall hereby be deemed released and shall no longer secure any Obligations (as defined in the Credit Agreement) or Guarantied Obligations (as defined in the Subsidiary Guaranty). This release and discharge shall be effective without any additional action being taken by Agent or any Lender; provided that, at the request of a Released Subsidiary Guarantor, Agent shall, and each Requisite Lender party hereto hereby authorizes Agent to, deliver to such Released Subsidiary Guarantor, any instrument, document or certificate to confirm that it has been released and discharged (as a Subsidiary Guarantor and Guarantor) from all such obligations and liabilities and such Collateral has been released from all encumbrances under the Collateral Documents and to give further effect to this Section 3.4. As used herein, "Released Subsidiary Guarantors" means (a) Globe Metals Enterprises, Inc., a Delaware

corporation, (b) GSM Alloys I Inc., a Delaware corporation, (c) GSM Alloys II Inc., a Delaware corporation, (d) GSM Financial, Inc., a Delaware corporation, (e) L F Resources, Inc., a Delaware corporation, (f) Solsil, Inc., a Delaware corporation, (g) GSM Enterprises Holdings Inc., a Delaware corporation, (h) GBG Financial, LLC, a Delaware limited liability company, (i) GBG Holdings, LLC, a Delaware limited liability company, (j) Globe Argentina Holdco LLC, a Delaware limited liability company, (k) Globe Realty LLC, a New York limited liability company and (l) GSM Enterprises LLC, a Delaware limited liability company.

ARTICLE IV
CONDITIONS TO EFFECTIVENESS

4.1 **Closing Conditions**. This Amendment shall be deemed effective as of the date set forth above (the "Effective Date") upon satisfaction of the following conditions (in form and substance reasonably acceptable to the Agent):

(a) Executed Amendment. The Agent shall have received a copy of this Amendment duly executed by each of the Borrowers, the other Loan Parties, the Agent and the Requisite Lenders.

(b) Executed Loan Documents. The Agent shall have received a duly executed copy of the U.K. Collateral Documents.

(c) Other Documents. The Agent shall have received:

(i) copies of the Organizational Documents of Company and each Loan Party, certified by the Secretary of State of its jurisdiction of organization or, if such document is of a type that may not be so certified, certified by a director, the secretary or similar officer or signatory (as applicable) of the applicable Loan Party, each dated a recent date prior to the Effective Date or a certification by a director, the secretary or similar officer or signatory (as applicable) of the applicable Loan Party that the Organizational Documents for such Loan Party delivered to the Agent on the Closing Date remain true and correct and in force and effect as of the Effective Date;

(ii) a good standing certificate (or equivalent document, if applicable) for Company and each Loan Party from the Secretary of State of its jurisdiction of organization dated a recent date prior to the Effective Date;

(iii) resolutions of the Governing Body of Company and each Loan Party approving and authorizing the execution, delivery and performance of the Amendment and the other Loan Documents to which it is a party that are being executed in connection with the Amendment, certified as of the Effective Date by the secretary or similar officer or signatory (as applicable), or a duly appointed signatory, of such Person as being in full force and effect without modification or amendment;

(iv) signature and incumbency certificates of the officers of Company and each Loan Party executing the Amendment and the other Loan Documents to which it is a party that are being executed in connection with the Amendment or a certification that each officer listed in the incumbency certification contained in such Loan Party's secretary's or signatory's certificate (as applicable), delivered on the Closing Date, remains a duly elected and qualified officer of such Loan Party and such officer or

signatory (as applicable) remains duly authorized to execute and deliver on behalf of such Loan Party the Amendment;

(v) All other documents from the Loan Parties as reasonably requested by the Agent prior to the date hereof.

(d) Fees and Expenses.

(i) The Agent shall have received from the Borrowers, for the account of each Lender that executes and delivers a signature page to this Amendment to the Agent by 5:00 p.m. (EST) on or before January 31, 2017 (each such Lender, a "Consenting Lender", and collectively, the "Consenting Lenders"), a consent fee in an amount equal to 100 basis points on the aggregate Revolving Loan Commitment of such Consenting Lender, determined immediately prior to giving effect to this Amendment.

(ii) The Agent shall have received from the Borrowers such other fees and reasonable and documented out-of-pocket expenses that are payable in connection with the consummation of the transactions contemplated hereby, and King & Spalding LLP shall have received from the Borrowers payment of all reasonable and documented fees and expenses incurred prior to the date hereof or in connection with this Amendment.

(e) Legal Opinions. The Agent shall have received an opinion or opinions of counsel for the Loan Parties and counsel for the Agent in respect of Company, dated the Effective Date and addressed to the Agent and the Lenders which shall be in form and substance satisfactory to the Agent.

(f) Senior Notes. Company shall have received, or shall, substantially contemporaneously with the effectiveness of this Amendment, receive, not less than $350,000,000 in proceeds from the issuance of the Senior Notes. The Agent shall have received, or shall, substantially contemporaneously with the effectiveness of this Amendment, receive, duly executed copies of the Senior Note Indenture and any related documents, certified by a responsible officer of Company as being true, correct and complete; provided that, promptly after the execution thereof, Company shall deliver to the Agent, duly executed copies of each of the Senior Notes, certified by a responsible officer of Company as being true, correct and complete.

(g) Liquidity. After giving effect to this Amendment and the transactions contemplated thereby, Liquidity (as defined in the Amended Credit Agreement) shall not be less than $150,000,000 on a Pro Forma Basis.

ARTICLE V
MISCELLANEOUS

5.1 Amended Terms. On and after the Effective Date, all references to the Credit Agreement in each of the Loan Documents shall hereafter mean the Credit Agreement as amended by this Amendment. Except as specifically amended hereby or otherwise agreed, the Credit Agreement is hereby ratified and confirmed and shall remain in full force and effect according to its terms.

5.2 Representations and Warranties of Loan Parties. Each of the Loan Parties (including Company) represents and warrants as follows:

(a) Such Loan Party (including Company) has taken all necessary action to authorize the execution, delivery and performance of this Amendment.

(b) Such Loan Party (including Company) has duly executed and delivered the Amendment and the Amendment constitutes such Loan Party's legal, valid and binding obligation, enforceable in accordance with its terms, except as such enforceability may be subject to (i) bankruptcy, insolvency, reorganization, fraudulent conveyance or transfer, moratorium or similar laws affecting creditors' rights generally and (ii) general principles of equity (regardless of whether such enforceability is considered in a proceeding at law or in equity).

(c) No approval is required to be obtained by such Loan Party (including Company) or any of its Subsidiaries in connection with the execution, delivery or performance by such Loan Party of this Amendment; except for such approvals which have been issued or obtained by such Loan Party or any of its Subsidiaries which are in full force and effect.

(d) The representations and warranties set forth in Section 5 of the Credit Agreement are (i) with respect to representations and warranties that contain a materiality qualification, true and correct as of the date hereof (except for those which expressly relate to an earlier date) and (ii) with respect to representations and warranties that do not contain a materiality qualification, true and correct in all material respects as of the date hereof (except for those which expressly relate to an earlier date).

(e) After giving effect to this Amendment, no event has occurred and is continuing which constitutes a Potential Event of Default or an Event of Default.

5.3 Reaffirmation of Obligations. Each Loan Party (including Company) acknowledges and agrees that: (a) as of February 15, 2017, the aggregate principal balance of the outstanding Loans under the Credit Agreement is at least $125,000,000; (b) the outstanding amount of Letters of Credit issued under the Credit Agreement is at least $382,436.82; (c) in addition to the outstanding principal amount of the Loans, the Loan Parties (including Company) are further indebted under the Credit Agreement for all other interests, costs, fees and expenses due and owing under the Credit Agreement and the Loan Documents in accordance with the terms thereof; and (d) all Obligations constitute the valid and binding obligations of such Loan Party (including Company) enforceable against such Loan Party without setoff, counterclaim, or defense, except as enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting creditors' rights generally and by general principles of equity. Each Loan Party (including Company) hereby ratifies the Credit Agreement and acknowledges and reaffirms that: (y) that it is bound by all terms of the Credit Agreement applicable to it and (z) it is responsible for the observance and full performance of its respective Obligations.

5.4 Loan Document. This Amendment shall constitute a Loan Document under the terms of the Credit Agreement.

5.5 Expenses. The Borrowers (including Company) agree to pay all reasonable and documented costs and expenses of the Agent in connection with the preparation, execution and delivery of this Amendment (including, without limitation, the reasonable and documented fees and expenses of the Agent's legal counsel).

5.6 Entirety. This Amendment and the other Loan Documents embody the entire agreement among the parties hereto and supersede all prior agreements and understandings, oral or written, if any, relating to the subject matter hereof.

5.7 **Counterparts; Telecopy**. This Amendment may be executed in any number of counterparts, all of which taken together shall constitute one agreement, and any of the parties hereto may execute this Amendment by signing any such counterpart. This Amendment shall be effective when it has been executed by the Borrowers (including Company), the other Loan Parties, the Agent and the Consenting Lenders constituting the Requisite Lenders and each party has transmitted executed signature pages by telefacsimile or in 'PDF' format by electronic mail.

5.8 **GOVERNING LAW**. THIS AMENDMENT AND ANY CLAIMS, CONTROVERSY OR DISPUTE ARISING OUT OF OR RELATING TO THIS AMENDMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO CHOICE OF LAW RULES (OTHER THAN SECTION 5-1401 OF THE GENERAL OBLIGATIONS LAW OF THE STATE OF NEW YORK).

5.9 **Successors and Assigns**. This Amendment shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

5.10 **Consent to Jurisdiction; Service of Process; Waiver of Jury Trial**. The consent to jurisdiction and waiver of jury trial provisions set forth in Sections 10.16 and 10.17 of the Credit Agreement, respectively, are hereby incorporated by reference, *mutatis mutandis*.

5.11 **General Release**. In consideration of the Agent's and Consenting Lenders' willingness to enter into this Amendment, each Loan Party (including Company) hereby releases and forever discharges the Agent, the Issuing Lender, the Swing Line Lender, the Lenders and the Agent's, the Issuing Lender's, the Swing Line Lender's, and each of the Lender's respective predecessors, successors, assigns, officers, managers, directors, employees, agents, attorneys, representatives, and affiliates (hereinafter all of the above collectively referred to as the "Bank Group"), from any and all claims, counterclaims, demands, damages, debts, suits, liabilities, actions and causes of action of any nature whatsoever, including, without limitation, all claims, demands, and causes of action for contribution and indemnity, whether arising at law or in equity, whether known or unknown, whether liability be direct or indirect, liquidated or unliquidated, whether absolute or contingent, foreseen or unforeseen, and whether or not heretofore asserted, which any Loan Party (including Company) may have or claim to have against any of the Bank Group.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF the parties hereto have caused this Amendment to be duly executed on the date first above written.

FERROGLOBE PLC,

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: CFO

GLOBE SPECIALTY METALS, INC.,

By: /s/ Pedro Larrea Paguaga
Name: Pedro Paguaga Larrea
Title: Director

ALABAMA SAND AND GRAVEL, INC., a Delaware corporation

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: Vice President and Treasurer

ALDEN RESOURCES LLC, a Delaware limited liability company

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: Manager, Vice President and Treasurer

ALDEN SALES CORP, LLC, a Delaware limited liability company

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: Manager, Vice President and Treasurer

ARL RESOURCES, LLC, a Delaware limited liability company
By: **ALDEN RESOURCES LLC**, as sole member

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: Manager, Vice President and Treasurer

ARL SERVICES, LLC, a Delaware limited liability company
By: **ALDEN RESOURCES LLC**, as sole member

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: Manager, Vice President and Treasurer

CORE METALS GROUP HOLDINGS LLC, a Delaware limited liability company

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: Vice President and Treasurer

CORE METALS GROUP LLC, a Delaware limited liability company

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: Vice President and Treasurer

GATLIFF SERVICES, LLC, a Delaware limited liability company

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: Manager, Vice President and Treasurer

GLOBE METALLURGICAL INC., a Delaware corporation

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: Vice President and Treasurer

GSM SALES, INC., a Delaware corporation

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: Vice President and Treasurer

METALLURGICAL PROCESS MATERIALS, LLC, a Delaware corporation

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: Manager, Vice President and Treasurer

NORCHEM, INC, a Florida corporation

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: Vice President and Treasurer

TENNESSEE ALLOYS COMPANY, LLC, a Delaware limited liability company

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: Manager, Vice President and Treasurer

GLOBE METALS ENTERPRISES LLC., a Delaware limited liability corporation

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: Director

GLOBE ARGENTINA HOLDCO LLC, a Delaware limited liability company
By: **GLOBE SPECIALTY METALS, INC.**, as sole manager

By: /s/ Pedro Larrea Paguaga
Name: Pedro Larrea Paguaga
Title: Director

GBG HOLDINGS, LLC, a Delaware limited liability company
By: **GSM ENTERPRISES HOLDINGS, LLC**, as sole member
By: **GSM ENTERPRISES, LLC**, as sole member
By: **GLOBE SPECIALTY METALS, INC.**, as sole member

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: CFO

GSM ALLOYS I INC., a Delaware corporation

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: Director

GSM ALLOYS II INC., a Delaware corporation

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: Director

GSM ENTERPRISES HOLDINGS, LLC, a Delaware limited liability company
By: **GSM ENTERPRISES, LLC**, as sole member
By: **GLOBE SPECIALTY METALS, INC.**, as sole member

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: CFO

GSM FINANCIAL, INC., a Delaware corporation

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: Director

L F RESOURCES, INC., a Delaware corporation

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: Director

SOLSIL, INC., a Delaware corporation

By: /s/ Joseph Ragan
Name: Joseph Ragan
Title: Director

GBG FINANCIAL, LLC, a Delaware limited liability company
By: **GSM ENTERPRISES, LLC**, as sole member
By: **GLOBE SPECIALTY METALS, INC.**, as sole member

By: /s/ Pedro Larrea Paguaga
Name: Pedro Larrea Paguaga
Title: Director

GLOBE REALTY LLC, a New York limited liability company

By: **GLOBE SPECIALTY METALS, INC.**, as sole member

By: /s/ Pedro Larrea Paguaga
Name: Pedro Larrea Paguaga
Title: Director

GSM ENTERPRISES LLC, a Delaware limited liability company

By: **GLOBE SPECIALTY METALS, INC.**, as sole member

By: /s/ Pedro Larrea Paguaga
Name: Pedro Larrea Paguaga
Title: Director

CITIZENS BANK OF PENNSYLVANIA,
as Agent and a Lender

By: /s/ David W. Stack
Name: David W. Stack
Title: Senior Vice President

Capital One, National Association,
as a Lender

By: /s/ Michael J. Sullivan
Name: Michael J. Sullivan
Title: Senior Vice - President

Citibank, N.A,
as a Lender

By: /s/ James McGinnis
Name: James McGinnis
Title: Senior Vice President

COMPASS BANK,
as a Lender

By: /s/ Cameron Gateman
Name: Cameron Gateman
Title: Senior Banker

Fifth Third Bank,
as a Lender

By: /s/ Jim Schmalz
Name: Jim Schmalz
Title: Vice President

HSBC Bank USA, National Association (f/k/a HSBC Bank USA, N.A.),
as a Lender

By: /s/ Fred Schimel
Name: Fred Schimel
Title: Vice President

PNC BANK, NATIONAL ASSOCIATION
as a Lender

By: /s/ Mahir J. Desai
Name: Mahir J. Desai
Title: AVP

Wells Fargo Bank N.A.,
as a Lender

By: /s/ Harry E. Ellis
Name: Harry E. Ellis
Title: Senior Vice President

Exhibit A

Amended Credit Agreement

[See attached].

Published CUSIP Number: **37954RAD0**

CREDIT AGREEMENT

DATED AS OF August 20, 2013

among

FERROGLOBE PLC,

GLOBE SPECIALTY METALS, INC.,

and

CERTAIN SUBSIDIARIES OF FERROGLOBE PLC

FROM TIME TO TIME PARTIES HERETO,

as Borrowers,

THE LENDERS LISTED HEREIN,

as Lenders,

CITIZENS BANK OF PENNSYLVANIA,

as Administrative Agent,

CITIZENS BANK, N.A. and PNC CAPITAL MARKETS, LLC,

Joint Book Managers and Joint Lead Arrangers,

PNC BANK, NATIONAL ASSOCIATION

as Syndication Agent

and

COMPASS BANK,

as Documentation Agent

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EXHIBITS

SCHEDULES

CREDIT AGREEMENT

This **CREDIT AGREEMENT** is dated as of August 20, 2013 and entered into by and among (a) **FERROGLOBE PLC**, a public limited company incorporated under the laws of England and Wales with a registered address at 5 Fleet Place, London EC4M 7RD, United Kingdom and registered number 09425113 ("**Company**"), (b) **GLOBE SPECIALTY METALS, INC.**, a Delaware corporation (**"Globe"**), (c) certain Subsidiaries of the Company from time to time party hereto (each a **"Co-Borrower"** and together with Company and Globe, the **"Borrowers"** and each a **"Borrower"**), (d) **THE FINANCIAL INSTITUTIONS FROM TIME TO TIME PARTY HERETO** (each individually referred to herein as a **"Lender"** and collectively as **"Lenders"**), (e) **PNC BANK, NATIONAL ASSOCIATION**, as syndication agent for Lenders (in such capacity, **"Syndication Agent"**), (f) **COMPASS BANK**, as Documentation Agent and (g) **CITIZENS BANK OF PENNSYLVANIA**, as administrative agent for Lenders (in such capacity, **"Administrative Agent"**).

R E C I T A L S

WHEREAS, Lenders, at the request of Company, have agreed to extend certain credit facilities to the Borrowers, the proceeds of which will be used (i) to repay in full all Indebtedness outstanding under the Existing Credit Agreement and the payment of fees and expenses in connection therewith, and (ii) to provide financing for working capital and other general corporate purposes of Company and its Subsidiaries (including, without limitation, Permitted Acquisitions, Consolidated Capital Expenditures and intercompany loans to certain Foreign Subsidiaries) (capitalized terms used herein without definition are defined in subsection 1.1 of this Agreement);

WHEREAS, each of Company and Globe desires to secure all of the Obligations hereunder and under the other Loan Documents by granting to Administrative Agent, on behalf of the Secured Parties, a First Priority Lien on substantially all of its personal property and Capital Stock of certain of its Subsidiaries; and

WHEREAS, the Subsidiary Guarantors have agreed to guarantee the Obligations hereunder and under the other Loan Documents and to secure their guaranties by granting to Administrative Agent, on behalf of the Secured Parties, a First Priority Lien on substantially all of their personal property, all of the Capital Stock of their Domestic Subsidiaries (other than any Domestic Subsidiary that is also a Foreign Corporation or is a Subsidiary of any Foreign Corporation) and first-tier Foreign Subsidiaries (other than any Foreign Corporations) and 65% of the Capital Stock of their first-tier Foreign Corporations.

NOW, THEREFORE, in consideration of the premises and the agreements, provisions and covenants herein contained, the Borrowers, Lenders, Syndication Agent and Administrative Agent agree as follows:

SECTION 1. DEFINITIONS

1.1 Certain Defined Terms.

The following terms used in this Agreement shall have the following meanings:

"Administrative Agent" has the meaning assigned to that term in the introduction to this Agreement and also means and includes any successor Administrative Agent appointed pursuant to subsection 9.5A .

"Affected Lender" has the meaning assigned to that term in subsection 2.6C.

"Affected Loans" has the meaning assigned to that term in subsection 2.6C.

"Affiliate", as applied to any Person, means any other Person directly or indirectly controlling, controlled by, or under common control with, that Person. For the purposes of this definition, "control" (including, with correlative meanings, the terms "controlling", "controlled by" and "under common control with"), as applied to any Person, means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of that Person, whether through the ownership of voting securities or by contract or otherwise.

"Affiliated Funds" means Funds that are administered, advised or managed by (i) a single entity or (ii) entities that are Affiliates of each other.

"Agents" means Administrative Agent, Syndication Agent, Joint Book Managers, Joint Lead Arrangers, Supplemental Collateral Agents and Related Parties.

"Aggregate Amounts Due" has the meaning assigned to that term in subsection 10.5.

"**Aggregate Asset Percentage**" means the percentage obtained by dividing (a) the sum of the assets of the Loan Parties, less (i) goodwill; (ii) intragroup accounts receivable from Subsidiary Guarantors and non-Subsidiary Guarantors; (iii) investments in Subsidiary Guarantors and non-Subsidiary Guarantors; (iv) receivables from related parties; (v) the portion of assets attributable to minority equity holders in a Subsidiary Guarantor; and (vi) assets attributable to the hydropower operations of FerroAtlantica, S.A., by (b) consolidated total assets of the Company and its Subsidiaries, less (i) goodwill; (ii) the assets attributable to the Alloy, West Virginia and Becancour, Canada facilities, which are jointly held with Dow Corning; and (iii) assets attributable to the hydropower operations of FerroAtlantica, S.A. and Hidro Nitro Española, S.A.

"**Aggregate Sales Percentage**" means the percentage obtained by dividing (a) the sum of the unconsolidated external sales of the Loan Parties, less (i) the portion of sales attributable to minority equity holders in a Subsidiary Guarantor and (ii) sales attributable to the hydropower operations of FerroAtlantica, S.A., by (b) consolidated sales of the Company and its Subsidiaries, less (i) sales from the Alloy, West Virginia and Becancour, Canada facilities, which are jointly held with Dow Corning; (ii) the portion of sales attributable to minority equity holders in a Subsidiary Guarantor; and (iii) sales attributable to the hydropower operations of FerroAtlantica, S.A. and Hidro Nitro Española, S.A.

"**Agreed Guaranty Principles**" means:

(a) other than with respect to Domestic Subsidiaries, all upstream and cross-stream guaranties must be limited by corporate benefit restrictions if so required;

(b) other than with respect to Domestic Subsidiaries, all guaranties must be limited by financial assistance restrictions if so required;

(c) all guaranties must be limited to the extent necessary in order to avoid any personal civil or criminal liability of any director or officer arising as a result of providing such guaranty or such guaranty being enforced by the holders of the Notes;

(d) all guaranties must be limited to the extent necessary to avoid any breach of fraudulent conveyance or preference, thin capitalization rules or any other general statutory laws or regulations (or analogous restrictions) of any applicable jurisdiction; and

(e) no guaranty shall be given to the extent it would result in costs that are disproportionate to the benefit obtained by the beneficiaries of such guaranty (as reasonably determined by the Administrative Agent).

For the avoidance of doubt, for the purposes of this definition, "cost" includes, but is not limited to, income tax cost, registration taxes payable on the granting or enforcement of any guarantee, stamp duties, out-of-pocket expenses, and other fees and expenses directly incurred by the relevant guarantor or any of its direct or indirect owners, subsidiaries or Affiliates.

"**Agreed Security Principles**" means the following principles.

No Lien shall be created or perfected to the extent that it would:

(a) other than with respect to Domestic Subsidiaries, result in any breach of corporate benefit, financial assistance, fraudulent preference or thin capitalization laws or regulations (or analogous restrictions) of any applicable jurisdiction;

(b) result in a significant risk to the officers of the relevant grantor of the Lien of contravention of their fiduciary duties and/or of civil or criminal liability; or

(c) result in costs that are disproportionate to the benefit obtained by the beneficiaries of such Lien (as reasonably determined by the Administrative Agent).

For the avoidance of doubt, for the purposes of this definition, "cost" includes, but is not limited to, income tax cost, registration taxes payable on the creation or enforcement or for the continuance of any Lien, stamp duties, out-of-pocket expenses, and other fees and expenses directly incurred by the relevant grantor of Liens or any of its direct or indirect owners, subsidiaries or Affiliates.

"Agreement" means this Credit Agreement dated as of August 20, 2013.

"Agreement Currency" has the meaning set forth in subsection 10.21.

"Alternative Currency" means each of Euro, British Pounds Sterling and each other currency (other than Dollars) that is approved in accordance with Section 1.5.

"Alternative Currency Equivalent" means, at any time, with respect to any amount denominated in Dollars, the equivalent amount thereof in the applicable Alternative Currency as determined by Administrative Agent or the Issuing Lender, as the case may be, at such time on the basis of the Spot Rate (determined in respect of the most recent Revaluation Date) for the purchase of such Alternative Currency with Dollars.

"Alternative Currency Sublimit" means an amount equal to the lesser of the aggregate Commitments and $100,000,000. The Alternative Currency Sublimit is part of, and not in addition to, the Revolving Loan Commitment Amount.

"**Anti-Corruption Laws**" means the United States Foreign Corrupt Practices Act of 1977 and all other laws, rules, and regulations of any jurisdiction applicable to the Loan Parties and their respective Subsidiaries concerning or relating to bribery or corruption.

"Applicable Foreign Obligor Documents" has the meaning set forth in subsection 5.18.

"Applicable Time" means, with respect to any borrowings and payments in any Alternative Currency, the local time in the place of settlement for such Alternative Currency as may be determined by Administrative Agent or Issuing Lender, as the case may be, to be necessary for timely settlement on the relevant date in accordance with normal banking procedures in the place of payment.

"Approved Fund" means a Fund that is administered or managed by (i) a Lender, (ii) an Affiliate of a Lender or (iii) an entity or an Affiliate of an entity that administers or manages a Lender.

"**A/R Securitization Programs**" means any accounts receivable purchase or factoring arrangement of the Loan Parties and their Subsidiaries to the extent that the accounts receivable sold pursuant to each such purchase or factoring arrangement are sold by the Loan Parties and their Subsidiaries on a non-recourse basis.

"Asset Sale" means any direct or indirect sale, lease, transfer, conveyance and other disposition (or series of related sales, leases, transfers, conveyances or other dispositions) by Company or any of its Subsidiaries to any Person (other than a Loan Party or by a Subsidiary that is not a Loan Party to another Subsidiary that is not a Loan Party) of (i) any of the stock of any of Company's Subsidiaries, (ii) all or substantially all of the assets of any division or line of business of Company or any of its Subsidiaries or (iii) any other assets (whether tangible or intangible) of Company or any of its Subsidiaries (other than (a) assets sold in the ordinary course of business, (b) Cash Equivalents in the ordinary course of business, (c) sales, assignments, discounts, transfers or dispositions of accounts or notes (including for less than the face value thereof) in the ordinary course of business for purposes of compromise or collection and (d) any such other assets to the extent that the aggregate fair market value of such assets sold in any single transaction or related series of transactions is equal to $10,000,000 or less). Notwithstanding the foregoing, sales of accounts receivable in connection with A/R Securitization Programs shall not constitute Asset Sales.

"Assignment Agreement" means an Assignment and Assumption Agreement in substantially the form of Exhibit VI annexed hereto.

"**Bail-In Action**" means the exercise of any Write-Down and Conversion Powers by the applicable EEA Resolution Authority in respect of any liability of an EEA Financial Institution.

"**Bail-In Legislation**" means, with respect to any EEA Member Country implementing Article 55 of Directive 2014/59/EU of the European Parliament and of the Council of the European Union, the implementing law for such EEA Member Country from time to time which is described in the EU Bail-In Legislation Schedule.

"Bankruptcy Code" means Title 11 of the United States Code entitled "Bankruptcy" or any successor statute.

"Base Rate" means, for any day, a rate per annum equal to the greatest of (a) the Prime Rate in effect on such day, (b) the Federal Funds Effective Rate in effect on such day plus 1/2 of 1% and (c) the Eurocurrency Rate for a Eurocurrency Rate Loan denominated in Dollars with a one-month interest period commencing on such day plus 1.0%. Any change in the Base Rate due to a change in the Prime Rate shall be effective as of the opening of business on the day specified in the public announcement of such change in the Prime Rate. Notwithstanding the foregoing, in no event shall the Base Rate be less than 0%.

"Base Rate Loans" means Loans bearing interest at rates determined by reference to the Base Rate as provided in subsection 2.2A. All Base Rate Loans shall be denominated in Dollars.

"Base Rate Margin" means the margin over the Base Rate used in determining the rate of interest of Base Rate Loans pursuant to subsection 2.2A .

"Borrower" and **"Borrowers"** have the meaning assigned to each such term in the introduction to this Agreement.

"British Pounds Sterling" shall mean British pounds sterling, the lawful currency of the United Kingdom.

"Business Day" means any day other than a Saturday, Sunday or other day on which commercial banks are authorized to close under the Laws of, or are in fact closed in, London, United Kingdom or the state where the Funding and Payment Office with respect to Obligations denominated in Dollars is located and,

(a) if such day relates to any interest rate settings as to a Eurocurrency Rate Loan denominated in Dollars, any fundings, disbursements, settlements and payments in Dollars in respect of any such Eurocurrency Rate Loan, or any other dealings in Dollars to be carried out pursuant to this Agreement in respect of any such Eurocurrency Rate Loan, "Business Day" means any such day on which dealings in deposits in Dollars are conducted by and between banks in the London interbank eurodollar market;

(b) if such day relates to any interest rate settings as to a Eurocurrency Rate Loan denominated in Euro, any fundings, disbursements, settlements and payments in Euro in respect of any such Eurocurrency Rate Loan, or any other dealings in Euro to be carried out pursuant to this Agreement in respect of any such Eurocurrency Rate Loan, "Business Day" means a TARGET Day;

(c) if such day relates to any interest rate settings as to a Eurocurrency Rate Loan denominated in a currency other than Dollars or Euro, "Business Day" means any such day on which dealings in deposits in the relevant currency are conducted by and between banks in the London or other applicable offshore interbank market for such currency; and

(d) if such day relates to any fundings, disbursements, settlements and payments in a currency other than Dollars or Euro in respect of a Eurocurrency Rate Loan denominated in a currency other than Dollars or Euro, or any other dealings in any currency other than Dollars or Euro to be carried out pursuant to this Agreement in respect of any such Eurocurrency Rate Loan (other than any interest rate settings), "Business Day" means any such day on which banks are open for foreign exchange business in the principal financial center of the country of such currency.

"Capital Lease", as applied to any Person, means any lease of any property (whether real, personal or mixed) by that Person as lessee that, in conformity with IFRS, is accounted for as a capital lease on the balance sheet of that Person.

"Capital Stock" means the capital stock of or other equity interests in a Person.

"Cash" means money, currency or a credit balance in a Deposit Account.

"Cash Collateralize" means to pledge and deposit with or deliver to Administrative Agent, for the benefit of Administrative Agent, Issuing Lender or Swing Line Lender (as applicable) and the Revolving Lenders, as collateral for Obligations in respect of Letters of Credit, Obligations in respect of Swing Line Loans, or obligations of Lenders to fund participations in respect of either thereof (as the context may require), cash or deposit account balances or, if Issuing Lender or Swing Line Lender

benefitting from such collateral shall agree in its reasonable discretion, other credit support, in each case pursuant to documentation in form and substance reasonably satisfactory to (a) Administrative Agent and (b) Issuing Lender or Swing Line Lender (as applicable) (which documents are hereby consented to by the Lenders). **"Cash Collateral"** shall have a meaning correlative to the foregoing and shall include proceeds of such cash collateral and other credit support.

"Cash Equivalents" means any of the following types of Investments (determined at the time such Investment was made), (i) marketable securities (a) issued or directly and unconditionally guaranteed as to interest and principal by the United States Government or (b) issued by any agency of the United States the obligations of which are backed by the full faith and credit of the United States, in each case maturing within one year after such date; (ii) marketable direct obligations issued by any state of the United States of America or any political subdivision of any such state or any public instrumentality thereof, in each case maturing within one year after such date and having, at the time of the acquisition thereof; (iii) commercial paper maturing no more than one year from the date of creation thereof and having, at the time of the acquisition thereof, a rating of at least A-1 from S&P or at least P-1 from Moody's; (iv) certificates of deposit, bankers' acceptances and money market deposits maturing within one year after such date and issued or accepted by any Lender or by any commercial bank organized under the laws of the United States of America or any state thereof or the District of Columbia that (a) is at least "adequately capitalized" (as defined in the regulations of its primary Federal banking regulator) and (b) has Tier 1 capital (as defined in such regulations) of not less than $100,000,000; (v) shares of any money market mutual fund that (a) has at least 95% of its assets invested continuously in the types of investments referred to in clauses (i) and (ii) above, (b) has net assets of not less than $500,000,000; (vi) Investments in repurchase obligations with a term of not more than 30 days for underlying securities of the types described in clause (i) above entered into with a bank meeting the qualifications described in clause (iv) above at the time such Investment is made; and (vii) and other short-term Investments utilized by Company or any Foreign Subsidiaries with normal investment practices for cash management in Investments of a type analogous to the foregoing.

"Cash Management Agreement" means any agreement with the Company or any Subsidiary to provide cash management services, including treasury, depository, overdraft, credit or debit card, electronic funds transfer and other cash management arrangements.

"Cash Management Bank" means any Person that (a) at the time that it enters into a Cash Management Agreement, is a Lender or an Affiliate of a Lender, or (b) is party to a Cash Management Agreement on the date that such Person or its Affiliate becomes a Lender, in each case in such Person's capacity as a party to such Cash Management Agreement.

"Change in Control" means any of the following: (i) any Person other than the Permitted Holders, either individually or acting in concert with one or more other Persons as a "group," shall have acquired beneficial ownership, directly or indirectly, of more than 35% of the Capital Stock of Company; or (ii) Company shall fail to own, directly or indirectly, one hundred percent (100%) of the issued and outstanding Capital Stock of any Co-Borrower (including Globe but excluding any qualifying shares of directors and de minimis shares required to be reserved or held by others pursuant to any requirement of any Governmental Authority); or (iii) any "Change of Control" or similar occurrence as defined in the Senior Notes. As used herein, the term "group", "beneficially own" or "beneficial ownership" shall have the meaning set forth in the Exchange Act and the rules and regulations promulgated thereunder.

"Change in Law" means the occurrence, after the date of this Agreement (or with respect to any Lender or Issuing Lender, if later, the date on which such Lender becomes a Lender), of any of the following: (a) the adoption or taking effect of any law, rule, regulation or treaty, (b) any change in any law, rule, regulation or treaty or in the administration, interpretation, implementation or application

thereof by any Government Authority or (c) the making or issuance of any request, rule, guideline or directive (whether or not having the force of law) by any Government Authority, requiring compliance by any Lender or Issuing Lender; provided that notwithstanding anything herein to the contrary, (x) the Dodd-Frank Wall Street Reform and Consumer Protection Act and all requests, rules, guidelines or directives thereunder or issued in connection therewith and (y) all requests, rules, guidelines or directives promulgated by the Bank for International Settlements, the Basel Committee on Banking Supervision (or any successor or similar authority) or the United States or foreign regulatory authorities, in each case pursuant to Basel III, shall in each case be deemed to be a "Change in Law", regardless of the date enacted, adopted, implemented or issued.

"Charges" has the meaning set forth in subsection 2.2G.

"Citizens" means Citizens Bank, N.A.

"Closing Date" means the date on which the initial Loans are made.

"Co-Borrower" means any Subsidiary of the Company that is added as a co-borrower hereunder pursuant to the provisions contained in Section 2.13.

"Co-Borrower Joinder Agreement" means a joinder agreement in form and substance reasonably satisfactory to the Company and the Administrative Agent pursuant to which a Subsidiary of the Company is joined to the Credit Agreement as a Co-Borrower.

"Collateral" means, collectively, all of the personal property in which Liens are purported to be granted pursuant to the Collateral Documents as security for the Obligations.

"Collateral Account" has the meaning assigned to that term in the Security Agreement.

"Collateral Documents" means the Security Agreement, the Foreign Collateral Documents, the Mortgages, the Control Agreements and all other agreements, instruments or documents delivered by any Loan Party pursuant to this Agreement or any of the other Loan Documents in order to grant to Administrative Agent, on behalf of the Secured Parties, a Lien on any real or personal property of that Loan Party as security for the Obligations and any obligation or liability arising under any Secured Hedge Agreement or Secured Cash Management Agreement (as applicable), each of which shall be in form and substance reasonably satisfactory to Administrative Agent.

"Commitment Fee" has the meaning assigned to that term in subsection 2.3.

"Commitments" means the commitments of Lenders to make Loans as set forth in subsections 2.1A and 3.3.

"Commodity Exchange Act" means the Commodity Exchange Act (7 U.S.C. § 1 et seq.).

"Communications" has the meaning assigned to that term in subsection 10.8.

"Company" has the meaning assigned to that term in the introduction to this Agreement.

"Company Guaranty" means, collectively, the Company Guaranty executed and delivered by Globe on the Closing Date in favor of the Secured Parties and the Company Guaranty executed and delivered by the Company on the Third Amendment Effective Date, in each case, substantially in the form of Exhibit VIII.

"**Competitor**" means each Person that the Administrative Agent and the Lenders have a reasonable basis (by notice from the Company) to know is a producer or distributor of silicon metal and/or silicon-based alloys, or primarily engaged in the silicon or silicones business, or controls or is controlled by such a Person; provided, that, any Person that is a finance company, fund or other similar entity which merely has an economic interest in any such Person, and is not itself such a Person and does not control, is not controlled by and is not under common control with such a Person, shall not constitute a "Competitor" for purposes of this definition.

"Compliance Certificate" means a certificate substantially in the form of Exhibit V annexed hereto.

"Consolidated Capital Expenditures" means, for any period, the sum of the aggregate of all expenditures (whether paid in cash or other consideration or accrued as a liability and including that portion of Capital Leases which is capitalized on the consolidated balance sheet of Company and its Subsidiaries) by Company and its Subsidiaries during that period that, in conformity with IFRS, are included in "property, plant or equipment" or comparable items reflected in the consolidated statement of cash flows of Company and its Subsidiaries. For purposes of this definition, the purchase price of equipment that is purchased simultaneously with the trade-in of existing equipment or with insurance proceeds shall be included in Consolidated Capital Expenditures only to the extent of the gross amount of such purchase price less the credit granted by the seller of such equipment for the equipment being traded in at such time or the amount of such proceeds, as the case may be.

"Consolidated EBITDA" means, for any period, the sum, without duplication, of the amounts for such period of (i) Consolidated Net Income, (ii) Consolidated Interest Expense, (iii) provisions for taxes based on income, (iv) total depreciation expense, (v) total amortization expense, (vi) other non-cash items (other than any such non-cash item to the extent it represents an accrual of or reserve for cash expenditures in any future period), (vii) any transaction costs, fees and expenses incurred with respect to the transactions contemplated by this Agreement and the other Loan Documents (including fees, costs, commissions, expenses and one-time compensation charges of accounting, legal and other similar advisors and consultants incurred in connection with the transactions contemplated in this clause (vii)), (viii) non-recurring cash restructuring charges and reserves taken by Company or its Subsidiaries; provided, that the aggregate amount of any such charges or reserves excluded pursuant to this clause (viii) shall not exceed $10,000,000 in any four fiscal quarter period, (ix) non-recurring out of pocket expenses paid to third party, not affiliated service providers in an aggregate amount not to exceed $4,000,000 during any four fiscal quarter period, (x) any transaction costs, fees and expenses incurred with respect to the transactions contemplated by the Third Amendment and the Senior Notes Indenture (including fees, costs, commissions, expenses and one-time compensation charges of accounting, legal and other similar advisors and consultants incurred in connection with the transactions contemplated in this clause (x)), and (xi) one-time transaction expenses related to the combination of Globe and Grupo FerroAtlántica in an aggregate amount not to exceed $10,000,000 with respect to Fiscal Year 2016, but only, in the case of clauses (ii) through (xi), to the extent deducted in the calculation of Consolidated Net Income during such period, (xii) severance payments made during such period to the management, employees, consultants or directors of the Company or its Subsidiaries, less non-cash items added in the calculation of Consolidated Net Income (other than any such non-cash item to the extent it will result in the receipt of cash payments in any future period), all of the foregoing as determined on a consolidated basis for Company and its Subsidiaries in conformity with IFRS.

"Consolidated Interest Expense" means, for any period, total interest expense of Company and its Subsidiaries on a consolidated basis with respect to all outstanding Indebtedness for such period, including, to the extent not otherwise included in such interest expense, and to the extent incurred by Company or its Subsidiaries in such period, without duplication, (a) interest expense attributable to

Capital Lease obligations; (b) amortization of debt discount and debt issuance cost; and (c) non-cash interest expense; in each case, as determined on a consolidated basis for such period in accordance with IFRS.

"Consolidated Secured Net Leverage Ratio" means, as of the last day of any Fiscal Quarter, the ratio of (i)(a) Consolidated Total Debt secured by a Lien on any asset of a Loan Party or any of its Subsidiaries on such date minus (b) Cash and Cash Equivalents held in the Energy Account on such date and unrestricted Cash and Cash Equivalents on the balance sheet of the Loan Parties on such date in an aggregate amount for all such Cash and Cash Equivalents pursuant to this clause (b) not to exceed $150,000,000 to (ii) the sum of Consolidated EBITDA for the consecutive four Fiscal Quarters ending on such date.

"Consolidated Net Leverage Ratio" means, as of the last day of any Fiscal Quarter, the ratio of (i)(a) Consolidated Total Debt as at such date minus (b) Cash and Cash Equivalents held in the Energy Account on such date and unrestricted Cash and Cash Equivalents on the balance sheet of the Loan Parties on such date in an aggregate amount for all such Cash and Cash Equivalents pursuant to this clause (b) not to exceed $150,000,000 to (ii) the sum of Consolidated EBITDA for the consecutive four Fiscal Quarters ending on such date.

"Consolidated Net Income" means, for any period, the net income (or loss) of Company and its Subsidiaries on a consolidated basis for such period taken as a single accounting period determined in conformity with IFRS; provided, however, that the following shall not be included in the calculation of Consolidated Net Income: without duplication, (i) the income (or loss) of any Person (other than a Subsidiary of the Company) in which any other Person (other than the Company or any of its Subsidiaries) has a 50% or more joint interest, except to the extent of the amount of dividends or other distributions actually paid to Company or any of its wholly-owned Subsidiaries by such Person during such period, (ii) the income (or loss) of any Person in which any other Person (other than the Company or any of its Subsidiaries) has less than a 50% joint interest solely to the extent of the amount attributable to the minority joint interest holder or holders during such period, (iii) the income of any Subsidiary of Company that is not a Loan Party to the extent that the declaration or payment of dividends or similar distributions by that Subsidiary of that income is not at the time permitted by operation of the terms of its charter or any agreement, instrument, judgment, decree, order, statute, rule or governmental regulation applicable to that Subsidiary, and (iv) any net extraordinary gain or loss (including, without limitation, any gain or loss in connection with the Energy Sale). Notwithstanding anything to the contrary contained herein, the income (or loss) of any Person accrued prior to the date it becomes a Subsidiary of Company or is merged into or consolidated with Company or any of its Subsidiaries or that Person's assets are acquired by the Company or any of its Subsidiaries shall be included in Consolidated Net Income only to the extent permitted pursuant to subsection 1.3F of this Agreement.

"Consolidated Total Debt" means, as at any date of determination, the aggregate stated balance sheet amount of all Indebtedness of Company and its Subsidiaries, determined on a consolidated basis in accordance with IFRS; provided that for purposes of determining Consolidated Total Debt, the Company shall include (a) any letter of credit issued for the account of the Company or any Subsidiary or as to which such Person is otherwise liable for reimbursement of drawings and (b) the direct or indirect guaranty by a Loan Party or its Subsidiaries of Indebtedness.

"Contingent Obligation", as applied to any Person, means any direct or indirect liability, contingent or otherwise, of that Person (i) with respect to any Indebtedness, lease, dividend or other obligation of another if the primary purpose or intent thereof by the Person incurring the Contingent Obligation is to provide assurance to the obligee of such obligation of another that such obligation of another will be paid or discharged, or that any agreements relating thereto will be complied with, or that

the holders of such obligation will be protected (in whole or in part) against loss in respect thereof, (ii) with respect to any letter of credit issued for the account of that Person or as to which that Person is otherwise liable for reimbursement of drawings, or (iii) with respect to net payment obligations of such Person under Hedge Agreements. Contingent Obligations shall include (a) the direct or indirect guaranty, endorsement (otherwise than for collection or deposit in the ordinary course of business), co-making, discounting with recourse or sale with recourse by such Person of the obligation of another, (b) the obligation to make take-or-pay or similar payments if required regardless of non-performance by any other party or parties to an agreement, and (c) any liability of such Person for the obligation of another through any agreement (contingent or otherwise) (1) to purchase, repurchase or otherwise acquire such obligation or any security therefor, or to provide funds for the payment or discharge of such obligation (whether in the form of loans, advances, stock purchases, capital contributions or otherwise) or (2) to maintain the solvency or any balance sheet item, level of income or financial condition of another if, in the case of any agreement described under subclauses (1) or (2) of this sentence, the primary purpose or intent thereof is as described in the preceding sentence. The amount of any Contingent Obligation shall be equal to the amount of the obligation so guaranteed or otherwise supported or, if not stated or determinable, the maximum reasonably anticipated liability in respect thereof as determined in good faith by the Person obligated in respect of such Contingent Obligation.

"Contractual Obligation", as applied to any Person, means any material provision of any material indenture, mortgage, deed of trust, contract, undertaking, agreement or other material instrument (including, without limitation, the Senior Notes and the Senior Note Indenture) or other material Security to which that Person is a party or to which such Person or any of its properties is subject.

"Control Agreement" means an agreement, reasonably satisfactory in form and substance to Administrative Agent and executed by the financial institution or securities intermediary at which a Deposit Account or a Securities Account, as the case may be, is maintained, pursuant to which such financial institution or securities intermediary confirms and acknowledges Administrative Agent's security interest in such account, and agrees that the financial institution or securities intermediary, as the case may be, will comply with instructions originated by Administrative Agent as to disposition of funds in such account, without further consent by Company or any Subsidiary and any similar agreement regarding Deposit Accounts or Securities Accounts in any jurisdiction outside of the United States.

"Currency Agreement" means any foreign exchange contract, currency swap agreement, futures contract, option contract, synthetic cap or other similar agreement or arrangement to which Company or any of its Subsidiaries is a party.

"Defaulting Lender" means, subject to subsection 2.12B, any Lender that, as reasonably determined by Administrative Agent, (a) has failed to perform any of its funding obligations hereunder, including in respect of its Loans or participations in respect of Letters of Credit or Swing Line Loans, within three (3) Business Days of the date required to be funded by it hereunder unless such Lender notifies the Administrative Agent and the Company in writing that such failure is the result of such Lender's determination that one or more conditions precedent to funding (each of which conditions precedent, together with any applicable default, shall be specifically identified in such writing) has not been satisfied, (b) has notified Company or Administrative Agent that it does not intend to comply with its funding obligations or has made a public statement to that effect with respect to its funding obligations hereunder or under other agreements in which it commits to extend credit (unless such notice or public statement relates to such Lender's obligation to fund a Loan hereunder and states that such position is based on such Lender's determination that a condition precedent to funding (which condition precedent, together with any applicable default, shall be specifically identified in such writing or public statement) cannot be satisfied), (c) has otherwise failed to pay over to Administrative Agent or any other Lender any other amount required to be paid by it hereunder within three (3) Business Days of the date when due,

unless the subject of a good faith dispute, (d) has failed, within three (3) Business Days after request by Administrative Agent, to confirm in a manner satisfactory to Administrative Agent that it will comply with its funding obligations, or (e) has, or has a direct or indirect parent company that has, (i) become the subject of a proceeding under the Bankruptcy Code or under any other applicable bankruptcy, insolvency or similar law now or hereafter in effect, (ii) had a receiver, conservator, trustee, administrator, assignee for the benefit of creditors or similar Person charged with reorganization or liquidation of its business or a custodian appointed for it, (iii) taken any action in furtherance of, or indicated its consent to, approval of or acquiescence in any such proceeding or appointment, or (iv) become the subject of a Bail-In Action; provided that a Lender shall not be a Defaulting Lender solely by virtue of the ownership or acquisition of any equity interest in that Lender or any direct or indirect parent company thereof by a Government Authority.

"Deposit Account" means a "deposit account" as defined in Article 9 of the UCC.

"Dollar" and the sign "$" mean the lawful money of the United States of America.

"Dollar Equivalent" means, at any time, (i) with respect to any amount denominated in Dollars, such amount, and (ii) with respect to any amount denominated in any Alternative Currency, the equivalent amount thereof in Dollars as determined by Administrative Agent or the Issuing Lender, as the case may be, at such time on the basis of the Spot Rate (determined in respect of the most recent Revaluation Date) for the purchase of Dollars with such Alternative Currency.

"**Domestic Co-Borrower**" means any Domestic Subsidiary that is a Co-Borrower.

"Domestic Obligor" means any Loan Party that is incorporated or organized under the laws of the United States of America, any state thereof or in the District of Columbia.

"Domestic Subsidiary" means any Subsidiary of Company that is incorporated or organized under the laws of the United States of America, any state thereof or in the District of Columbia.

"Domestic Subsidiary Guarantor" means any Domestic Subsidiary of Company that executes and delivers a Subsidiary Guaranty.

"EDGAR Website" means a publicly available website maintained by or on behalf of the Securities and Exchange Commission for access to documents filed in the EDGAR database.

"EEA Financial Institution" means (a) any credit institution or investment firm established in any EEA Member Country which is subject to the supervision of an EEA Resolution Authority, (b) any entity established in an EEA Member Country which is a parent of an institution described in clause (a) of this definition, or (c) any financial institution established in an EEA Member Country which is a subsidiary of an institution described in clauses (a) or (b) of this definition and is subject to consolidated supervision with its parent.

"EEA Member Country" means any of the member states of the European Union, Iceland, Liechtenstein, and Norway.

"EEA Resolution Authority" means any public administrative authority or any person entrusted with public administrative authority of any EEA Member Country (including any delegee) having responsibility for the resolution of any EEA Financial Institution.

"Eligible Assignee" means (i) any Lender, any Affiliate of any Lender and any Approved Fund of any Lender (other than any Defaulting Lender or any of its Subsidiaries); and (ii)(a) a commercial bank organized under the laws of the United States or any state thereof; (b) a savings and loan association or savings bank organized under the laws of the United States or any state thereof; (c) a commercial bank organized under the laws of any other country or a political subdivision thereof; provided that (1) such bank is acting through a branch or agency located in the United States or (2) such bank is organized under the laws of a country that is a member of the Organization for Economic Cooperation and Development or a political subdivision of such country; and (d) any other entity that is a "qualified institutional buyer" (as defined under Rule 144A promulgated under the Securities Act) that extends credit or buys loans in the ordinary course including insurance companies, mutual funds and lease financing companies; provided, however, in no event shall the Company or any Subsidiary or Affiliate of the Company be an Eligible Assignee.

"Employee Benefit Plan" means any "employee benefit plan" as defined in Section 3(3) of ERISA which is or has been maintained or contributed to by Company, any of its Subsidiaries or any of their respective ERISA Affiliates.

"EMU Legislation" means the legislative measures of the European Council for the introduction of, changeover to or operation of a single or unified European currency.

"Energy Account" has the meaning assigned to that term in subsection 7.7(xix).

"Energy Assets" means the hydro-electric plants, and the assets associated with such business, located at each of the locations set forth on Schedule 1.1D attached hereto, and owned as of the Third Amendment Effective Date by FerroAtlántica, S.A., HidroNitro Espanola, S.A. and FerroPem, including, for the avoidance of doubt, the Spanish Energy Assets.

"Energy Sale" means the sale by the Company or its Subsidiaries of all the Spanish Energy Assets or the sale of the "Target Shares", as such term is defined in the Energy Sale SPA.

"**Energy Sale SPA**" means the Share Purchase Agreement, dated as of December 12, 2016, by and between GFA SAU, Brookfield Renewable Power Limited and the Company, as guarantor.

"Environmental Claim" means any investigation, notice, notice of violation, claim, action, suit, proceeding, demand, abatement order or other order or directive (conditional or otherwise), by any Government Authority or any other Person, arising (i) pursuant to or in connection with any actual or alleged violation of any Environmental Law, (ii) in connection with any Hazardous Materials or any actual or alleged Hazardous Materials Activity, or (iii) in connection with any actual or alleged damage, injury, threat or harm to health, safety, natural resources or the environment.

"Environmental Laws" means any and all current or future federal, state, foreign, or local laws, statutes, ordinances, orders, rules, regulations, judgments, Governmental Authorizations, codes, binding and enforceable guidelines, binding and enforceable written policy or rule of common law, or any other requirements of any Government Authority relating to (i) environmental matters, including those relating to any Hazardous Materials Activity, (ii) the generation, use, storage, transportation or disposal of Hazardous Materials, or (iii) occupational safety and health, industrial hygiene or the protection of human, plant or animal health or welfare, in any manner applicable to Company or any of its Subsidiaries or any Facility, including but not limited to the Comprehensive Environmental Response, Compensation and Liability Act as amended by the Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. Sections 9601 et seq., the Resource Conservation and Recovery Act of 1976, 42 U.S.C. Section 6901 et seq., the Clean Air Act, 42 U.S.C. Sections 7401 et seq., the Federal Water Pollution Control Act, 33

U.S.C. Sections 1251 et seq., the Toxic Substances Control Act, 15 U.S.C. Sections 2601 et seq., the Federal Insecticide, Fungicide and Rodenticide Act, 7 U.S.C. Sections 136 et seq., the Safe Drinking Water Act, 42 USC. § 3803 et seq.; the Oil Pollution Act of 1990, 33 USC. § 2701 et seq.; the Emergency Planning and the Community Right-to-Know Act of 1986, 42 USC. § 11001 et seq.; the Hazardous Material Transportation Act, 49 USC § 1801 et seq.; and the Occupational Safety and Health Act, 29 USC. §651 et seq. (to the extent it regulates occupational exposure to Hazardous Materials), all rules are regulations related thereto; and any state and local counterparts, equivalents or similar laws.

"ERISA" means the Employee Retirement Income Security Act of 1974 and any successor thereto.

"ERISA Affiliate", as applied to any Person, means (i) any corporation that is a member of a controlled group of corporations within the meaning of Section 414(b) of the Internal Revenue Code of which that Person is a member; (ii) any trade or business (whether or not incorporated) that is a member of a group of trades or businesses under common control within the meaning of Section 414(c) of the Internal Revenue Code of which that Person is a member; and (iii) any member of an affiliated service group within the meaning of Section 414(m) or (o) of the Internal Revenue Code of which that Person, any corporation described in clause (i) above or any trade or business described in clause (ii) above is a member. Any former ERISA Affiliate of a Person or any of its Subsidiaries shall continue to be considered an ERISA Affiliate of such Person or such Subsidiary within the meaning of this definition with respect to the period such entity was an ERISA Affiliate of such Person or such Subsidiary and with respect to liabilities arising after such period for which such Person or such Subsidiary could be liable under the Internal Revenue Code or ERISA.

"ERISA Event" means (i) a **"reportable event"** within the meaning of Section 4043 of ERISA and the regulations issued thereunder with respect to any Pension Plan (excluding those for which the provision for 30-day notice to the PBGC has been waived by regulation); (ii) the failure to meet the minimum funding standard of Section 412 of the Internal Revenue Code with respect to any Pension Plan (whether or not waived in accordance with Section 412(c) of the Internal Revenue Code) or the failure to make by its due date a required installment under Section 430(j) of the Internal Revenue Code with respect to any Pension Plan or the failure to make any required contribution to a Multiemployer Plan; (iii) the provision by the administrator of any Pension Plan pursuant to Section 4041(a)(2) of ERISA of a notice of intent to terminate such plan in a distress termination described in Section 4041(c) of ERISA; (iv) the withdrawal by Company, any of its Subsidiaries or any of their respective ERISA Affiliates from any Pension Plan with two or more contributing sponsors or the termination of any such Pension Plan resulting in liability pursuant to Section 4063 or 4064 of ERISA; (v) the institution by the PBGC of proceedings to terminate any Pension Plan, or the occurrence of any event or condition which might constitute grounds under ERISA for the termination of, or the appointment of a trustee to administer, any Pension Plan; (vi) the imposition of liability on Company, any of its Subsidiaries or any of their respective ERISA Affiliates pursuant to Section 4062(e) or 4069 of ERISA or by reason of the application of Section 4212(c) of ERISA; (vii)(A) the withdrawal of Company, any of its Subsidiaries or any of their respective ERISA Affiliates in a complete or partial withdrawal (within the meaning of Sections 4203 and 4205 of ERISA) from any Multiemployer Plan if there is any potential liability therefor, or (B) the receipt by Company, any of its Subsidiaries or any of their respective ERISA Affiliates of notice from any Multiemployer Plan that it is in insolvency within the meaning of Title IV of ERISA, or that it intends to terminate or has terminated under Section 4041A or 4042 of ERISA, or that it is in endangered or critical status, within the meaning of Section 305 of ERISA; (viii) receipt from the Internal Revenue Service of notice of the failure of any Pension Plan (or any other Employee Benefit Plan intended to be qualified under Section 401(a) of the Internal Revenue Code) to qualify under Section 401(a) of the Internal Revenue Code, or the failure of any trust forming part of any Pension Plan to qualify for exemption from taxation under Section 501(a) of the Internal Revenue Code; (ix) the imposition of a Lien pursuant to

Section 430(k) of the Internal Revenue Code or pursuant to ERISA with respect to any Pension Plan; or (x) a determination that any Pension Plan is in "at-risk" status (as defined in Section 303(i)(4)(A) of ERISA or Section 430(i)(4)(A) of the Internal Revenue Code).

"EU Bail-In Legislation Schedule" means the EU Bail-In Legislation Schedule published by the Loan Market Association (or any successor person), as in effect from time to time.

"Euro" means the lawful currency of the Participating Member States introduced in accordance with the EMU Legislation.

"Eurocurrency Rate" means:

(a) for any Interest Rate Determination Date with respect to an Interest Period for a Eurocurrency Rate Loan, the rate per annum equal to (i) the offered rate which the ICE Benchmark Administration (or any successor administrator of LIBOR rates) fixes as its LIBOR rate ("ICE LIBOR") at approximately 11:00 a.m., London time, two Business Days prior to the commencement of such Interest Period, for deposits in the relevant currency (for delivery on the first day of such Interest Period) with a term equivalent to such Interest Period or, (ii) if such rate is not available at such time for any reason, the rate per annum determined by Administrative Agent to be the rate at which deposits in the relevant currency for delivery on the first day of such Interest Period in Same Day Funds in the approximate amount of the Eurocurrency Rate Loan being made, continued or converted and with a term equivalent to such Interest Period would be offered to major banks in the London or other offshore interbank market for such currency at their request at approximately 11:00 a.m. (London time) two Business Days prior to the commencement of such Interest Period; and

(b) for any interest calculation with respect to a Base Rate Loan on any date, the rate per annum equal to (i) ICE LIBOR, at approximately 11:00 a.m., London time determined two Business Days prior to such date for Dollar deposits being delivered in the London interbank market for a term of one month commencing that day or (ii) if such published rate is not available at such time for any reason, the rate per annum determined by Administrative Agent to be the rate at which deposits in Dollars for delivery on such date in Same Day Funds in the approximate amount of the Base Rate Loan being made, continued or converted by Citizens and with a term equal to one month would be offered to major banks in the London interbank eurodollar market at approximately 11:00 a.m., London time determined two Business Days prior to such date at their request at the date and time of determination.

Notwithstanding the foregoing, in no event shall the Eurocurrency Rate be less than 0%.

"Eurocurrency Rate Loans" means Loans bearing interest at rates determined by reference to clause (a) of the definition of "Eurocurrency Rate" as provided in subsection 2.2A. Eurocurrency Rate Loans may be denominated in Dollars or in an Alternative Currency. All Loans denominated in an Alternative Currency must be Eurocurrency Rate Loans.

"Eurocurrency Rate Margin" means the margin over the Eurocurrency Rate used in determining the rate of interest of Eurocurrency Rate Loans pursuant to subsection 2.2A.

"Event of Default" has the meaning set forth in Section 8.

"Exchange Act" means the Securities Exchange Act of 1934 and any successor statute.

"**Excluded Accounts**" means (a) accounts held with the Administrative Agent, (b) any payroll or benefits account so long as such payroll account is a zero balance account, (c) any withholding tax or

fiduciary account, (d) accounts established and used solely by a Foreign Subsidiary that is not a Foreign Obligor and that does not guaranty any of the Obligations (or, with the consent of the Administrative Agent, if such Foreign Subsidiary that is a Loan Party guaranties any of the Obligations) and (e)(i) with respect to Domestic Obligors, deposit accounts with balances that do not exceed $1,000,000 for any one deposit account for a period of more than five (5) consecutive days, and that do not exceed $5,000,000 in the aggregate for all such accounts and (ii) with respect to Foreign Obligors, deposit accounts with balances that do not exceed the Dollar Equivalent of $2,000,000 for any one deposit account for a period of more than five (5) consecutive days, and that do not exceed the Dollar Equivalent of $10,000,000 in the aggregate for all such accounts.

"**Excluded Swap Obligation**" means, with respect to any Loan Party, any Swap Obligation if, and to the extent that, all or a portion of the Guaranty of any Loan Party of, or the grant by any Loan Party of a security interest to secure, such Swap Obligation (or any Guaranty thereof) is or becomes illegal under the Commodity Exchange Act or any rule, regulation or order of the Commodity Futures Trading Commission (or the application or official interpretation of any thereof) by virtue of such Loan Party's failure for any reason to constitute an "eligible contract participant" as defined in the Commodity Exchange Act and the regulations thereunder at the time the Guaranty of such Loan Party or the grant of such security interest becomes effective with respect to such Swap Obligation. If a Swap Obligation arises under a master agreement governing more than one swap, such exclusion shall apply only to the portion of such Swap Obligation that is attributable to swaps for which such Guaranty or security interest is or becomes illegal.

"Excluded Taxes" means, with respect to Administrative Agent, any Lender, or any other recipient of any payment to be made by or on account of any obligation of a Borrower under this Agreement or any other Loan Document (i) Taxes that are imposed on or measured by net income (however denominated), franchise Taxes, branch profits Taxes or similar Taxes, in each case imposed (a) by the United States, (b) by any other Government Authority under the laws of which such recipient is organized or has its principal office or maintains its applicable lending office, or (c) by any Government Authority as a result of a present or former connection between such recipient and the jurisdiction of such Government Authority (other than any such connection arising solely from such recipient having executed, delivered or performed its obligations or received a payment under, or enforced, any of the Loan Documents), (ii) any backup withholding tax that is required by the Internal Revenue Code to be withheld from amounts payable to a Lender that has failed to comply with clause (e) of subsection 2.7B(viii), (iii) in the case of any Lender, Agent or other recipient of payment hereunder, any withholding Tax that (x) is imposed on amounts payable to or for the account of such recipient at the time that such recipient becomes a party hereto or such Lender with respect to an applicable interest in a Loan or Commitment pursuant to the law in effect on the date on which such Lender acquires such interest (other than pursuant to an assignment request by a Borrower that does not involve a Defaulting Lender under subsection 2.9) (or designates a new lending office), except to the extent that such Lender (or its assignor, if any) was entitled, at the time of designation of a new lending office (or assignment), to receive additional amounts from Company with respect to such withholding tax pursuant to subsection 2.7B, (y) is attributable to such recipient's failure or inability (other than as a result of a Change in Law) to comply with its obligations under subsection 2.7B(iv)-(viii) or (z) is required to be deducted under applicable law from any payment hereunder on the basis of information provided by such recipient pursuant to subsection 2.7B(viii), (iv) in the case of any Lender, any withholding Tax that would have been compensated for by an increased payment under subsection 2.7B(ii) but was not so compensated because one of the exclusions in subsection 2.7B(iii) applied and (v) Taxes imposed pursuant to FATCA. For the avoidance of doubt, any Participant that is entitled to the benefits of subsection 2.7 shall be treated as a Lender for purposes of this defined term.

"Existing Credit Agreement" means the Credit Agreement, dated as of May 31, 2012, by and among Globe and certain Subsidiaries of Globe, as borrowers, the lenders from time to time party thereto, Fifth Third Bank, as administrative agent and the other agents party thereto, as amended by that certain Joinder and Amendment No. 1 to Credit Agreement dated as of June 13, 2012, Consent and Amendment No. 2 to Credit Agreement dated as of November 9, 2012 and Consent and Amendment No. 3 to Credit Agreement dated as of May 7, 2013.

"**Existing Letter of Credit**" shall mean each of the letters of credit described by applicant, date of issuance, letter of credit number, amount, beneficiary and the date of expiry on Schedule 1.1B hereto.

"Facilities" means any and all real property (including all buildings, fixtures or other improvements located thereon) now, hereafter or heretofore owned, leased, operated or used by Company or any of its Subsidiaries or any of their respective predecessors or Affiliates.

"Facility Office" means the office or offices notified by a Lender to the Administrative Agent as the office or offices through which it will perform its obligations under this Agreement.

"Facility Termination Date" means the date as of which all of the following shall have occurred: termination of the Commitments and payment in full of all Obligations (other than (x) contingent indemnification obligations and (y) obligations and liabilities under Secured Cash Management Agreements and Secured Hedge Agreements as to which arrangements satisfactory to the applicable Cash Management Bank or Hedge Counterparty shall have been made) and the expiration or termination of all Letters of Credit (other than Letters of Credit as to which other arrangements with respect thereto satisfactory to Administrative Agent and Issuing Lender shall have been made).

"FATCA" means Sections 1471 through 1474 of the Internal Revenue Code, as of the date of this Agreement (or any amended or successor version that is substantively comparable and not materially more onerous to comply with), current or future United States Treasury Regulations promulgated thereunder and published guidance with respect thereto, any agreements entered into pursuant to Section 1471(b)(1) of the Code, and any applicable intergovernmental agreements with respect thereto.

"Federal Funds Effective Rate" means, for any period, a fluctuating interest rate equal for each day during such period to the weighted average of the rates on overnight Federal funds transactions with members of the Federal Reserve System arranged by Federal funds brokers on such day, as published for such day (or, if such day is not a Business Day, for the next preceding Business Day) by the Federal Reserve Bank of New York on the Business Day next succeeding such day, or, if such rate is not so published on such next succeeding Business Day, the average rate (rounded upward, if necessary, to a whole multiple of 1/100 of 1%) charged to Citizens Bank of Pennsylvania on such day on such transactions as determined by Administrative Agent.

"Fee Letter" means the letter agreement, dated July 26, 2013, between Company, Citizens Bank of Pennsylvania and Citizens Bank, N.A. (f/k/a RBS Citizens, N.A.).

"**FerroPem**" means FerroPem, S.A.S, a French société par actions simplifiée with registered office located at 517 Avenue de la Boisse, 73000 Chambéry, France, and registered with number 642 005 177 R.C.S. Chambery.

"Finance Lease" means the Finance Lease, dated as of May 25, 2012, between NGC Banco, S.A. and FerroAtlántica, S.A., as amended from time to time.

"**Finance Lease Energy Assets**" means the assets owned by NGC Banco, S.A. and leased back to FerroAtlántica, S.A. pursuant to the Finance Lease, which assets may be re-acquired by FerroAtlántica, S.A. in accordance with the terms thereof.

"Financial Officer" means the chief executive officer, chief financial officer, treasurer or chief accounting officer of Company.

"First Priority" means, with respect to any Lien purported to be created in any Collateral pursuant to any Collateral Document, that (i) such Lien is perfected and has priority over any other Lien on such Collateral (other than Liens permitted pursuant to subsection 7.2A) and (ii) such Lien is the only Lien (other than Liens permitted pursuant to subsection 7.2A) to which such Collateral is subject.

"Fiscal Quarter" means a fiscal quarter of any Fiscal Year.

"Fiscal Year" means the fiscal year of Company and its Subsidiaries ending on December 31 of each calendar year.

"Flood Hazard Property" means a Mortgaged Property located in an area designated by the Federal Emergency Management Agency as having special flood or mud slide hazards.

"**Foreign Co-Borrower**" means any Foreign Subsidiary that is a Co-Borrower.

"Foreign Co-Borrower Sublimit" means an amount equal to the lesser of the aggregate Commitments and $100,000,000. The Foreign Co-Borrower Sublimit is part of, and not in addition to, the Revolving Loan Commitment Amount.

"Foreign Collateral Documents" means (a) the U.K. Collateral Documents, (b) the French Guaranty, (c) the French Collateral Documents, (d) the Spanish Guaranty and (e) the Spanish Collateral Documents.

"Foreign Corporation" means (i) any Foreign Subsidiary of Globe that is treated as a corporation for United States federal income tax purposes, (ii) any Subsidiary all or substantially all of whose assets consist, directly or indirectly, of Capital Stock of Subsidiaries described in clause (i) of this definition, or (iii) any Subsidiary treated as disregarded for United States federal income tax purposes that owns more than 65% of the Capital Stock of a Subsidiary described in clause (i) or clause (ii) of this definition.

"Foreign Lender" means, with respect to any Borrower, any Lender that is organized under the laws of a jurisdiction other than that in which such Borrower is resident for tax purposes. For purposes of this definition, the United States, each state thereof and the District of Columbia shall be deemed to constitute a single jurisdiction.

"Foreign Obligor" means the Company and any other Loan Party that is a Foreign Subsidiary.

"Foreign Subsidiary" means any Subsidiary of Company that is not a Domestic Subsidiary.

"Foreign Subsidiary Guarantor" means any Foreign Subsidiary of Company that executes and delivers a Foreign Subsidiary Guaranty.

"Foreign Subsidiary Guaranty" means the French Guaranty, the Spanish Guaranty, and any other Guaranty executed and delivered by a Foreign Subsidiary from time to time in accordance with subsection 6.8, in form and substance reasonably satisfactory to the Administrative Agent.

"French Collateral Documents" means collectively all French law agreements, instruments or documents delivered by the French Subsidiary or any other Subsidiary of Company which is a shareholder of the French Subsidiary pursuant to this Agreement or any of the other Loan Documents in order to grant to the Administrative Agent, on behalf of the Secured Parties, a lien on certain assets of the French Subsidiary or the shares issued by the French Subsidiary and owned by a Loan Party to be agreed between the French Subsidiary or any other Subsidiary of Company which is a shareholder of the French Subsidiary and the Administrative Agent and securing the obligations of the French Subsidiary as guarantor under the French Guaranty.

"**French Energy Assets**" means the hydro-electric plants, and the assets associated with such business, located at each of the locations in France set forth on Schedule 1.1D attached hereto and owned as of the Third Amendment Effective Date by FerroPem.

"French Guaranty" means the guarantee granted by the French Subsidiary in favor of the Administrative Agent, on behalf of the Secured Parties, as security and in order to guarantee the Obligations.

"**French Hydro-electric Sale**" means the disposition by the Company or a Subsidiary of the Company of the French Energy Assets.

"French Loan Party" means a Loan Party incorporated or existing under the laws of France.

"**French Subsidiary**" means FerroPem or the entity formed or acquired as contemplated in Section 6.8D(i), as applicable.

"Fronting Exposure" means, at any time there is a Revolving Lender that is a Defaulting Lender, (a) with respect to Issuing Lender, such Defaulting Lender's Pro Rata Share of the outstanding Letter of Credit Usage (other than Letter of Credit Usage as to which such Defaulting Lender's participation obligation has been reallocated to other Lenders or Cash Collateralized in accordance with the terms hereof), and (b) with respect to Swing Line Lender, such Defaulting Lender's Pro Rata Share of Swing Line Loans (other than Swing Line Loans as to which such Defaulting Lender's participation obligation has been reallocated to other Lenders, repaid by Company or Cash Collateralized in accordance with the terms hereof).

"Fund" means any Person (other than a natural Person) that is (or will be) engaged in making, purchasing, holding or otherwise investing in commercial loans and similar extensions of credit in the ordinary course of its activities.

"Funding and Payment Office" means, with respect to any currency, the office of Administrative Agent, Issuing Lender and Swing Line Lender as set forth on Schedule 10.8 with respect to such currency, or such other office of Administrative Agent, Issuing Lender and Swing Line Lender with respect to such currency as may from time to time hereafter be designated as such in a written notice delivered by Administrative Agent and Swing Line Lender to Company and each Lender.

"Funding Date" means the date of funding of a Loan.

"**Funds Transfer and Deposit Account Liability**" means the liability of any Loan Party or any of its Subsidiaries owing to any of the Lenders, or any Affiliates of such Lenders, arising out of (a) the execution or processing of electronic transfers of funds by automatic clearing house transfer, wire transfer or otherwise to or from the deposit accounts of any Loan Party or any of its respective Subsidiaries or now or hereafter maintained with any of the Lenders or their Affiliates and (b) the acceptance for deposit or the honoring for payment of any check, draft or other item with respect to any such deposit accounts.

"GFA SAU" means Grupo FerroAtlántica SAU.

"Globe" means Globe Specialty Metals, Inc., a Delaware corporation.

"Globe Foreign Subsidiary" means each Subsidiary of Globe that is also a Foreign Corporation or is a Subsidiary of a Foreign Corporation.

"Governing Body" means the board of directors or other body, general manager, limited partner or general partner having the power to direct or cause the direction of the management and policies of a Person that is a corporation, partnership, limited liability partnership, trust, public limited company, private limited company or limited liability company or any similar corporate entity in a Relevant Jurisdiction.

"Government Authority" means the government of the United States or any other nation, or any state, regional or local political subdivision or department thereof, and any other governmental or regulatory agency, authority, body, commission, central bank, board, bureau, organ, court, instrumentality or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative powers or functions of or pertaining to government, in each case whether federal, state, local or foreign (including supra-national bodies such as the European Union or the European Central Bank).

"Governmental Authorization" means any permit, license, registration, authorization, plan, directive, accreditation, consent, order or consent decree of or from, or notice to, any Government Authority.

"Granting Lender" has the meaning assigned to that term in subsection 10.1B(iv).

"Guaranties" means, collectively, the Company Guaranty, the Subsidiary Guaranty and each Foreign Subsidiary Guaranty.

"Hazardous Materials" means (i) any chemical, material or substance at any time defined as or included in the definition of "hazardous substances", "hazardous wastes", "hazardous materials", "extremely hazardous waste", "acutely hazardous waste", "radioactive waste", "biohazardous waste", "pollutant", "toxic pollutant", "contaminant", "restricted hazardous waste", "infectious waste", "toxic substances", or any other term or expression intended to define, list or classify substances by reason of properties harmful to health, safety or the indoor or outdoor environment (including harmful properties such as ignitability, corrosivity, reactivity, carcinogenicity, toxicity, reproductive toxicity, "TCLP toxicity" or "EP toxicity" or words of similar import under any applicable Environmental Laws); (ii) any oil, petroleum, petroleum fraction or petroleum derived substance; (iii) any drilling fluids, produced waters and other wastes associated with the exploration, development or production of crude oil, natural gas or geothermal resources; (iv) any flammable substances or explosives; (v) any radioactive materials; (vi) any asbestos-containing materials; (vii) urea formaldehyde foam insulation; (viii) electrical equipment which contains any oil or dielectric fluid containing polychlorinated biphenyls; (ix) pesticides; and (x) any other chemical, material or substance, exposure to which is prohibited, limited or regulated by

any Government Authority or which may or could pose a hazard to the health and safety of the owners, occupants or any Persons in the vicinity of any Facility or to the indoor or outdoor environment.

"Hazardous Materials Activity" means any past, current, proposed or threatened activity, event or occurrence involving any Hazardous Materials, including the use, manufacture, possession, storage, holding, presence, existence, location, Release, threatened Release, discharge, placement, generation, transportation, processing, construction, treatment, abatement, removal, remediation, disposal, disposition or handling of any Hazardous Materials, and any corrective action or response action with respect to any of the foregoing.

"Hedge Agreement" means (i) any Currency Agreement designed to hedge against fluctuations in currency values, exchange rates or forward rates, or any similar agreement designed to hedge against fluctuations in commodity prices and (ii) any Interest Rate Agreement.

"Hedge Counterparty" means any Person that (a) at the time that it enters into any Hedge Agreement, is a Lender or an Affiliate of a Lender, or (b) is party to a Hedge Agreement on the date that such Person or its Affiliate becomes a Lender, in each case in such Person's capacity as a party to such Hedge Agreement.

"HM Revenue & Customs" means Her Majesty's Revenue and Customs (or any successor authority).

"IFRS" means, subject to the limitations on the application thereof set forth in subsection 1.2, International Financial Reporting Standards and applicable accounting requirements set by the International Accounting Standards Board or any successor thereto, as in effect from time to time.

"Increased Amount Date" has the meaning assigned to such term in subsection 2.10.

"Incremental Amount" means, (a) at any time prior to the Third Amendment Effective Date, the excess, if any, of (i) $150,000,000 over (ii) the aggregate amount of all Incremental Term Loan Commitments and Incremental Revolving Loan Commitments established prior to such time pursuant to subsection 2.10 and (b) at any time after the Third Amendment Effective Date, $0.

"Incremental Assumption Agreement" means an Incremental Assumption Agreement in form and substance reasonably satisfactory to Administrative Agent, among the Borrowers, Administrative Agent and one or more Incremental Term Lenders and/or Incremental Revolving Lenders.

"Incremental Revolving Lender" means a Lender with an Incremental Revolving Loan Commitment or an outstanding Incremental Revolving Loan.

"Incremental Revolving Loan Commitment" means the commitment of any Incremental Revolving Lender, established pursuant to subsection 2.10, to make Incremental Revolving Loans to Company.

"Incremental Revolving Loan Commitment Termination Date" means the final maturity date of any Incremental Revolving Loan, as set forth in the applicable Incremental Assumption Agreement.

"Incremental Revolving Loans" means Revolving Loans made by one or more Lenders to Company pursuant to subsection 2.1A(iv). Incremental Revolving Loans may be made in the form of additional Revolving Loans or, to the extent permitted by subsection 2.10 and provided for in the relevant Incremental Assumption Agreement, Other Revolving Loans.

"Incremental Term Lender" means a Lender with an Incremental Term Loan Commitment or an outstanding Incremental Term Loan.

"Incremental Term Loan Commitment" means the commitment of any Incremental Term Lender, established pursuant to subsection 2.10 , to make Incremental Term Loans to Company.

"Incremental Term Loan Exposure" means, with respect to any Lender, as of any date of determination, the sum, without duplication, of (i) the amount of that Lender's unfunded Incremental Term Loan Commitment plus (ii) the outstanding principal amount of that Lender's Incremental Term Loans.

"Incremental Term Loan Maturity Date" means the final maturity date of any Incremental Term Loan, as set forth in the applicable Incremental Assumption Agreement.

"Incremental Term Loans" means term loans made by one or more Lenders to Company pursuant to subsection 2.1A(iv).

"Indebtedness", as applied to any Person, means, without duplication, (i) all indebtedness for borrowed money, (ii) that portion of obligations with respect to Capital Leases that is properly classified as a liability on a balance sheet in conformity with IFRS, (iii) notes payable and drafts accepted representing extensions of credit whether or not representing obligations for borrowed money (excluding any such notes payable and drafts relating to trade accounts payable or accrued liabilities (other than accrued liabilities in respect of the items described in the other clauses of this definition) arising in the ordinary course of business and payable in accordance with customary practice or which are being contested in good faith), (iv) any obligation owed for all or any part of the deferred purchase price of property or services (excluding any such obligations incurred under ERISA and excluding trade accounts payable or accrued liabilities (other than accrued liabilities in respect of the items described in the other clauses of this definition) arising in the ordinary course of business and payable in accordance with customary practice or which are being contested in good faith), which purchase price is due more than six months from the date of incurrence of the obligation in respect thereof, (v) Synthetic Lease Obligations, (vi) all indebtedness secured by any Lien on any property or asset owned or held by that Person regardless of whether the indebtedness secured thereby shall have been assumed by that Person or is nonrecourse to the credit of that Person and (vii) all Contingent Obligations of such Person.

"Indemnified Liabilities" has the meaning assigned to that term in subsection 10.3.

"Indemnified Taxes" means Taxes other than Excluded Taxes.

"Indemnitee" and **"Indemnitees"** has the meaning assigned to that term in subsection 10.3 .

"Intellectual Property" means all issued patents, pending patent applications, trademarks, tradenames, copyrights, software, service-marks and trade secrets, including those rights in know-how, technology and processes.

"Interest Payment Date" means (i) with respect to any Base Rate Loan (including a Swing Line Loan), the last Business Day of each March, June, September and December of each year, commencing on the first such date to occur after the Closing Date, and (ii) with respect to any Eurocurrency Rate Loan, the last day of each Interest Period applicable to such Loan; provided that in the case of each Interest Period of longer than three (3) months "Interest Payment Date" shall also include the date that is three (3) months, or a multiple thereof, after the commencement of such Interest Period.

"Interest Period" has the meaning assigned to that term in subsection 2.2B.

"Interest Rate Agreement" means any interest rate swap agreement, interest rate cap agreement, interest rate collar agreement or other similar agreement or arrangement to which Company or any of its Subsidiaries is a party.

"Interest Rate Determination Date", with respect to any Interest Period, means the second Business Day prior to the first day of such Interest Period.

"Internal Control Event" means a material weakness in, or fraud that involves management or other employees who have a significant role in, any Credit Party's internal controls over financial reporting, in each case as described in the Securities Act or the Exchange Act or other federal securities laws.

"Internal Revenue Code" means the Internal Revenue Code of 1986, as amended.

"Investment" means (i) any direct or indirect purchase or other acquisition by Company or any of its Subsidiaries of, or of a beneficial interest in, any Securities of any other Person (including any Subsidiary of Company), (ii) any direct or indirect redemption, retirement, purchase or other acquisition for value, by any Subsidiary of Company from any Person other than Company or any of its Subsidiaries, of any equity Securities of such Subsidiary, (iii) any direct or indirect loan, advance (other than advances to employees, officers and directors for moving, entertainment and travel expenses, drawing accounts and similar expenditures in the ordinary course of business, and other advances in respect of customary indemnification obligations owed to employees, officers and directors) or capital contribution by Company or any of its Subsidiaries to any other Person, including all indebtedness and accounts receivable from that other Person that are not current assets or did not arise from sales to that other Person in the ordinary course of business, or (iv) Interest Rate Agreements or Currency Agreements not constituting Hedge Agreements. The amount of any Investment shall be the original cost of such Investment plus the cost of all additions thereto, without any adjustments for increases or decreases in value, or write-ups, write-downs or write-offs with respect to such Investment (other than adjustments for the repayment of, or the refund of capital with respect to, the original amount of any such Investment).

"IP Collateral" means, collectively, the Intellectual Property owned by a Loan Party that constitutes Collateral under the Security Agreement.

"IP Filing Office" means the United States Patent and Trademark Office, the United States Copyright Office or any successor or substitute office in the United States in which filings are necessary in the reasonable opinion of Administrative Agent in order to create or perfect Liens on, or evidence the interest of Administrative Agent and the Secured Parties in, any IP Collateral.

"Issuing Lender" means, as the context may require, (a) with respect to any Existing Letter of Credit, Fifth Third Bank and (b) with respect to all other Letters of Credit, Citizens Bank of Pennsylvania in its capacity as issuer of Letters of Credit hereunder, or any successor issuer of Letters of Credit hereunder.

"Joint Book Managers" means a collective reference to Citizens and PNC Capital Markets, LLC.

"Joint Lead Arrangers" means a collective reference to Citizens and PNC Capital Markets, LLC.

"Joint Venture" means a joint venture, partnership or other similar arrangement, whether in corporate, partnership or other legal form.

"Judgment Currency" has the meaning set forth in subsection 10.21.

"Lender" and **"Lenders"** means the Persons identified as "Lenders" and listed on the signature pages of this Agreement and any Incremental Revolving Lender or Incremental Term Lender that becomes a party hereto pursuant to an Incremental Assumption Agreement, in each case together with their successors and permitted assigns pursuant to subsection 10.1, and the term "Lenders" shall include Swing Line Lender unless the context otherwise requires; provided that the term "Lenders", when used in the context of a particular Commitment, shall mean Lenders having that Commitment.

"Letter of Credit" or **"Letters of Credit"** means (a) Standby Letters of Credit issued or to be issued by Issuing Lender for the account of a Borrower pursuant to subsection 3.1 and (b) any Existing Letter of Credit. Letters of Credit may be issued in Dollars or in an Alternative Currency.

"Letter of Credit Expiration Date" means the day that is five (5) days prior to the Revolving Loan Commitment Termination Date then in effect (or, if such day is not a Business Day, the next preceding Business Day).

"Letter of Credit Usage" means, as at any date of determination, the sum of (i) the maximum aggregate amount which is or at any time thereafter may become available for drawing under all Letters of Credit then outstanding plus (ii) the aggregate amount of all drawings under Letters of Credit honored by Issuing Lender and not theretofore reimbursed out of the proceeds of Revolving Loans pursuant to subsection 3.3B or otherwise reimbursed by the Borrowers.

"Lien" means any lien, mortgage, pledge, assignment, security interest, charge or encumbrance of any kind (including any conditional sale or other title retention agreement, any lease in the nature thereof, and any agreement to give any security interest) and any option, trust or other preferential arrangement having the practical effect of any of the foregoing.

"Liquidity" means, at any time, the amount of unrestricted Cash and Cash Equivalents of the Loan Parties (which for the avoidance of doubt shall include the French Subsidiary, the Spanish Subsidiary and GFA SAU prior to the date they execute a guaranty agreement) plus the amount available to be drawn as Revolving Loans by the Borrowers under this Agreement.

"Loan" or **"Loans"** means one or more of the Loans made by Lenders to Borrowers pursuant to subsection 2.1A.

"Loan Documents" means this Agreement, the Notes, the Letters of Credit (and any applications for, or reimbursement agreements or other documents or certificates executed by a Borrower in favor of Issuing Lender relating to, the Letters of Credit), Company Guaranty, the Subsidiary Guaranty, the Foreign Subsidiary Guaranty, the Collateral Documents, any agreement creating or perfecting rights in Cash Collateral pursuant to the provisions of Section 2.11 and the Fee Letter.

"Loan Party" means each of Company, Globe, the Co-Borrowers and any of Company's Subsidiaries from time to time executing a Loan Document, and **"Loan Parties"** means all such Persons, collectively.

"Margin Stock" has the meaning assigned to that term in Regulation U of the Board of Governors of the Federal Reserve System as in effect from time to time.

"Material Adverse Effect" means a material adverse effect upon (i) the business, operations, properties, assets or condition (financial or otherwise) of Company and its Subsidiaries taken as a whole, (ii) the ability of any Loan Party to perform the Obligations or (iii) the rights, remedies and benefits available to Administrative Agent or any Lender under any Loan Documents.

"Material Domestic Subsidiary" means a Material Subsidiary of Company that is a Domestic Subsidiary.

"Material Event" means (a)(i) [reserved], (ii) the incurrence of any Indebtedness pursuant to subsection 7.1(ix) in excess of $50,000,000 for any individual incurrence of Indebtedness or (iii) the making of any Investment pursuant to subsection 7.3(vi) or 7.3(xvii) in excess of $50,000,000 for any individual Investment or (b) the making of any Asset Sale in excess of $35,000,000 during any four fiscal quarter period pursuant to subsection 7.7(viii); provided that the payment of the Company's quarterly dividend payment in amounts consistent with past practices shall not constitute a Material Event.

"Material Foreign Subsidiary" means a Material Subsidiary of Company that is a Foreign Subsidiary.

"Material Subsidiary" means each Subsidiary of Company now existing or hereafter acquired or formed by Company which, on a consolidated basis for such Subsidiary and its Subsidiaries, for the most recent Fiscal Year (a) generated more than 1% of the Consolidated EBITDA of Company and its Subsidiaries or (b) had total assets (including equity interests in other Subsidiaries and excluding investments that are eliminated in consolidation) of greater than $1,000,000, in each case on a Pro Forma Basis (if applicable).

"Maturity Date" means the Revolving Loan Commitment Termination Date, the Incremental Revolving Loan Commitment Termination Date and the Incremental Term Loan Maturity Date, as the context may require.

"Maximum Rate" has the meaning set forth in subsection 2.2G.

"Moody's" means Moody's Investors Service, Inc.

"Mortgage" means a security instrument (whether designated as a deed of trust or a mortgage or by any similar title) executed and delivered by any Loan Party in form reasonably acceptable to the Administrative Agent.

"Mortgaged Property" means the real property identified on Schedule 1.1A.

"Multiemployer Plan" means any Employee Benefit Plan that is a "multiemployer plan" as defined in Section 3(37) of ERISA.

"Non-Consenting Lender" has the meaning assigned to that term in subsection 2.9.

"Non-Defaulting Lender" means each Lender other than a Defaulting Lender.

"Notes" means one or more of the Revolving Notes or Swing Line Note, or any promissory notes issued to evidence Incremental Term Loans or Incremental Revolving Loans, or any combination thereof.

"Notice of Borrowing" means a notice substantially in the form of Exhibit I annexed hereto.

"Notice of Conversion/Continuation" means a notice substantially in the form of Exhibit II annexed hereto.

"Obligations" means all obligations of every nature of each Loan Party from time to time owed to the Secured Parties or any of them under the Loan Documents or otherwise with respect to any Loan, Letter of Credit, Secured Cash Management Agreement or Secured Hedge Agreement, whether direct or indirect (including those acquired by assumption), absolute or contingent, due or to become due, now existing or hereafter arising and including interest and fees that accrue after the commencement by or against any Loan Party or any Affiliate thereof of any proceeding under the Bankruptcy Code or under any other applicable bankruptcy, insolvency or similar law now or hereafter in effect naming such Person as the debtor in such proceeding, regardless of whether such interest and fees are allowed claims in such proceeding, but in all cases excluding Excluded Swap Obligations.

"OFAC" means the US Department of the Treasury's Office of Foreign Assets Control.

"Officer" means the president, chief executive officer, a vice president, chief financial officer, chief accounting officer, secretary, treasurer, general partner (if an individual), managing member (if an individual) or other individual appointed by the Governing Body or the Organizational Documents of a corporation, partnership, trust or limited liability company to serve in a similar capacity as the foregoing.

"Officer's Certificate", as applied to any Person that is a corporation, partnership, trust or limited liability company, means a certificate executed on behalf of such Person by one or more Officers of such Person or one or more Officers of a general partner or a managing member if such general partner or managing member is a corporation, partnership, trust or limited liability company.

"OID" has the meaning assigned to that term in subsection 2.10B.

"Organizational Documents" means the documents (including Bylaws, if applicable) pursuant to which a Person that is a corporation, partnership, trust or limited liability company (or equivalent or comparable type of organization with respect to any Foreign Obligor) is organized.

"Other Loan Exposure" means, as of any date of determination, the sum of (i) with respect to any Incremental Revolving Lender, the amount of that Lender's Incremental Revolving Loan Commitment, and (ii) with respect to any Incremental Term Lender, the amount of that Lender's Incremental Term Loan Exposure.

"Other Revolving Loans" shall have the meaning assigned to such term in subsection 2.10.

"Other Taxes" means all present or future stamp or documentary taxes or any other excise or property taxes, charges, fees, expenses or similar levies arising from any payment made hereunder or under any other Loan Document or from the execution, delivery or enforcement of, or otherwise with respect to, this Agreement or any other Loan Document, except any such Taxes that are imposed with respect to an assignment or sale of a participation.

"Outstanding Amount" means (a) with respect to Revolving Loans on any date, the Dollar Equivalent amount of the aggregate outstanding principal amount thereof after giving effect to any borrowings and prepayments or repayments of such Revolving Loans occurring on such date; (b) with respect to Swing Line Loans on any date, the aggregate outstanding principal amount thereof after giving effect to any borrowings and prepayments or repayments of such Swing Line Loans occurring on such date; and (c) with respect to Letters of Credit on any date, the Dollar Equivalent amount of the aggregate outstanding amount of Letter of Credit Usage on such date after giving effect to any issuance, extension

or increase in the amount of any Letter of Credit occurring on such date and any other changes in the aggregate amount of the Letter of Credit Usage as of such date, including as a result of any reimbursements by a Borrower of any amount of unreimbursed drawings under any Letter of Credit.

"Overnight Rate" means, for any day, (a) with respect to any amount denominated in Dollars, the greater of (i) the Federal Funds Effective Rate and (ii) an overnight rate determined by Administrative Agent, Issuing Lender, or Swing Line Lender, as the case may be, in accordance with banking industry rules on interbank compensation, and (b) with respect to any amount denominated in an Alternative Currency, the rate of interest per annum at which overnight deposits in the applicable Alternative Currency, in an amount approximately equal to the amount with respect to which such rate is being determined, would be offered for such day by a branch or Affiliate of Citizens Bank of Pennsylvania in the applicable offshore interbank market for such currency to major banks in such interbank market.

"Participant" means a purchaser of a participation in the rights and obligations under this Agreement pursuant to subsection 10.1 C .

"Participating Member State" means each state so described in any EMU Legislation.

"Patriot Act" means the Uniting And Strengthening America By Providing Appropriate Tools Required To Intercept And Obstruct Terrorism (USA Patriot Act) Act of 2001.

"PBGC" means the Pension Benefit Guaranty Corporation or any successor thereto.

"Pension Plan" means any Employee Benefit Plan, other than a Multiemployer Plan, that is subject to Section 412 of the Internal Revenue Code or Section 302 of ERISA.

"Pensions Act 2004" means the Pensions Act 2004 under the laws of England and Wales.

"Permitted Acquisition" means the acquisition of all or any portion of the business and assets, or Capital Stock, of any Person which acquisition is permitted pursuant to clause (vi) of subsection 7.3.

"**Permitted Additional Indebtedness**" shall mean unsecured senior, senior subordinated or subordinated Indebtedness issued by a Loan Party (i) in respect of which no Subsidiary of Company that is not an obligor under the Loan Documents is an obligor, (ii) before and after giving effect to the incurrence of which, and the application of the proceeds therefrom, no Potential Event of Default or Event of Default shall have occurred and be continuing and (iii) after giving effect to the incurrence of which and the application of the proceeds therefrom, (a) the Company and its Subsidiaries shall be in Pro Forma Compliance and (b) the Consolidated Net Leverage Ratio does not exceed 2.75 to 1.00 on a Pro Forma Basis.

"Permitted Encumbrances" means the following types of Liens (excluding any such Lien imposed pursuant to Section 401(a)(29) or 412(n) of the Internal Revenue Code or by ERISA):

(i) Liens for taxes, assessments or governmental charges or claims the payment of which is not, at the time, required by subsection 6.3;

(ii) statutory Liens of landlords, Liens of collecting banks under the UCC on items in the course of collection, statutory Liens and rights of set-off of banks, statutory Liens of carriers, warehousemen, mechanics, repairmen, workmen and materialmen, and other Liens imposed by law, in each case incurred in the ordinary course of business (a) for amounts not yet overdue or (b) for amounts that are overdue and that (in the case of any such amounts overdue for a period in excess of five (5) days)

are being contested in good faith by appropriate proceedings, so long as such reserves or other appropriate provisions, if any, as shall be required by IFRS shall have been made for any such contested amounts;

(iii) deposits made in the ordinary course of business in connection with workers' compensation, unemployment insurance and other types of social security (excluding, however, any Liens imposed by ERISA), or to secure liability to insurance carriers under insurance or self-insurance arrangements, the performance of tenders, statutory obligations, surety and appeal bonds, bids, leases, government contracts, trade contracts, performance and return-of-money bonds, or in connection with the payment of the exercise price and withholding taxes in respect of the exercise by employees of stock options, and other similar obligations (exclusive of obligations for the payment of borrowed money), so long as no foreclosure, sale or similar proceedings have been commenced with respect to any material portion of the Collateral on account thereof;

(iv) any attachment or judgment Lien not constituting an Event of Default under subsection 8.8;

(v) licenses (with respect to Intellectual Property and other property), leases or subleases granted to third parties and not interfering in any material respect with the ordinary conduct of the business of Company or any of its Subsidiaries and licenses permitted under subsection 7.7 hereof;

(vi) easements, rights-of-way, restrictions, encroachments, and other minor defects or irregularities in title, in each case which do not and will not interfere in any material respect with the ordinary conduct of the business of Company or any of its Subsidiaries;

(vii) any (a) interest or title of a lessor or sublessor under any lease not prohibited by this Agreement, (b) Lien or restriction that the interest or title of such lessor or sublessor may be subject to, or (c) subordination of the interest of the lessee or sublessee under such lease to any Lien or restriction referred to in the preceding clause (b) , so long as the holder of such Lien or restriction agrees to recognize the rights of such lessee or sublessee under such lease;

(viii) Liens arising from filing UCC financing statements relating solely to leases not prohibited by this Agreement;

(ix) Liens in favor of customs and revenue authorities arising as a matter of law to secure payment of customs duties in connection with the importation of goods;

(x) any zoning or similar law or right reserved to or vested in any Government Authority to control or regulate the use of any real property;

(xi) Liens granted pursuant to the Collateral Documents;

(xii) Liens securing obligations (other than obligations representing Indebtedness for borrowed money) under operating, reciprocal easement or similar agreements entered into in the ordinary course of business of Company and its Subsidiaries; and

(xiii) any encumbrance or restriction (including put and call arrangements) with respect to Capital Stock of, or assets owned by, any Joint Venture as set forth in the joint venture (or similar) agreement of such Joint Venture.

"**Permitted Holders**" means, collectively, (i) Grupo Villar Mir, S.A.U., (ii) members of the senior management team of the Company as of the Third Amendment Effective Date, (iii) Alan Kestenbaum and (iv) any related person of any Persons specified in clause (i) to (iii).

"Permitted Refinancings" shall mean the issuance of any Indebtedness (**"Permitted Refinancing Indebtedness"**) in exchange for, or the net proceeds of which are used to extend, refinance, renew, replace, defease or refund (collectively, to **"Refinance"**), the Indebtedness being Refinanced; provided that (a) the principal amount (or accreted value, if applicable) of such Permitted Refinancing Indebtedness does not exceed the principal amount (or accreted value, if applicable) of the Indebtedness so Refinanced (plus unpaid accrued interest and premium thereon and discounts, fees, commissions and expenses in connection therewith and plus an amount equal to any existing commitments unutilized thereunder), (b) the average life to maturity of such Permitted Refinancing Indebtedness is greater than or equal to that of the Indebtedness being Refinanced, (c) no Permitted Refinancing Indebtedness (i) with respect to any Loan Party, shall have different obligors, or greater guarantees or security, than the Indebtedness being Refinanced and (ii) with respect to any Subsidiary that is not a Loan Party, shall have no obligor that is a Loan Party, or greater guarantees or security, than the Indebtedness being Refinanced and (d) if the Indebtedness being Refinanced is secured by any collateral (whether equally and ratably with, or junior to, Administrative Agent on behalf of the Lenders or otherwise), such Permitted Refinancing Indebtedness may be secured by such collateral (including in respect of working capital facilities of Foreign Subsidiaries otherwise permitted under this Agreement only, any collateral pursuant to after-acquired property clauses to the extent any such collateral secured the Indebtedness being Refinanced) on terms no less favorable, taken as whole, to Administrative Agent on behalf of the Lenders than those contained in the documentation governing the Indebtedness being Refinanced; and provided further, that with respect to a Refinancing of Permitted Additional Indebtedness, such Permitted Refinancing Indebtedness shall meet the requirements of clauses (i), (ii) and (iii) of the definition of **"Permitted Additional Indebtedness"**.

"Person" means and includes natural persons, corporations, limited partnerships, general partnerships, limited liability companies, limited liability partnerships, joint stock companies, Joint Ventures, associations, companies, trusts, banks, trust companies, land trusts, business trusts or other organizations, whether or not legal entities, and Government Authorities.

"Platform" means an electronic delivery system (which may be provided by Administrative Agent, an Affiliate of Administrative Agent or any Person that is not an Affiliate of Administrative Agent), such as IntraLinks or a substantially similar electronic delivery system.

"Potential Event of Default" means a condition or event that, with the giving of notice or lapse of time or both, would constitute an Event of Default.

"Prime Rate" means the rate that Citizens Bank of Pennsylvania publicly announces from time to time as its prime lending rate, as in effect from time to time. The Prime Rate is a rate set by Citizens Bank of Pennsylvania based upon various factors including Citizens Bank of Pennsylvania's costs and desired return, general economic conditions and other factors, and is used as a reference rate and does not necessarily represent the lowest or best rate actually charged to any customer. Citizens Bank of Pennsylvania or any other Lender may make commercial loans or other loans at rates of interest at, above or below the Prime Rate.

"Pro Forma Basis" means, with respect to compliance with any test or covenant hereunder, compliance with such test or covenant after giving effect to (a) any proposed Permitted Acquisition or other Investment, (b) any Asset Sale of a Subsidiary or operating entity for which historical financial statements for the relevant period are available or (c) any incurrence of Indebtedness (including pro forma

adjustments and exclusions arising out of events which are directly attributable to the proposed Permitted Acquisition, Asset Sale or incurrence of Indebtedness, are factually supportable and are expected to have a continuing impact, in each case as determined on a basis consistent with Article 11 of Regulation S-X of the Securities Act, as interpreted by the Staff of the Securities and Exchange Commission, and such other adjustments as are reasonably satisfactory to Administrative Agent and the Company, in each case as certified by the chief financial officer of Company) or Restricted Junior Payment using, for purposes of determining such compliance, the historical financial statements of all entities or assets so acquired or sold and the consolidated financial statements of Company and its Subsidiaries, which shall be reformulated as if such Permitted Acquisitions, Investment, Asset Sale or Restricted Junior Payment, and all other Permitted Acquisitions, Investments, Asset Sales or Restricted Junior Payments that have been consummated during the period, and any Indebtedness or other liabilities to be incurred or repaid in connection therewith had been consummated and incurred or repaid at the beginning of such period (and assuming that any such Indebtedness bearing interest at a variable rate and deemed to be incurred during such measurement period bears interest during any portion of the applicable measurement period prior to the relevant acquisition at the weighted average of the interest rates applicable to outstanding Loans incurred during such period).

"Pro Forma Compliance" means, at any date of determination, that Company shall be in pro forma compliance with any or all of the covenants set forth in subsections 7.6A, 7.6B and 7.6C, as applicable, as of the date of such determination or the last day of the most recently completed Fiscal Quarter, as the case may be (computed on the basis of (a) balance sheet amounts as of such date and (b) income statement amounts for the most recently completed period of four consecutive Fiscal Quarters for which financial statements shall have been delivered to Administrative Agent and calculated on a Pro Forma Basis in respect of the event giving rise to such determination).

"Pro Rata Share" means, for all purposes with respect to each Lender with Revolving Loan Exposure, the percentage obtained by dividing (x) the Revolving Loan Exposure of that Lender by (y) the aggregate Revolving Loan Exposure of all Lenders, in any such case as the applicable percentage may be adjusted pursuant to subsection 2.10 and by assignments permitted pursuant to subsection 10.1. The initial Pro Rata Share of each Lender for purposes of the preceding sentence will be set forth in an allocation letter delivered to such Lender (with a copy to Company).

"Proceedings" means any action, suit, proceeding (whether administrative, judicial or otherwise), governmental investigation or arbitration.

"Real Property Asset" means, at any time of determination, any interest then owned by any Loan Party in any real property.

"Refunded Swing Line Loans" has the meaning assigned to that term in subsection 2.1A(iii).

"Register" has the meaning assigned to that term in subsection 2.1D.

"Reimbursement Date" has the meaning assigned to that term in subsection 3.3B.

"Related Parties" has the meaning assigned to that term in subsection 9.1A.

"Release" means any release, spill, emission, leaking, pumping, pouring, injection, escaping, deposit, disposal, discharge, dispersal, dumping, leaching or migration of Hazardous Materials into the indoor or outdoor environment (including the abandonment or disposal of any barrels, containers or other closed receptacles containing any Hazardous Materials), including the movement of any Hazardous Materials through the air, soil, surface water or groundwater.

"Relevant Jurisdiction" means, in relation to a Loan Party: (a) the jurisdiction under whose laws that Loan Party is incorporated as at the date of this Agreement, or if an entity becomes a Loan Party after the date of this Agreement, as at the date on which it becomes a Loan Party; (b) any jurisdiction where any asset subject to or intended to be subject to a first priority perfected Lien in favor of the Administrative Agent to be created by it is situated; (c) any jurisdiction where it conducts its business; and (d) the jurisdiction whose laws govern the perfection of any of the Collateral Documents entered into by it.

"Request for Issuance" means an application and agreement for the issuance or amendment of a Letter of Credit in the form from time to time in use by Issuing Lender.

"Requirement of Law" mean, as to any Person, all international, foreign, Federal, state and local statutes, treaties, rules, guidelines, regulations, ordinances, codes, executive orders, and administrative or judicial precedents or authorities, including the interpretation or administration thereof by any Government Authority charged with the enforcement, interpretation or administration thereof, and all applicable administrative orders, directed duties, requests, licenses, authorizations and permits of, and agreements with, any Government Authority (in each case whether or not having the force of law); in each case applicable to or binding upon such Person or any of its property or to which such Person or any of its property is subject.

"Requisite Lenders" means one or more Lenders having or holding Revolving Loan Exposure and/or Other Loan Exposure and representing more than 50% of the sum of (i) the aggregate Revolving Loan Exposure and (ii) the aggregate Other Loan Exposure; provided that, (a) as set forth in subsection 2.12, the Revolving Loan Exposure and the Other Loan Exposure, as applicable, held by any Defaulting Lender (other than any Voting Defaulting Lender) shall be excluded for the purposes of making a determination of Requisite Lenders and (b) at any time there are three (3) or more Lenders (other than Defaulting Lenders), Requisite Lenders shall include at least two (2) Lenders.

"Restricted Junior Payment" means (i) any dividend or other distribution, direct or indirect, on account of any shares of any class of stock of Company now or hereafter outstanding, except a dividend payable solely in shares of that class of stock or of common stock to the holders of that class, (ii) any redemption, retirement, sinking fund or similar payment, purchase or other acquisition for value, direct or indirect, of any shares of any class of stock of Company now or hereafter outstanding, (iii) any payment made to retire, or to obtain the surrender of, any outstanding warrants, options or other rights to acquire shares of any class of stock of Company now or hereafter outstanding, and (iv) any payment or prepayment of principal of, premium, if any, or interest on, or fees with respect to, or redemption, purchase, retirement, defeasance (including in-substance or legal defeasance), sinking fund or similar payment with respect to, any Permitted Additional Indebtedness or the Senior Notes.

"Revaluation Date" means (a) with respect to any Loan, each of the following: (i) each date of a borrowing of a Eurocurrency Rate Loan denominated in an Alternative Currency, (ii) each date of a continuation of a Eurocurrency Rate Loan denominated in an Alternative Currency pursuant to subsection 2.1, and (iii) such additional dates as Administrative Agent shall reasonably determine or the Requisite Lenders shall reasonably require; and (b) with respect to any Letter of Credit, each of the following: (i) each date of issuance of a Letter of Credit denominated in an Alternative Currency, (ii) each date of an amendment of any such Letter of Credit having the effect of increasing the amount thereof (solely with respect to the increased amount), (iii) each date of any payment by the Issuing Lender under any Letter of Credit denominated in an Alternative Currency, and (iv) such additional dates as Administrative Agent or Issuing Lender shall reasonably determine or the Requisite Lenders shall reasonably require.

"Revolver Intercompany Loan Agreement" means that certain intercompany loan agreement pursuant to which the Company may use proceeds of Revolving Loans to make, directly or indirectly, intercompany loans to the French Subsidiary in an aggregate amount not to exceed $200,000,000.

"Revolving Lender" means a Lender that has a Revolving Loan Commitment and/or that has an outstanding Revolving Loan.

"Revolving Loan Commitment" means the commitment of a Revolving Lender to make Revolving Loans to the applicable Borrower pursuant to subsections 2.1A(ii) and (iv), and **"Revolving Loan Commitments"** means such commitments of all Revolving Lenders in the aggregate.

"Revolving Loan Commitment Amount" means, at any date, the aggregate amount of the Revolving Loan Commitments of all Revolving Lenders.

"Revolving Loan Commitment Termination Date" means August 20, 2018; provided that, if such date is not a Business Day, the Revolving Loan Commitment Termination Date shall be the preceding Business Day.

"Revolving Loan Exposure", with respect to any Revolving Lender, means, as of any date of determination (i) prior to the termination of the Revolving Loan Commitments, the amount of that Lender's Revolving Loan Commitment, and (ii) after the termination of the Revolving Loan Commitments, the sum of (a) the aggregate outstanding principal amount of the Revolving Loans of that Lender plus (b) in the event that Lender is Issuing Lender, the aggregate Letter of Credit Usage in respect of all Letters of Credit issued by that Lender (in each case net of any participations purchased by other Lenders in such Letters of Credit or in any unreimbursed drawings thereunder) plus (c) the aggregate amount of all participations purchased by that Lender in any outstanding Letters of Credit or any unreimbursed drawings under any Letters of Credit plus (d) in the case of Swing Line Lender, the aggregate outstanding principal amount of all Swing Line Loans (net of any assignments thereof deemed purchased by other Revolving Lenders) plus (e) the aggregate amount of all assignments deemed purchased by that Lender in any outstanding Swing Line Loans.

"Revolving Loans" means, collectively, the Loans made by Revolving Lenders to Borrowers pursuant to subsections 2.1A(ii) and (iv).

"Revolving Notes" means any promissory notes of any Borrower issued pursuant to subsection 2.1E to evidence the Revolving Loans of any Revolving Lenders, substantially in the form of Exhibit III annexed hereto.

"S&P" means Standard & Poor's, a Division of The McGraw-Hill Companies.

"Same Day Funds" means (a) with respect to disbursements and payments in Dollars, immediately available funds, and (b) with respect to disbursements and payments in an Alternative Currency, same day or other funds as may be determined by Administrative Agent or the Issuing Lender, as the case may be, to be customary in the place of disbursement or payment for the settlement of international banking transactions in the relevant Alternative Currency.

"Sanctioned Country" means a country subject to sanctions designated by OFAC, the U.S. Department of State, the European Union, the United Kingdom, the United Nations or France.

"**Sanctioned Person**" means any of the following currently or in the future: (i) an entity, vessel, or individual named on (A) the list of Specially Designated Nationals or Blocked Persons maintained by

OFAC currently available at http://www.treasury.gov/resource-center/sanctions/SDN-List/Pages/default.aspx, (B) the consolidated list of persons, groups, and entities subject to EU financial sanctions currently available at http://eeas.europa.eu/cfsp/sanctions/consol-list_en.htm, (C) the lists maintained by the United Nations Security Council available at http://www.un.org/sc/committees/list_compend.shtml or (D) the lists maintained by Her Majesty's Treasury available at http://www.hm-treasury.gov.uk/fin_sanctions_index.htm; or (ii) anyone more than 50%-owned by an entity or individual described in (i) above; or (iii) (A) an agency or instrumentality of, or an entity owned or controlled by, the government of a Sanctioned Country, to the extent prohibited by Sanctions Laws, (B) an entity located in a Sanctioned Country, or (C) an individual who is a citizen or resident of, or located in, a Sanctioned Country, to the extent that the agency, instrumentality, entity, or individual is subject to a sanctions program administered by OFAC; or (iv) an entity or individual engaged in activities sanctionable under CISADA (as defined under Sanctions Laws), ITRA (as defined under Sanctions Laws), IFCA (as defined under Sanctions Laws below), or any other Sanctions Laws as amended from time to time.

"Sanctions Laws" means the laws, regulations, and rules promulgated or administered by OFAC to implement US sanctions programs, including any enabling legislation or Executive Order related thereto, as amended from time to time; the US Comprehensive Iran Sanctions, Accountability, and Divestment Act and the regulations and rules promulgated thereunder ("CISADA"), as amended from time to time; the US Iran Threat Reduction and Syria Human Rights Act and the regulations and rules promulgated thereunder ("ITRA"), as amended from time to time; the US Iran Freedom and Counter-Proliferation Act and the regulations and rules promulgated thereunder ("IFCA"), as amended from time to time; the sanctions and other restrictive measures applied by the European Union in pursuit of the Common Foreign and Security Policy objectives set out in the Treaty on European Union; and any similar sanctions laws as may be enacted from time to time in the future by the U.S., the European Union (and its Member States), or the Security Council or any other legislative body of the United Nations; and any corresponding laws of jurisdictions in which any Borrower operates or in which the proceeds of any borrowing under this Agreement will be used or from which repayments of the Obligations will be derived.

"Second Amendment Effective Date" means December 21, 2016.

"Secured Cash Management Agreement" means any Cash Management Agreement permitted by Section 6 or 7 that is entered into by and between any Loan Party or any Subsidiary of any Loan Party and any Cash Management Bank.

"Secured Hedge Agreement" means any Hedge Agreement permitted by Section 6 or 7 that is entered into by and between any Loan Party or any Subsidiary of any Loan Party and any Hedge Counterparty.

"Secured Parties" means, collectively, with respect to the Collateral Documents, Administrative Agent, the Lenders, Issuing Lender, each Cash Management Bank and each Hedge Counterparty.

"Securities" means any stock, shares, partnership interests, voting trust certificates, certificates of interest or participation in any profit-sharing agreement or arrangement, options, warrants, bonds, debentures, notes, or other evidences of indebtedness, secured or unsecured, convertible, subordinated, certificated or uncertificated, or otherwise, or in general any instruments commonly known as "securities" or any certificates of interest, shares or participations in temporary or interim certificates for the purchase or acquisition of, or any right to subscribe to, purchase or acquire, any of the foregoing.

"Securities Account" means a "securities account" as defined in Article 8 of the UCC.

"Securities Act" means the Securities Act of 1933 and any successor statute.

"Security Agreement" means the Security Agreement executed and delivered on the Closing Date, substantially in the form of Exhibit X annexed hereto.

"Senior Note Indenture" means that Indenture, dated as of February 15, 2017, among the Company, the Subsidiaries party thereto and Wilmington Trust, National Association, as trustee, pursuant to which the Senior Notes were issued, as amended or otherwise modified to the extent permitted under Section 7.12.

"Senior Notes" means the senior notes of the Company and Globe in an aggregate principal amount of $350,000,000, issued pursuant to the Senior Note Indenture.

"Significant Subsidiary" means any Subsidiary that meets any of the following conditions: (a) the Company's and its Subsidiaries' investments in and advances to such Subsidiary exceed 10% of the total assets of the Company and its Subsidiaries on a consolidated basis as of the end of the most recently completed fiscal year; (b) the Company's and its Subsidiaries' proportionate share of the total assets (after intercompany eliminations) of such Subsidiary exceeds 5% of the total assets of the Company and its Subsidiaries on a consolidated basis as of the end of the most recently completed fiscal year; or (c) the Company's and its Subsidiaries' proportionate share of the Consolidated EBITDA of such Subsidiary exceeds 2.5% of the Consolidated EBITDA of the Company and its Subsidiaries on a consolidated basis for the most recently completed fiscal year.

"Solvent", with respect to any Person, means that as of the date of determination both (i)(a) the then fair saleable value of the property of such Person is (1) greater than the total amount of debts and liabilities (including unmatured liabilities and contingent liabilities but without duplication of any underlying liability related thereto) of such Person and (2) not less than the amount that will be required to pay the probable liabilities on such Person's then existing debts as they become absolute and due considering all financing alternatives and potential asset sales reasonably available to such Person; (b) such Person's capital is not unreasonably small in relation to its business or any contemplated or undertaken transaction; and (c) such Person does not intend to incur, or believe (nor should it reasonably believe) that it will incur, debts beyond its ability to pay such debts as they become due; and (ii) such Person is "solvent" within the meaning given that term and similar terms under applicable laws relating to fraudulent transfers and conveyances. For purposes of this definition, the amount of any contingent liability at any time shall be computed as the amount that, in light of all of the facts and circumstances existing at such time, represents the amount that can reasonably be expected to become an actual or matured liability.

"Spanish Collateral Documents" means collectively all agreements, instruments or documents delivered by the Spanish Subsidiary, GFA SAU or any other Loan Party pursuant to this Agreement or any of the other Loan Documents in order to grant to Administrative Agent, on behalf of the Secured Parties, a lien on certain assets of the Spanish Subsidiary and/or GFA SAU.

"Spanish Companies Law" means Spanish Royal Legislative Decree 1/2010, of 2 July, approving the Spanish Capital Companies Law (Ley de Sociedades de Capital), as amended from time to time.

"Spanish Energy Assets" means the hydro-electric plants, and the assets associated with such business, located at each of the locations in Spain set forth on Schedule 1.1D attached hereto and owned as of the Third Amendment Effective Date by FerroAtlantica, S.A. and HidroNitro Espanola, S.A., including, for the avoidance of doubt, the Finance Lease Energy Assets.

"Spanish Guaranty" means collectively the Spanish law securities and guarantees granted by the Spanish Subsidiary and/or GFA SAU in favor of the Administrative Agent, on behalf of the Secured Parties, as security and in order to guarantee the Obligations.

"Spanish Subsidiary" has the meaning set forth in Section 6.8A.

"SPC" has the meaning assigned to that term in subsection 10.1B(iv).

"Special Notice Currency" means at any time an Alternative Currency, other than the currency of a country that is a member of the Organization for Economic Cooperation and Development at such time located in North America or Europe.

"Spot Rate" for a currency means the rate determined in good faith by Administrative Agent or the Issuing Lender, as applicable, to be the rate quoted by the Person acting in such capacity as the spot rate for the purchase by such Person of such currency with another currency through its principal foreign exchange trading office at approximately 11:00 a.m. on the date two Business Days prior to the date as of which the foreign exchange computation is made; provided that Administrative Agent or the Issuing Lender may obtain such spot rate from another financial institution designated by Administrative Agent or the Issuing Lender if the Person acting in such capacity does not have as of the date of determination a spot buying rate for any such currency; and provided further that the Issuing Lender may use such spot rate quoted on the date as of which the foreign exchange computation is made in the case of any Letter of Credit denominated in an Alternative Currency.

"Standby Letter of Credit" means any letter of credit issued by the Issuing Lender pursuant to the terms hereof, as such letter of credit may be amended, modified, restated, extended, renewed, increased, replaced or supplemented from time to time in accordance with the terms of this Agreement.

"Subject Lender" has the meaning assigned to that term in subsection 2.9.

"Subsidiary" means, with respect to any Person, any corporation, partnership, trust, limited liability company, association, Joint Venture or other business entity of which more than 50% of the total voting power of shares of stock or other ownership interests entitled (without regard to the occurrence of any contingency) to vote in the election of the members of the Governing Body is at the time owned or controlled, directly or indirectly, by that Person or one or more of the other Subsidiaries of that Person or a combination thereof.

"Subsidiary Guarantor" means the Domestic Subsidiary Guarantors and the Foreign Subsidiary Guarantors.

"Subsidiary Guaranty" means the Subsidiary Guaranty executed and delivered by existing Material Domestic Subsidiaries of Company on the Closing Date and to be executed and delivered by additional Material Domestic Subsidiaries of Company from time to time thereafter in accordance with subsection 6.8 and any other Subsidiary of Company that elects to (or is required to) comply with the provisions of subsection 6.8, substantially in the form of Exhibit IX annexed hereto (or such other form as reasonably acceptable to the Administrative Agent).

"Supplemental Collateral Agent" has the meaning assigned to that term in subsection 9.1B.

"Swap Obligations" means, with respect to any Loan Party, an obligation to pay or perform under any agreement, contract or transaction that constitutes a "swap" within the meaning of § 1a(47) of the Commodity Exchange Act.

"Swing Line Lender" means Citizens Bank of Pennsylvania, or any Person serving as a successor Administrative Agent hereunder, in its capacity as Swing Line Lender hereunder.

"Swing Line Loan Commitment" means the commitment of Swing Line Lender to make Swing Line Loans to Globe pursuant to subsection 2.1A(iii). The Swing Line Loan Commitment is part of, and not in addition to, the Revolving Credit Commitments.

"Swing Line Loans" means the Loans made by Swing Line Lender to Globe pursuant to subsection 2.1A(iii) .

"Swing Line Note" means any promissory note of Globe issued pursuant to subsection 2.1E to evidence the Swing Line Loans of Swing Line Lender, substantially in the form of Exhibit IV annexed hereto.

"Syndication Agent" has the meaning assigned to that term in the introduction to this Agreement.

"Synthetic Lease Obligation" means the monetary obligation of a Person under a so-called synthetic, off-balance sheet or tax retention lease.

"TARGET Day" means any day on which the Trans-European Automated Real-time Gross Settlement Express Transfer (TARGET) payment system (or, if such payment system ceases to be operative, such other payment system (if any) reasonably determined by Administrative Agent to be a suitable replacement) is open for the settlement of payments in Euro.

"Tax" or **"Taxes"** means any present or future tax, levy, impost, duty, fee, assessment, deduction, withholding or other charge of any nature and whatever called, by whomsoever, on whomsoever and wherever imposed, levied, collected, withheld or assessed, including interest, penalties, additions to tax and any similar liabilities with respect thereto.

"Third Amendment Effective Date" means February 15, 2017.

"Total Utilization of Revolving Loan Commitments" means, as at any date of determination, the sum of (i) the Outstanding Amount of Revolving Loans plus (ii) the Outstanding Amount of Swing Line Loans plus (iii) the Letter of Credit Usage.

"UCC" means the Uniform Commercial Code as in effect in any applicable jurisdiction.

"Unasserted Obligations" means, at any time, obligations for taxes, costs, indemnifications, reimbursements, damages and other liabilities (except for (i) the principal of and interest on, and fees relating to, any Indebtedness and (ii) contingent reimbursement obligations in respect of amounts that may be drawn under Letters of Credit) in respect of which no claim or demand for payment has been made (or, in the case of obligations for indemnification, no notice for indemnification has been issued by the Indemnitee) at such time.

"UK Borrower" means Company and any other Borrower from time to time that is resident for tax purposes in the United Kingdom.

"UK Borrower DTTP Filing" means an HM Revenue & Customs' Form DTTP2 duly completed and filed by the relevant UK Borrower which contains the scheme reference number and

jurisdiction of tax residence of the relevant UK Treaty Lender as notified in writing to the Borrowers in accordance with subsection 2.7B(v).

"U.K. Collateral Documents" means the English law debenture dated as of the Third Amendment Effective Date granted by the Company in favor of the Administrative Agent.

"**UK CTA**" means the United Kingdom Corporation Tax Act 2009.

"**UK ITA**" means the United Kingdom Income Tax Act 2007.

"**UK Qualifying Lender**" means a Lender which is beneficially entitled to interest payable to that Lender in respect of an advance under a Loan Document and is:

(i) a Lender: (a) which is a bank (as defined for the purpose of section 879 of the UK ITA) making an advance under this Agreement and is within the charge to United Kingdom corporation tax as respects any payments of interest made in respect of that advance or would be within such charge as respects such payments apart from section 18A of the UK CTA; or (b) in respect of an advance made under this Agreement by a person that was a bank (as defined for the purpose of section 879 of the UK ITA) at the time that advance was made and is within the charge to United Kingdom corporation tax as respects any payments of interest made in respect of that advance; or

(ii) a Lender which is: (a) a company resident in the United Kingdom for United Kingdom tax purposes; (b) a partnership each member of which is a company so resident in the United Kingdom or a company not so resident in the United Kingdom which carries on a trade in the United Kingdom through a permanent establishment and which brings into account in computing its chargeable profits (within the meaning of section 19 of the UK CTA) the whole of any share of interest payable in respect of that advance that falls to it by reason of Part 17 of the UK CTA; or (c) a company not so resident in the United Kingdom which carries on a trade in the United Kingdom through a permanent establishment and which brings into account interest payable in respect of that advance in computing the chargeable profits (within the meaning of section 19 of the UK CTA) of that company; or

(iii) a UK Treaty Lender.

"**UK Tax Confirmation**" means a confirmation by a Lender that the person beneficially entitled to interest payable to that Lender in respect of an advance under this Agreement is either: (a) a company resident in the United Kingdom for United Kingdom tax purposes; (b) a partnership each member of which is a company so resident in the United Kingdom or a company not so resident in the United Kingdom which carries on a trade in the United Kingdom through a permanent establishment and which brings into account in computing its chargeable profits (within the meaning of section 19 of the UK CTA) the whole of any share of interest payable in respect of that advance that falls to it by reason of Part 17 of the UK CTA; or (c) a company not so resident in the United Kingdom which carries on a trade in the United Kingdom through a permanent establishment and which brings into account interest payable in respect of that advance in computing the chargeable profits (within the meaning of section 19 of the UK CTA) of that company.

"**UK Treaty Lender**" means a Lender which:

(i) is treated as a resident of a UK Treaty State for the purposes of the Relevant Treaty;

(ii) does not carry on a business in the United Kingdom through a permanent establishment through which that Lender's participation in the Loans is effectively connected; and

(iii) fulfils any conditions which must be fulfilled under the double taxation agreement for residents of that Treaty State to obtain full exemption from United Kingdom taxation on interest payable to that Lender in respect of an advance under this Agreement.

"**UK Treaty State**" means a jurisdiction having a double taxation agreement (a "**Relevant Treaty**") with the United Kingdom which makes provision for full exemption from tax imposed by the United Kingdom on interest.

"Voting Defaulting Lender" means a Lender that is a Defaulting Lender solely by virtue of such Lender's direct or indirect parent having taken an action, or become subject to a proceeding or appointment, that is described in clause (e) of the definition of "Defaulting Lender".

"Write-Down and Conversion Powers" means, with respect to any EEA Resolution Authority, the write-down and conversion powers of such EEA Resolution Authority from time to time under the Bail-In Legislation for the applicable EEA Member Country, which write-down and conversion powers are described in the EU Bail-In Legislation Schedule.

1.2 Accounting Terms; Utilization of IFRS for Purposes of Calculations Under Agreement.

Except as otherwise expressly provided in this Agreement, all accounting terms not otherwise defined herein shall have the meanings assigned to them in conformity with IFRS. Financial statements and other information required to be delivered by Company to Lenders pursuant to clauses (ii), (iii), (v) and (xii) of subsection 6.1 shall be prepared in accordance with IFRS as in effect at the time of such preparation (and delivered together with the reconciliation statements provided for in subsection 6.1(v)). Calculations in connection with the definitions, covenants and other provisions of this Agreement shall utilize IFRS as in effect on the date of determination, applied in a manner consistent with that used in preparing the financial statements referred to in subsection 5.3. If at any time any change in IFRS would affect the computation of any financial ratio or requirement set forth in any Loan Document, and Company, Administrative Agent or Requisite Lenders shall so request, Administrative Agent, Lenders and Company shall negotiate in good faith to amend such ratio or requirement to preserve the original intent thereof in light of such change in IFRS (subject to the approval of Requisite Lenders), provided that, until so amended, such ratio or requirement shall continue to be computed in accordance with IFRS prior to such change therein and Company shall provide to Administrative Agent and Lenders reconciliation statements provided for in subsection 6.1(v). Without limiting the foregoing, leases shall continue to be classified and accounted for on a basis consistent with that reflected in the audited financial statements of the Company for Fiscal Year 2015 in for all purposes of this Agreement, notwithstanding any change in IFRS relating thereto, unless the parties hereto shall enter into a mutually acceptable amendment addressing such changes, as provided for above.

Notwithstanding any other provision contained herein, all terms of an accounting or financial nature used herein shall be construed, and all computations of amounts and ratios referred to herein shall be made, without giving effect to any election under International Accounting Standard 39 – *Financial Instruments: Recognition and Measurement* or any similar accounting standard to value any Indebtedness of Company or any Subsidiary at "fair value", as defined therein.

1.3 Other Definitional Provisions and Rules of Construction.

A. Any of the terms defined herein may, unless the context otherwise requires, be used in the singular or the plural, depending on the reference.

B. References to "Sections" and "subsections" shall be to Sections and subsections, respectively, of this Agreement unless otherwise specifically provided. Section and subsection headings in this Agreement are included herein for convenience of reference only and shall not constitute a part of this Agreement for any other purpose or be given any substantive effect.

C. The use in any of the Loan Documents of the word "include" or "including", when following any general statement, term or matter, shall not be construed to limit such statement, term or matter to the specific items or matters set forth immediately following such word or to similar items or matters, whether or not nonlimiting language (such as "without limitation" or "but not limited to" or words of similar import) is used with reference thereto, but rather shall be deemed to refer to all other items or matters that fall within the broadest possible scope of such general statement, term or matter.

D. Unless otherwise expressly provided herein, references to Organizational Documents, agreements (including the Loan Documents) and other contractual instruments shall be deemed to include all subsequent amendments, restatements, extensions, supplements and other modifications thereto.

E. Unless the context requires otherwise, any reference to any law shall include all statutory and regulatory provisions consolidating, amending, replacing or interpreting such law and any reference to any law or regulation shall, unless otherwise specified, refer to such law or regulation as amended, modified or supplemented from time to time and any successor statute.

F. The parties hereto acknowledge and agree that, for purposes of all calculations made for any applicable period under any Loan Document, (i) after consummation of any Permitted Acquisition, (A) income statement items and other balance sheet items (whether positive or negative) attributable to the target acquired in such transaction shall be included in such calculations and deemed to have been acquired as of the first day of such applicable period on a Pro Forma Basis and (B) Indebtedness of a target which is retired in connection with a Permitted Acquisition shall be excluded from such calculations and deemed to have been retired as of the first day of such applicable period on a Pro Forma Basis and (ii) after any Asset Sale, (A) income statement items, cash flow statement items and balance sheet items (whether positive or negative) attributable to the property or assets disposed of shall be excluded in such calculations to the extent relating to such applicable period on a Pro Forma Basis and (B) Indebtedness that is repaid with the proceeds of such Asset Sale shall be excluded from such calculations and deemed to have been repaid as of the first day of such applicable period on a Pro Forma Basis.

1.4 Exchange Rates; Currency Equivalents.

A. Administrative Agent or Issuing Lender, as applicable, shall determine the Spot Rates as of each Revaluation Date to be used for calculating Dollar Equivalent amounts of credit extensions and Outstanding Amounts denominated in Alternative Currencies. Such Spot Rates shall become effective as of such Revaluation Date and shall be the Spot Rates employed in converting any amounts between the applicable currencies until the next Revaluation Date to occur. Except for purposes of financial statements delivered by Loan Parties hereunder or calculating financial covenants hereunder or except as otherwise provided herein, the applicable amount of any currency (other than Dollars) for purposes of the Loan Documents shall be such Dollar Equivalent amount as so determined by Administrative Agent or Issuing Lender, as applicable.

B. Wherever in this Agreement in connection with a borrowing, conversion, continuation or prepayment of a Eurocurrency Rate Loan or the issuance, amendment or extension of a Letter of Credit, an amount, such as a required minimum or multiple amount, is expressed in Dollars, but such borrowing, Eurocurrency Rate Loan or Letter of Credit is denominated in an Alternative Currency, such amount shall

be the relevant Alternative Currency Equivalent of such Dollar amount (rounded to the nearest unit of such Alternative Currency, with 0.5 of a unit being rounded upward), as determined by Administrative Agent or the Issuing Lender, as the case may be.

C. For purposes of determining compliance as of any date with the definition of Material Event or Sections 7.1, 7.2, 7.3, 7.4, 7.5, 7.7, 8.2 or 8.8 (other than for purposes of calculating the Consolidated Net Leverage Ratio or Consolidated Secured Net Leverage Ratio, as used in any such Section, which shall be calculated in accordance with the definition thereof), the amount of any incurrence of indebtedness, investment, asset disposition, restricted payment or other applicable transaction (each a "**Subject Transaction**") denominated in a currency other than Dollars shall be the Dollar Equivalent of such amount as of the date such Subject Transaction. No Potential Event of Default or Event of Default shall arise as a result of any limitation or threshold set forth in Dollars in Section 7.1, 7.2, 7.3, 7.4, 7.5, 7.7, 8.2 or 8.8 being exceeded solely as a result of changes in currency exchange rates from those rates applicable on the date of such Subject Transaction.

1.5 Additional Alternative Currencies.

A. Company may from time to time request that Eurocurrency Rate Loans be made and/or Letters of Credit be issued in a currency other than those specifically listed in the definition of "Alternative Currency;" provided that such requested currency is a lawful currency (other than Dollars) that is readily available and freely transferable and convertible into Dollars. In the case of any such request with respect to the making of Eurocurrency Rate Loans, such request shall be subject to the approval of Administrative Agent and the Lenders; and in the case of any such request with respect to the issuance of Letters of Credit, such request shall be subject to the approval of Administrative Agent and Issuing Lender.

B. Any such request shall be made to Administrative Agent not later than 11:00 a.m., ten (10) Business Days prior to the date of the desired Credit Extension (or such earlier time or date as may be agreed by Administrative Agent and, in the case of any such request pertaining to Letters of Credit, the Issuing Lender, in its or their sole discretion). In the case of any such request pertaining to Eurocurrency Rate Loans, Administrative Agent shall promptly notify each Lender thereof; and in the case of any such request pertaining to Letters of Credit, Administrative Agent shall promptly notify the Issuing Lender thereof. Each Lender (in the case of any such request pertaining to Eurocurrency Rate Loans) or Issuing Lender (in the case of a request pertaining to Letters of Credit) shall notify Administrative Agent, not later than 11:00 a.m., five (5) Business Days after receipt of such request whether it consents, in its sole discretion, to the making of Eurocurrency Rate Loans or the issuance of Letters of Credit, as the case may be, in such requested currency.

C. Any failure by a Lender or Issuing Lender, as the case may be, to respond to such request within the time period specified in the preceding sentence shall be deemed to be a refusal by such Lender or the Issuing Lender, as the case may be, to permit Eurocurrency Rate Loans to be made or Letters of Credit to be issued in such requested currency. If Administrative Agent and all the Lenders consent to making Eurocurrency Rate Loans in such requested currency, Administrative Agent shall so notify Company and such currency shall thereupon be deemed for all purposes to be an Alternative Currency hereunder for purposes of any borrowing of Eurocurrency Rate Loans; and if Administrative Agent and Issuing Lender consent to the issuance of Letters of Credit in such requested currency, Administrative Agent shall so notify Company and such currency shall thereupon be deemed for all purposes to be an Alternative Currency hereunder for purposes of any Letter of Credit issuances. If Administrative Agent shall fail to obtain consent to any request for an additional currency under this subsection 1.5, Administrative Agent shall promptly so notify Company.

1.6 Change of Currency.

A. Each obligation of Borrowers to make a payment denominated in the national currency unit of any member state of the European Union that adopts the Euro as its lawful currency after the date hereof shall be redenominated into Euro at the time of such adoption (in accordance with the EMU Legislation). If, in relation to the currency of any such member state, the basis of accrual of interest expressed in this Agreement in respect of that currency shall be inconsistent with any convention or practice in the London interbank market for the basis of accrual of interest in respect of the Euro, such expressed basis shall be replaced by such convention or practice with effect from the date on which such member state adopts the Euro as its lawful currency; provided that if any borrowing in the currency of such member state is outstanding immediately prior to such date, such replacement shall take effect, with respect to such borrowing, at the end of the then current Interest Period.

B. Each provision of this Agreement shall be subject to such reasonable changes of construction as Administrative Agent may from time to time specify in a written notice to Company to be appropriate to reflect the adoption of the Euro (or departure from usage thereof) by any member state of the European Union and any relevant market conventions or practices relating to the Euro.

Each provision of this Agreement also shall be subject to such reasonable changes of construction as Administrative Agent may from time to time specify in a written notice to Company to be appropriate to reflect a change in currency of any other country and any relevant market conventions or practices relating to the change in currency, such changes to put the Lenders and Borrower in the same position, as close as possible, that they would have been in had no such change in currency or market conventions or practices occurred.

1.7 Letter of Credit Amounts.

Unless otherwise specified herein, the amount of a Letter of Credit at any time shall be deemed to be the Dollar Equivalent of the stated amount of such Letter of Credit in effect at such time; provided, however, that with respect to any Letter of Credit that, by its terms or the terms of any application or other document related thereto, provides for one or more automatic increases in the stated amount thereof, the amount of such Letter of Credit shall be deemed to be the Dollar Equivalent of the maximum stated amount of such Letter of Credit after giving effect to all such increases (at the time specified therefor in such Letter of Credit and as such amount may be reduced by (a) any permanent reduction of such Letter of Credit or (b) any amount which is drawn, reimbursed and no longer available under such Letter of Credit).

SECTION 2. AMOUNTS AND TERMS OF COMMITMENTS AND LOANS

2.1 Commitments; Making of Loans; the Register; Optional Notes.

A. Commitments. Subject to the terms and conditions of this Agreement and in reliance upon the representations and warranties of Company and the other Borrowers herein set forth, each Lender hereby severally agrees to make the Loans as described in subsections 2.1A(ii) and, as applicable, 2.1A(iv) and Swing Line Lender hereby agrees to make the Swing Line Loans as described in subsection 2.1A(iii).

(i) [Intentionally omitted].

(ii) Revolving Loans. Each Revolving Lender severally agrees, subject to the limitations set forth below with respect to the maximum amount of Revolving Loans permitted to

be outstanding from time to time, to lend to Borrowers in Dollars or in one or more Alternative Currencies from time to time on any Business Day during the period from and including the Closing Date to the earliest of (1) the Revolving Loan Commitment Termination Date, (2) the date of the termination of the Revolving Loan Commitments pursuant to subsection 2.4B(ii) and (3) the date of the termination of the commitment of each Revolving Lender to make Revolving Loans and Issuing Lender to issue, increase or extend Letters of Credit pursuant to Section 8, an aggregate amount not exceeding its Pro Rata Share of the aggregate amount of the Revolving Loan Commitments to be used for the purposes identified in subsection 2.5B. The amount of each Revolving Lender's Revolving Loan Commitment as of the Third Amendment Effective Date is set forth opposite the name of such Lender on Schedule 2.1A and the Revolving Loan Commitment Amount as of the Third Amendment Effective Date is $200,000,000; provided that the amount of the Revolving Loan Commitment of each Revolving Lender shall be adjusted to give effect to any assignment of such Revolving Loan Commitment pursuant to subsection 10.1B (in which case, the amount of such Lender's Revolving Loan Commitment is set forth in the Assignment Agreement) and shall be reduced from time to time by the amount of any reductions thereto made pursuant to subsection 2.4B. Each Revolving Lender's Revolving Loan Commitment shall expire on the Revolving Loan Commitment Termination Date and all Revolving Loans and all other amounts owed hereunder with respect to the Revolving Loans and the Revolving Loan Commitments shall be paid in full no later than that date. Amounts borrowed under this subsection 2.1A(ii) may be repaid and reborrowed to but excluding the Revolving Loan Commitment Termination Date. Notwithstanding the foregoing, any Other Revolving Loans shall be due and payable as set forth in the relevant Incremental Assumption Agreement.

Anything contained in this Agreement to the contrary notwithstanding, the Revolving Loans and the Revolving Loan Commitments shall be subject to the limitation that in no event shall (w) the Total Utilization of Revolving Loan Commitments at any time exceed the Revolving Loan Commitment Amount then in effect or (x) the aggregate principal amount of all outstanding Revolving Loans of any Lender plus such Lender's Pro Rata Share of the Outstanding Amount of all Letters of Credit plus such Lender's Pro Rata Share of the Outstanding Amount of all Swing Line Loans shall not exceed such Lender's Revolving Loan Commitment, or (y) the aggregate Outstanding Amount of all Revolving Loans made to a Foreign Co-Borrower shall not exceed the Foreign Co-Borrower Sublimit, or (z) the Outstanding Amount of all Revolving Loans denominated in Alternative Currencies plus the Outstanding Amount of all Letters of Credit denominated in Alternative Currencies shall not exceed the Alternative Currency Sublimit.

(iii) Swing Line Loans.

(a) General Provisions. Swing Line Lender, in reliance upon the agreements of the other Revolving Lenders set forth in this subsection 2.1A(iii) and subject to the limitations set forth in the last paragraph of subsection 2.1A(ii) and set forth below with respect to the maximum amount of Swing Line Loans permitted to be outstanding from time to time, may in its sole discretion make a portion of the Revolving Loan Commitments available to Globe from time to time on any Business Day from and including the Closing Date to the earliest of (1) the Revolving Loan Commitment Termination Date, (2) the date of the termination of the Revolving Loan Commitments pursuant to subsection 2.4B(ii) and (3) the date of the termination of the commitment of each Revolving Lender to make Revolving Loans and Issuing Lender to issue, increase or extend Letters of Credit pursuant to Section 8, by making Swing Line Loans to Globe in Dollars in an aggregate amount not exceeding the amount of the Swing Line Loan Commitment to be used for the purposes identified in subsection 2.5B, notwithstanding the fact that such Swing Line Loans, when aggregated with Swing Line Lender's

outstanding Revolving Loans and Swing Line Lender's Pro Rata Share of the Letter of Credit Usage then in effect, may exceed Swing Line Lender's Revolving Loan Commitment. The original amount of the Swing Line Loan Commitment is $10,000,000; provided that any reduction of the Revolving Loan Commitment Amount made pursuant to subsection 2.4 that reduces the Revolving Loan Commitment Amount to an amount less than the then current amount of the Swing Line Loan Commitment shall result in an automatic corresponding reduction of the amount of the Swing Line Loan Commitment to the amount of the Revolving Loan Commitment Amount, as so reduced, without any further action on the part of Globe, Administrative Agent or Swing Line Lender. The Swing Line Loan Commitment shall expire on the Revolving Loan Commitment Termination Date and all Swing Line Loans and all other amounts owed hereunder with respect to the Swing Line Loans shall be paid in full no later than that date. Amounts borrowed under this subsection 2.1A(iii) may be repaid and reborrowed to but excluding the Revolving Loan Commitment Termination Date.

(b) Swing Line Loan Prepayment with Proceeds of Revolving Loans. With respect to any Swing Line Loans that have not been voluntarily prepaid by Globe pursuant to subsection 2.4B(i), Swing Line Lender may, at any time in its sole discretion, deliver to Administrative Agent (with a copy to Globe), no later than 11:00 A.M. (New York City time) on the proposed Funding Date, a notice (which shall be deemed to be a Notice of Borrowing given by Globe) requesting Revolving Lenders to make Revolving Loans that are Base Rate Loans on such Funding Date in an amount equal to the amount of such Swing Line Loans (the **"Refunded Swing Line Loans"**) outstanding on the date such notice is given. Globe hereby authorizes the giving of any such notice and the making of any such Revolving Loans. Each Revolving Lender shall make an amount equal to its Pro Rata Share of the Refunded Swing Line Loans to Administrative Agent in immediately available funds at the Funding and Payment Office for Dollar-denominated payments not later than 1:00 P.M. (New York City time) on the Funding Date, whereupon, subject to subsection 2.1A(iii)(c), each Revolving Lender that so makes funds available shall be deemed to have made a Revolving Loan that is a Base Rate Loan to Globe in such amount. Anything contained in this Agreement to the contrary notwithstanding, (1) the proceeds of such Revolving Loans made by Revolving Lenders other than Swing Line Lender shall be immediately delivered by Administrative Agent to Swing Line Lender (and not to Globe) and applied (and Administrative Agent may apply Cash Collateral available with respect to the applicable Swing Line Loan) to repay a corresponding portion of the Refunded Swing Line Loans and (2) on the day such Revolving Loans are made, Swing Line Lender's Pro Rata Share of the Refunded Swing Line Loans shall be deemed to be paid with the proceeds of a Revolving Loan made by Swing Line Lender, and such portion of the Swing Line Loans deemed to be so paid shall no longer be outstanding as Swing Line Loans and shall no longer be due under the Swing Line Note, if any, of Swing Line Lender but shall instead constitute part of Swing Line Lender's outstanding Revolving Loans and shall be due under the Revolving Note, if any, of Swing Line Lender. Globe hereby authorizes Administrative Agent and Swing Line Lender to charge Globe's accounts with Administrative Agent and Swing Line Lender (up to the amount available in each such account) in order to immediately pay Swing Line Lender the amount of the Refunded Swing Line Loans to the extent the proceeds of such Revolving Loans made by Revolving Lenders, including the Revolving Loan deemed to be made by Swing Line Lender, are not sufficient to repay in full the Refunded Swing Line Loans. Administrative Agent shall promptly notify Globe of any such charges. If any portion of any such amount paid (or deemed to be paid) to Swing Line Lender should be recovered by or on behalf of Globe from Swing Line Lender in

any bankruptcy proceeding, in any assignment for the benefit of creditors or otherwise, the loss of the amount so recovered shall be ratably shared among all Lenders in the manner contemplated by subsection 10.5.

(c) Swing Line Loan Participations. On the Funding Date of each Swing Line Loan, each Revolving Lender shall be deemed to, and hereby agrees to, purchase a risk participation in such Swing Line Loan in an amount equal to its Pro Rata Share. If for any reason (1) Revolving Loans are not made upon the request of Swing Line Lender as provided in the immediately preceding paragraph in an amount sufficient to repay any amounts owed to Swing Line Lender in respect of such Swing Line Loan or (2) the Revolving Loan Commitments are terminated at a time when such Swing Line Loan is outstanding, the request for Revolving Loans that are Base Rate Loans submitted by the Swing Line Lender pursuant to subsection 2.1A(iii)(b) shall be deemed to be a request by the Swing Line Lender that each of the Revolving Lenders fund its risk participation in the relevant Swing Line Loan and each Revolving Lender's payment to Administrative Agent for the account of the Swing Line Lender pursuant to subsection 2.1A(iii)(b) shall be deemed payment in respect of such participation (such Revolving Lender's Pro Rata Share calculated, in the case of the foregoing clause (2), immediately prior to such termination of the Revolving Loan Commitments). In the event any Revolving Lender fails to make available to Swing Line Lender any amount as provided in subsections 2.1A(iii)(b) and (c), Swing Line Lender shall be entitled to recover (acting through Administrative Agent) such amount on demand from such Revolving Lender together with interest thereon for the period from the date such payment is required to the date on which such payment is immediately available to the Swing Line Lender at a rate per annum equal to the greater of the applicable Overnight Rate from time to time in effect and a rate determined by the Swing Line Lender in accordance with banking industry rules on interbank compensation, plus any administrative, processing or similar fees customarily charged by the Swing Line Lender in connection with the foregoing. If such Revolving Lender pays such amount (with interest and fees as aforesaid), the amount so paid shall constitute such Lender's Revolving Loan included in the relevant Refunded Swing Line Loan or funded participation in the relevant Swing Line Loan as the case may be. In the event Swing Line Lender receives a payment of any amount with respect to which other Revolving Lenders have funded the purchase of risk participations as provided in this paragraph, Swing Line Lender shall promptly distribute to each such other Revolving Lender its Pro Rata Share of such payment. A certificate of the Swing Line Lender submitted to any Revolving Lender (through Administrative Agent) with respect to any amounts owing under this paragraph shall be conclusive absent manifest error.

(d) Revolving Lenders' Obligations. Anything contained herein to the contrary notwithstanding, each Revolving Lender's obligation to make Revolving Loans for the purpose of repaying any Refunded Swing Line Loans pursuant to subsection 2.1A(iii)(b) and each Revolving Lender's obligation to purchase and fund a risk participation in any unpaid Swing Line Loans pursuant to the immediately preceding paragraph shall be absolute and unconditional and shall not be affected by any circumstance, including (1) any set-off, counterclaim, recoupment, defense or other right which such Revolving Lender may have against Swing Line Lender, Company or any other Person for any reason whatsoever; (2) the occurrence or continuation of an Event of Default or a Potential Event of Default; (3) any adverse change in the business, operations, properties, assets, condition (financial or otherwise) or prospects of Company or any of its Subsidiaries; (4) any breach of this Agreement or any other Loan Document

by any party thereto; or (5) any other circumstance, happening or event whatsoever, whether or not similar to any of the foregoing; provided that such obligations of each Revolving Lender are subject to the limitations set forth in the last paragraph of subsection 2.1A(ii) and the condition that (x) all conditions under Section 4 to the making of the applicable Refunded Swing Line Loans or other unpaid Swing Line Loans, as the case may be, were satisfied at the time such Refunded Swing Line Loans or unpaid Swing Line Loans were made or (y) the satisfaction of any such condition not satisfied had been waived in accordance with subsection 10.6 prior to or at the time such Refunded Swing Line Loans or other unpaid Swing Line Loans were made.

(e) Interest for Account of Swing Line Lender. The Swing Line Lender shall be responsible for invoicing Globe for interest on Swing Line Loans. Until each Revolving Lender funds its Revolving Loan or risk participation pursuant to this subsection 2.1A(iii) to refinance such Revolving Lender's Pro Rata Share of any Swing Line Loan, interest in respect of such Pro Rata Share shall be solely for the account of the Swing Line Lender.

(f) Payments Directly to Swing Line Lender. Globe shall make all payments of principal and interest in respect of the Swing Line Loans directly to the Swing Line Lender.

(iv) Each Lender having an Incremental Term Loan Commitment or an Incremental Revolving Loan Commitment agrees, subject to the terms and conditions set forth in the applicable Incremental Assumption Agreement, to make Incremental Term Loans and/or Incremental Revolving Loans to Company, in an aggregate principal amount not to exceed its Incremental Term Loan Commitment or Incremental Revolving Loan Commitment, as the case may be.

B. Borrowing Mechanics. Loans made on any Funding Date (other than Swing Line Loans, Revolving Loans made pursuant to a request by Swing Line Lender pursuant to subsection 2.1A(iii) or Revolving Loans made pursuant to subsection 3.3B) shall be in an aggregate minimum amount of $500,000 and multiples of $100,000 in excess of that amount; provided that Loans made as Eurocurrency Rate Loans with a particular Interest Period shall be in an aggregate minimum amount of $5,000,000 and multiples of $1,000,000 in excess of that amount. Swing Line Loans made on any Funding Date shall be in an aggregate minimum amount of $500,000 and multiples of $100,000 in excess of that amount. Whenever a Borrower desires that Lenders make Revolving Loans, the applicable Borrower shall deliver to Administrative Agent a duly executed Notice of Borrowing no later than 12:00 Noon (New York City time) at least (i) three (3) Business Days in advance of the proposed Funding Date (in the case of a Eurocurrency Rate Loan denominated in Dollars), (ii) four (4) Business Days (or five (5) Business Days in the case of a Special Notice Currency) in advance of the proposed Funding Date in the case of a Eurocurrency Rate Loan denominated in an Alternative Currency, and (iii) on the proposed Funding Date (in the case of a Base Rate Loan) or, in the case of clauses (i), (ii) and (iii), such shorter period as approved by the Administrative Agent. Whenever Globe desires that Swing Line Lender make a Swing Line Loan, Globe shall deliver to Administrative Agent a duly executed Notice of Borrowing no later than 1:00 P.M. (New York City time) on the proposed Funding Date. Revolving Loans may be continued as or converted into Base Rate Loans and Eurocurrency Rate Loans in the manner provided in subsection 2.2D. If a Borrower fails to specify in the Notice of Borrowing whether the requested Loan shall be a Base Rate Loan or Eurocurrency Rate Loan, then the applicable Loans shall be made as Base Rate Loans. In lieu of delivering a Notice of Borrowing, the applicable Borrower may give Administrative Agent telephonic notice by the required time of any proposed borrowing under this

subsection 2.1B; provided that such notice shall be promptly confirmed in writing by delivery of a duly executed Notice of Borrowing to Administrative Agent on or before the applicable Funding Date.

Neither Administrative Agent nor any Lender shall incur any liability to the Borrowers in acting upon any telephonic notice referred to above that Administrative Agent believes in good faith to have been given by an Officer or other person authorized to borrow on behalf of Company or Globe, as applicable, or for otherwise acting in good faith under this subsection 2.1B or under subsection 2.2D, and upon funding of Loans by Lenders, and upon conversion or continuation of the applicable basis for determining the interest rate with respect to any Loans pursuant to subsection 2.2D, in each case in accordance with this Agreement, pursuant to any such telephonic notice Company shall have effected Loans or a conversion or continuation, as the case may be, hereunder.

Except as otherwise provided in subsections 2.6B, 2.6C, 2.6D and 2.6G, a Notice of Borrowing for, or a Notice of Conversion/Continuation for conversion to, or continuation of, a Eurocurrency Rate Loan (or telephonic notice in lieu thereof) shall be irrevocable on and after the related Interest Rate Determination Date, and Company and/or Globe, as applicable, shall be bound to make a borrowing or to effect a conversion or continuation in accordance therewith.

During the existence of an Event of Default, no Loan may be requested as a Eurocurrency Rate Loan (whether in Dollars or any Alternative Currency) without the consent of the Requisite Lenders.

C. Disbursement of Funds. Subject to subsection 2.12, all Revolving Loans shall be made by Revolving Lenders simultaneously and proportionately to their respective Pro Rata Shares, it being understood that neither Administrative Agent nor any Lender shall be responsible for any default by any other Lender in such other Lender's obligation to make a Loan requested hereunder nor shall the amount of the Commitment of any Lender to make the particular type of Loan requested or Pro Rata Share of any Lender be increased or decreased as a result of a default by any other Lender in such other Lender's obligation to make a Loan requested hereunder. Promptly after receipt by Administrative Agent of a Notice of Borrowing pursuant to subsection 2.1B (or telephonic notice in lieu thereof), Administrative Agent shall notify each Lender for that type of Loan or Swing Line Lender, as the case may be, of the proposed borrowing (including amount and currency and the applicable Borrower). Each such Lender (other than Swing Line Lender) shall make the amount of its Loan available to Administrative Agent on the applicable Funding Date in Same Day Funds at the Funding and Payment Office for the applicable currency (i) not later than 1:00 P.M. (New York City time) for any Loan denominated in Dollars and (ii) not later than the Applicable Time specified by Administrative Agent in the case of any Loan in an Alternative Currency. Unless the Swing Line Lender has received notice (by telephone or in writing) from Administrative Agent (including at the request of any Revolving Lender) prior to 2:00 P.M. (New York City time) on the applicable Funding Date (i) directing Swing Line Lender not to make such Swing Line Loan as a result of the limitations set forth in the last paragraph of subsection 2.1A(ii) or (ii) that one or more of the applicable conditions specified in Section 4 is not then satisfied, Swing Line Lender shall make the amount of its Swing Line Loan available to Globe not later than 3:00 P.M. (New York City time) on the applicable Funding Date by crediting the account of Globe at the Funding and Payment Office. Except as provided in subsection 2.1A(iii) and subsection 3.3B with respect to Revolving Loans used to repay Refunded Swing Line Loans or to reimburse Issuing Lender for the amount of a drawing under a Letter of Credit issued by it, upon satisfaction or waiver of the conditions precedent specified in subsections 4.1 (in the case of Loans made on the Closing Date) and 4.2 (in the case of all Loans), Administrative Agent shall make all funds so received by Administrative Agent available to the applicable Borrower on the applicable Funding Date either by (a) causing an amount of Same Day Funds in Dollars equal to the proceeds of all such Loans received by Administrative Agent from Lenders to be credited to the account of the applicable Borrower at the Funding and Payment Office or (b) wire transfer of such funds, in each case in accordance with instructions provided to Administrative Agent by the

applicable Borrower; provided, however, that if, on the date the Notice of Borrowing is given by a Borrower, there are unreimbursed drawings under any Letter of Credit outstanding that have not been refinanced as Revolving Loans, then the proceeds of such requested Loans, first, shall be applied to the payment in full of any such unreimbursed drawings, and second, shall be made available to the applicable Borrower as provided above.

Unless Administrative Agent shall have been notified by any Lender prior to a Funding Date (or, in the case of a Notice of Borrowing for Base Rate Loans, prior to 12:00 Noon (New York City time) on such Funding Date) that such Lender does not intend to make available to Administrative Agent the amount of such Lender's Loan requested on such Funding Date, Administrative Agent may assume that such Lender has made such amount available to Administrative Agent on such Funding Date and Administrative Agent may, in its sole discretion, but shall not be obligated to, make available to the applicable Borrower a corresponding amount on such Funding Date. If such corresponding amount is not in fact made available to Administrative Agent by such Lender, Administrative Agent shall be entitled to recover such corresponding amount on demand from such Lender together with interest thereon, for each day from such Funding Date until the date such amount is paid to Administrative Agent and if such Lender does not pay such corresponding amount forthwith upon Administrative Agent's demand therefor, Administrative Agent shall promptly notify the Borrowers and the Borrowers shall promptly pay such corresponding amount to Administrative Agent in immediately available funds together with interest thereon, for each day from and including such Funding Date until but excluding the date such amount is paid to Administrative Agent, at (1) in the case of payment to be made by such Lender, the Overnight Rate, plus any administrative, processing or similar fees customarily charged by Administrative Agent in connection with the foregoing, and (2) in the case of payment made by the Borrowers, at the rate payable under this Agreement for the applicable Loans made to the Borrower. If the Borrowers and such Lender shall pay such interest to Administrative Agent for the same or an overlapping period, Administrative Agent shall promptly remit to the applicable Borrower the amount of such interest paid by such Borrower for such period. Any payment by the Borrowers shall be without prejudice to any claim the Borrowers may have against a Lender that shall have failed to make such payment to Administrative Agent. Nothing in this subsection 2.1C shall be deemed to relieve any Lender from its obligation to fulfill its Commitments hereunder or to prejudice any rights that Company may have against any Lender as a result of any default by such Lender hereunder.

D. The Register. For purposes of this subsection 2.1D, any reference to a Lender shall be construed to include Issuing Lender. Administrative Agent, acting solely for these purposes as a non-fiduciary agent of the Borrowers (and such agency being solely for tax purposes) (it being acknowledged that Administrative Agent (and any sub-agent), in such capacity, its Affiliates and its Affiliates' partners, officers, directors, employees, agents, trustees and advisors shall constitute Indemnitees under subsection 10.3), shall maintain (and make available for inspection by Company and Lenders upon reasonable prior notice at reasonable times at its address referred to in subsection 10.8) a register for the recordation of, and shall record, the names and addresses of Lenders and the respective amounts of the Revolving Loan Commitment, Swing Line Loan Commitment, Incremental Term Loan Commitments, Incremental Revolving Loan Commitments, Revolving Loans, Swing Line Loans, Incremental Term Loans and Incremental Revolving Loans, Letters of Credit of, and Obligations owed to each Lender from time to time (the **"Register"**). The entries in the Register shall be conclusive (absent manifest error), the Borrowers, Administrative Agent and Lenders shall deem and treat the Persons listed as Lenders in the Register as the holders and owners of the corresponding Commitments and Loans listed therein for all purposes hereof; all amounts owed with respect to any Commitment or Loan shall be owed to the Lender listed in the Register as the owner thereof; and any request, authority or consent of any Person who, at the time of making such request or giving such authority or consent, is listed in the Register as a Lender shall be conclusive and binding on any subsequent holder, assignee or transferee of the corresponding Commitments or Loans. Each Lender shall record on its internal records the amount of its Loans and

Commitments and each payment in respect hereof, and any such recordation shall be conclusive and binding on the Borrowers, absent manifest error, subject to the entries in the Register, which shall, absent manifest error, govern in the event of any inconsistency with any Lender's records. Failure to make any recordation in the Register or in any Lender's records, or any error in such recordation, shall not affect any Loans or Commitments or any Obligations in respect of any Loans. In addition, Administrative Agent shall maintain on the Register information regarding the designation, and revocation of designation, of any Lender as a Defaulting Lender (and as a Voting Defaulting Lender).

E. Optional Notes. If so requested by any Lender by written notice to Company (with a copy to Administrative Agent) at least two Business Days' prior to the Closing Date or upon two Business Days' written notice any time thereafter, the applicable Borrower shall execute and deliver to such Lender (and/or, if applicable and if so specified in such notice, to any Person who is an assignee of such Lender pursuant to subsection 10.1) on the Closing Date (or, if such notice is delivered after the Closing Date, promptly after Company's receipt of such notice) a promissory note or promissory notes to evidence, as applicable, such Lender's Revolving Loans or Swing Line Loans, substantially in the form of Exhibit III or Exhibit IV annexed hereto, respectively, with appropriate insertions, or such Lender's Incremental Term Loans or Incremental Revolving Loans.

2.2 Interest on the Loans.

A. Rate of Interest. Subject to the provisions of subsections 2.2E, 2.2G, 2.6 and 2.7, each Revolving Loan shall bear interest on the unpaid principal amount thereof from the date made through maturity (whether by acceleration or otherwise) at a rate determined by reference to the Base Rate or the Eurocurrency Rate, as applicable. Subject to the provisions of subsection 2.7, each Swing Line Loan shall bear interest on the unpaid principal amount thereof from the date made through maturity (whether by acceleration or otherwise) at a rate determined by reference to the Base Rate. The applicable basis for determining the rate of interest with respect to any Revolving Loan shall be selected by the applicable Borrower initially at the time a Notice of Borrowing is given with respect to such Loan pursuant to subsection 2.1B (subject to the third to last sentence of subsection 2.1B), and the basis for determining the interest rate with respect to any Revolving Loan may be changed from time to time pursuant to subsection 2.2D (subject to the third to last sentence of subsection 2.1B). If on any day a Revolving Loan is outstanding with respect to which notice has not been delivered to Administrative Agent in accordance with the terms of this Agreement specifying the applicable basis for determining the rate of interest, then for that day that Loan shall bear interest determined by reference to the Base Rate; provided, however, in the case of a Eurocurrency Rate Loan, then that Loan shall bear interest as a Eurocurrency Rate Loan with an Interest Period of one (1) month.

(i) Subject to the provisions of subsections 2.2E, 2.2G and 2.7, the Revolving Loans shall bear interest through maturity as follows:

(a) if a Base Rate Loan, then at the sum of the Base Rate plus the Base Rate Margin set forth in the table below opposite the applicable Consolidated Net Leverage Ratio for the four Fiscal Quarter period for which the applicable Compliance Certificate has been delivered pursuant to subsection 6.1(iv); or

(b) if a Eurocurrency Rate Loan, then at the sum of the Eurocurrency Rate plus the Eurocurrency Rate Margin set forth in the table below opposite the applicable Consolidated Net Leverage Ratio for the four Fiscal Quarter period for which the applicable Compliance Certificate has been delivered pursuant to subsection 6.1(iv) :

Consolidated Net Leverage Ratio	Eurocurrency Rate Margin/ Letter of Credit Fee	Base Rate Margin
Greater than or equal to 2.50:1.00	2.50%	1.50%
Greater than or equal to 2.00:1.00 but less than 2.50:1.00	2.25%	1.25%
Greater than or equal to 1.00:1.00 but less than 2.00:1.00	2.00%	1.00%
Less than 1.00:1.00	1.50%	0.50%

provided that at all times following the Third Amendment Effective Date, the applicable margin for Eurocurrency Rate Loans shall be 4.00% per annum and for Base Rate Loans shall be 3.00% per annum.

(ii) [Intentionally omitted].

(iii) Upon delivery of the Compliance Certificate by Company to Administrative Agent pursuant to subsection 6.1(iv), the Base Rate Margin and the Eurocurrency Rate Margin shall automatically be adjusted in accordance with such Compliance Certificate, such adjustment to become effective on the next succeeding Business Day following the receipt by Administrative Agent of such Compliance Certificate (subject to the provisions of the foregoing clause (i)); provided that, if at any time a Compliance Certificate is not delivered at the time required pursuant to subsection 6.1(iv), from the time such Compliance Certificate was required to be delivered until the Business Day next succeeding delivery of such Compliance Certificate, the applicable margins shall be the maximum percentage amount for Loans set forth above.

If, as a result of any restatement of or other adjustment to the financial statements of Company and its Subsidiaries or for any other reason, Company or Administrative Agent or any Lender determines that (i) the Consolidated Net Leverage Ratio as calculated by Company as of any applicable date was inaccurate and (ii) a proper calculation of the Consolidated Net Leverage Ratio would have resulted in higher pricing for such period, Company shall immediately and retroactively be obligated to pay to Administrative Agent for the account of the applicable Lenders or Issuing Lender, as the case may be, promptly on demand by Administrative Agent (or, after the occurrence of an actual or deemed entry of an order for relief with respect to Company under the Bankruptcy Code, automatically and without further action by Administrative Agent, any Lender or Issuing Lender), an amount equal to the excess of the amount of interest and fees (including the Commitment Fee referenced in Section 2.3A) that should have been paid for such period over the amount of interest and fees actually paid for such period. This paragraph shall not limit the rights of Administrative Agent, any Lender or Issuing Lender, as the case may be, under subsection 2.2E, 3.2, 3.3B or Section 8 and the Lenders' acceptance of payment of such amounts will not constitute a waiver of any default under this Agreement. Company's obligations under this paragraph to pay additional interest and fees as a result of any revised calculation of the Consolidated Net Leverage Ratio with respect to any period in any Fiscal Year shall survive for a period not to exceed sixty (60) days following the delivery of the audited financial statements delivered pursuant to Section 6.1(iii) for such Fiscal Year (unless such recalculation is the result of a non-appealable determination by a

court of competent jurisdiction that the Company committed actual fraud in the preparation of the financial statements used to calculate the Consolidated Net Leverage Ratio for such period, in which event the foregoing limitation shall not apply).

(iv) Subject to the provisions of subsections 2.2E, 2.2G and 2.7, the Swing Line Loans shall bear interest through maturity at the sum of the Base Rate plus the applicable Base Rate Margin.

(v) Subject to the provisions of subsections 2.2E, 2.2G and 2.7, Incremental Term Loans and Incremental Revolving Loans shall bear interest through maturity at the rates specified in the applicable Incremental Assumption Agreements.

B. Interest Periods. In connection with each Eurocurrency Rate Loan, a Borrower may, pursuant to the applicable Notice of Borrowing or Notice of Conversion/Continuation, as the case may be, select an interest period (each an **"Interest Period"**) to be applicable to such Loan, which Interest Period shall be, at Company's option, either a one, two, three or six month period; provided that:

(i) the initial Interest Period for any Eurocurrency Rate Loan shall commence on the Funding Date in respect of such Loan, in the case of a Loan initially made as a Eurocurrency Rate Loan, or on the date specified in the applicable Notice of Conversion/Continuation, in the case of a Base Rate Loan converted to a Eurocurrency Rate Loan;

(ii) in the case of immediately successive Interest Periods applicable to a Eurocurrency Rate Loan continued as such pursuant to a Notice of Conversion/Continuation, each successive Interest Period shall commence on the day on which the next preceding Interest Period expires;

(iii) if an Interest Period would otherwise expire on a day that is not a Business Day, such Interest Period shall expire on the next succeeding Business Day; provided that, if any Interest Period would otherwise expire on a day that is not a Business Day but is a day of the month after which no further Business Day occurs in such month, such Interest Period shall expire on the next preceding Business Day;

(iv) any Interest Period that begins on the last Business Day of a calendar month (or on a day for which there is no numerically corresponding day in the calendar month at the end of such Interest Period) shall, subject to clause (v) of this subsection 2.2B , end on the last Business Day of the calendar month at the end of such Interest Period;

(v) no Interest Period with respect to any portion of the Revolving Loans shall extend beyond the Revolving Loan Commitment Termination Date, no Interest Period with respect to any portion of any Incremental Term Loans shall extend beyond the applicable Incremental Term Loan Maturity Date and no Interest Period with respect to any portion of any Incremental Revolving Loan shall extend beyond the applicable Incremental Revolving Loan Commitment Termination Date;

(vi) [Intentionally omitted];

(vii) there shall be no more than ten (10) Interest Periods outstanding at any time; and

(viii) in the event the applicable Borrower fails to specify an Interest Period for any Eurocurrency Rate Loan in the applicable Notice of Borrowing or Notice of

Conversion/Continuation, such Borrower shall be deemed to have selected an Interest Period of one month.

C. Interest Payments. Subject to the provisions of subsection 2.2E, interest on each Loan shall be due and payable by the applicable Borrower in arrears on each Interest Payment Date applicable to that Loan, upon any prepayment of that Loan (to the extent accrued on the amount being prepaid) and on the Maturity Date. Interest hereunder shall be due and payable in accordance with the terms hereof before and after judgment, and before and after the commencement of any proceeding under the Bankruptcy Code or under any other applicable bankruptcy, insolvency or similar law now or hereafter in effect.

D. Conversion or Continuation. Subject to the provisions of subsection 2.6, each Borrower shall have the option (i) to convert at any time all or any part of its outstanding Revolving Loans equal to (x) with respect to conversion of Eurocurrency Rate Loans to Base Rate Loans, $1,000,000 and multiples of $100,000 in excess of that amount and (y) with respect to conversion of Base Rate Loans to Eurocurrency Rate Loans, $5,000,000 and multiples of $1,000,000 in excess of that amount or (ii) upon the expiration of any Interest Period applicable to a Eurocurrency Rate Loan, to continue all or any portion of such Loan equal to $5,000,000 and multiples of $1,000,000 in excess of that amount as a Eurocurrency Rate Loan. If a Borrower fails to specify a type of Loan or fails to give a timely Notice of Conversion/Continuation with respect to any Loan, then the applicable Loan shall be automatically converted to or continued as the type of Loan that it was and in the same currency, provided, however, in the case of a Eurocurrency Rate Loan, such Loan shall be continued as a Eurocurrency Rate Loan in its original currency with an Interest Period of one (1) month. No Loan may be converted into or continued as a Loan denominated in a different currency, but instead must be prepaid in the original currency of such Loan and reborrowed in the other currency. If a Borrower requests a Loan of, conversion to, or continuation of a Eurocurrency Rate Loan but fails to specify an Interest Period, it will be deemed to have specified an Interest Period of one month.

Except as otherwise provided herein, a Eurocurrency Rate Loan may be continued or converted only on the last day of an Interest Period for such Eurocurrency Rate Loan unless the applicable Borrower pays the amounts due, if any, under subsection 2.7 in connection therewith. During the existence of an Event of Default, no Loans may be converted to or continued as Eurocurrency Rate Loans (whether in Dollars or any Alternative Currency) without the consent of the Requisite Lenders, and the Requisite Lenders may demand that any or all of the then outstanding Eurocurrency Rate Loans denominated in an Alternative Currency be prepaid, or redenominated into Dollars in the amount of the Dollar Equivalent thereof, on the last day of the then current Interest Period with respect thereto.

The applicable Borrower shall deliver a duly executed Notice of Conversion/Continuation to Administrative Agent no later than 12:00 Noon (New York City time) at least (i) three (3) Business Days in advance of the proposed conversion/continuation date in the case of a Base Rate Loan or a Eurocurrency Rate Loan denominated in Dollars and (ii) four (4) Business Days (or five (5) Business Days in the case of a Special Notice Currency) in advance of the proposed conversion/continuation date in the case of a Eurocurrency Rate Loan denominated in an Alternative Currency. In lieu of delivering a Notice of Conversion/Continuation, Company may give Administrative Agent telephonic notice by the required time of any proposed conversion/continuation under this subsection 2.2D; provided that such notice shall be promptly confirmed in writing by delivery of a duly executed Notice of Conversion/Continuation to Administrative Agent on or before the proposed conversion/continuation date. Administrative Agent shall notify each Lender of any Loan subject to a Notice of Conversion/Continuation.

E. Default Rate. From and after the occurrence and during the continuation of any Event of Default under subsections 8.1, 8.6 or 8.7, and from and after the occurrence and during the continuation of any other Event of Default at the election of Administrative Agent (acting at the direction of the Requisite Lenders) or the Requisite Lenders, the outstanding principal amount of all Loans and, to the extent permitted by applicable law, any interest payments thereon not paid when due and any fees and other amounts then due and payable hereunder, shall thereafter bear interest (including post-petition interest in any proceeding under the Bankruptcy Code or other applicable bankruptcy laws) payable upon demand by Administrative Agent at a rate that is 2% per annum in excess of the interest rate (including any applicable margin) otherwise payable under this Agreement with respect to the applicable Loans (or, in the case of (i) Letter of Credit fees, a rate that is 2% per annum in excess of the Eurocurrency Rate Margin and (ii) any such fees (other than Letter of Credit fees) and other amounts, at a rate which is 2% per annum in excess of the interest rate (including the Base Rate Margin) otherwise payable under this Agreement for Base Rate Loans). Payment or acceptance of the increased rates of interest provided for in this subsection 2.2E is not a permitted alternative to timely payment and shall not constitute a waiver of any Event of Default or otherwise prejudice or limit any rights or remedies of Administrative Agent or any Lender.

F. Computation of Interest. Interest on the Loans shall be computed (i) in the case of Base Rate Loans (including Base Rate Loans determined by reference to the Eurocurrency Rate), on the basis of a 365-day or 366-day year, as the case may be, and (ii) in the case of Eurocurrency Rate Loans and all other computations of fees and interest, on the basis of a 360-day year, in each case for the actual number of days elapsed in the period during which it accrues, or, in the case of interest in respect of Loans denominated in Alternative Currencies as to which market practice differs from the foregoing, in accordance with such market practice. In computing interest on any Loan, the date of the making of such Loan or the first day of an Interest Period applicable to such Loan or, with respect to a Base Rate Loan being converted from a Eurocurrency Rate Loan, the date of conversion of such Eurocurrency Rate Loan to such Base Rate Loan, as the case may be, shall be included, and the date of payment of such Loan or the expiration date of an Interest Period applicable to such Loan or, with respect to a Base Rate Loan being converted to a Eurocurrency Rate Loan, the date of conversion of such Base Rate Loan to such Eurocurrency Rate Loan, as the case may be, shall be excluded; provided that if a Loan is repaid on the same day on which it is made, one day's interest shall, subject to subsection 2.4C(i), be paid on that Loan. Each determination by Administrative Agent of the interest rate or fee hereunder shall be conclusive and binding for all purposes, absent manifest error.

G. Maximum Rate. Notwithstanding anything herein to the contrary, if at any time the applicable interest rate, together with all fees and charges that are treated as interest under applicable law (collectively, the **"Charges"**), as provided for herein or in any other document executed in connection herewith, or otherwise contracted for, charged, received, taken or reserved by any Lender or Issuing Lender, shall exceed the maximum lawful rate (the **"Maximum Rate"**) that may be contracted for, charged, taken, received or reserved by such Lender in accordance with applicable law, the rate of interest payable hereunder, together with all Charges payable to such Lender or Issuing Lender, shall be limited to the Maximum Rate, provided that such excess amount shall be paid to such Lender or Issuing Lender on subsequent payment dates to the extent not exceeding the Maximum Rate. If Administrative Agent or any Lender shall receive interest in an amount that exceeds the Maximum Rate, the excess interest shall be applied to the principal of the Loans or, if it exceeds such unpaid principal, refunded to the applicable Borrower. In determining whether the interest contracted for, charged, or received by Administrative Agent or a Lender exceeds the Maximum Rate, such Person may, to the extent permitted by applicable law, (a) characterize any payment that is not principal as an expense, fee, or premium rather than interest, (b) exclude voluntary prepayments and the effects thereof, and (c) amortize, prorate, allocate, and spread in equal or unequal parts the total amount of interest throughout the contemplated term of the Obligations hereunder.

2.3 Fees.

A. Revolving Loan Commitment Fees. Company agrees to pay to Administrative Agent, for distribution to each Non-Defaulting Lender with a Revolving Loan Commitment in proportion to that Revolving Lender's Pro Rata Share, commitment fees (collectively, the "**Commitment Fee**") in Dollars for the period from and including the Closing Date to and excluding the Revolving Loan Commitment Termination Date equal to the actual daily amount by which the Revolving Loan Commitment Amount exceeds the sum of (i) the Outstanding Amount of Revolving Loans (but not any outstanding Swing Line Loans) plus (ii) the Outstanding Amount of Letters of Credit multiplied by the Commitment Fee set forth in the table below opposite the applicable Consolidated Net Leverage Ratio for the four Fiscal Quarter period for which the applicable Compliance Certificate has been delivered pursuant to subsection 6.1(iv), such Commitment Fees to be calculated on the basis of a 360-day year and the actual number of days elapsed and to be payable quarterly in arrears on the last Business Day of each March, June, September and December of each year, commencing on the first such date to occur after the Closing Date, and on the Revolving Loan Commitment Termination Date;

Consolidated Net Leverage Ratio	Commitment Fee
Greater than or equal to 2.50:1.00	0.40%
Greater than or equal to 2.00:1.00 but less than 2.50:1.00	0.35%
Greater than or equal to 1.00:1.00 but less than 2.00:1.00	0.30%
Less than 1.00:1.00	0.25%

provided that at all times following the Third Amendment Effective Date, the Commitment Fee shall be 0.50% per annum.

B. Other Fees. Company agrees to pay to the applicable Agents and Administrative Agent for their own respective accounts, in Dollars, fees in the amounts and at the times specified in the Fee Letter. Such fees shall be fully earned when paid and shall not be refundable for any reason whatsoever.

2.4 Repayments, Prepayments and Reductions of Revolving Loan Commitment Amount; General Provisions Regarding Payments; Application of Proceeds of Collateral and Payments Under Guaranties.

A. Repayment of Loans.

(i) [Intentionally omitted].

(ii) Scheduled Payments of Incremental Term Loans. In the event that any Incremental Term Loans are made on an Increased Amount Date, Company shall repay such Incremental Term Loans on the dates and in the amounts set forth in the Incremental Assumption Agreement.

(iii) Revolving Loans. Borrowers shall repay to the Revolving Credit Lenders on the Revolving Loan Commitment Termination Date the aggregate principal amount of all Revolving Loans outstanding on such date.

(iv) Incremental Revolving Loans. In the event that any Incremental Revolving Loans are made on an Increased Amount Date, Company shall repay such Incremental Revolving Loans on the Incremental Revolving Loan Commitment Termination Date.

(v) Swing Line Loans. Globe shall repay each Swing Line Loan on the earlier to occur of (a) the date ten (10) Business Days after such Loan is made and (b) the Revolving Loan Commitment Termination Date.

B. Prepayments and Reductions in Revolving Loan Commitment Amount.

(i) Voluntary Prepayments. The Borrowers may, upon written or telephonic notice to Administrative Agent on or prior to 12:00 Noon (New York City time) on the date of prepayment, which notice, if telephonic, shall be promptly confirmed in writing, at any time and from time to time prepay any Swing Line Loan on any Business Day in whole or in part in an aggregate minimum amount of $500,000 in the case of Base Rate Loans and 1,000,000 in the case of Eurocurrency Rate Loans and multiples of $500,000 in excess of that amount. A Borrower may, upon (i) not less than one (1) Business Day's prior written or telephonic notice, in the case of Base Rate Loans, (ii) three (3) Business Days' prior written or telephonic notice in the case of Eurocurrency Rate Loans denominated in Dollars and (iii) four (4) Business Days' (or five (5), in the case of prepayment of Loans denominated in Special Notice Currencies) prior written or telephonic notice in the case of Eurocurrency Rate Loans denominated in an Alternative Currency, and in each case given to Administrative Agent by 12:00 Noon (New York City time) on the date required and, if given by telephone, promptly confirmed in writing to Administrative Agent, who will promptly notify each Lender whose Loans are to be prepaid of such prepayment, at any time and from time to time prepay any Revolving Loans outstanding in favor of such Borrower on any Business Day in whole or in part in an aggregate minimum amount of $500,000 in the case of Base Rate Loans and $1,000,000 in the case of Eurocurrency Rate Loans and multiples of $500,000 in excess of that amount. Notice of prepayment having been given as aforesaid, the principal amount of the Loans specified in such notice shall become due and payable on the prepayment date specified therein; provided that if such notice is given in connection with a refinancing of all Obligations (other than contingent indemnification obligations), such notice may be conditional on the effectiveness of the replacement credit agreement or other similar document and may be revoked by Company if such condition is not satisfied, subject to the provisions of Section 2.7. Any such voluntary prepayment shall be applied as specified in subsection 2.4B(iv).

(ii) Voluntary Reductions of Revolving Loan Commitments. Company may, upon not less than three (3) Business Days' (or such shorter period as approved by Administrative Agent) prior written or telephonic notice confirmed in writing to Administrative Agent, or upon such lesser number of days' prior written or telephonic notice, as determined by Administrative Agent in its sole discretion, at any time and from time to time, terminate in whole or permanently reduce in part, without premium or penalty, the Revolving Loan Commitment Amount in an amount up to the amount by which the Revolving Loan Commitment Amount exceeds the Total Utilization of Revolving Loan Commitments at the time of such proposed termination or reduction; provided that any such partial reduction of the Revolving Loan Commitment Amount, unless the Revolving Loan Commitment is reduced to equal the Total Utilization of Revolving Loan Commitments, shall be in an aggregate minimum amount of $1,000,000 and multiples of

$500,000 in excess of that amount. Company's notice to Administrative Agent (who will promptly notify each Revolving Lender of such notice) shall designate the date (which shall be a Business Day) of such termination or reduction and the amount of any partial reduction, and such termination or reduction shall be effective on the date specified in Company's notice and shall reduce the amount of the Revolving Loan Commitment of each Revolving Lender proportionately to its Pro Rata Share. Any such voluntary reduction of the Revolving Loan Commitment Amount shall be applied as specified in subsection 2.4B(iv). The amount of any such Revolving Loan Commitment reduction shall not be applied to the Alternative Currency Sublimit, the sublimit for Letters of Credit, the Foreign Co-Borrower Sublimit or the sublimit for Swing Line Loans unless otherwise specified by Company. All fees accrued until the effective date of any termination of the Revolving Loan Commitment shall be paid on the effective date of such termination.

(iii) Mandatory Prepayments. The Loans shall be prepaid in the amounts and under the circumstances set forth below, all such prepayments to be applied as set forth below or as more specifically provided in subsection 2.4B(iv) and subsection 2.4D:

(a) [Intentionally omitted].

(b) [Intentionally omitted].

(c) [Intentionally omitted].

(d) [Intentionally omitted].

(e) Prepayments Due to Reductions or Restrictions of Revolving Loan Commitment Amount. The Borrowers shall from time to time prepay first the Swing Line Loans and second the Revolving Loans (and, after prepaying all Revolving Loans, Cash Collateralize any outstanding Letters of Credit by depositing the requisite amount in the Collateral Account) to the extent necessary so that the Total Utilization of Revolving Loan Commitments (less any outstanding Letters of Credit that have been Cash Collateralized) shall not at any time exceed the Revolving Loan Commitment Amount then in effect. At such time as the Total Utilization of Revolving Loan Commitments shall be equal to or less than the Revolving Loan Commitment Amount, if no Event of Default has occurred and is continuing, to the extent any Cash Collateral was provided by the Borrowers and has not been applied to any Obligations as provided in the Security Agreement, such amount shall, at the request of Company, be released to the applicable Borrowers in accordance with subsection 2.11.

(f) Prepayments Due to Exchange Rate Fluctuations. (i) If Administrative Agent notifies Company at any time that the Total Utilization of Revolving Loan Commitments (less any outstanding Letters of Credit that have been Cash Collateralized) at such time exceeds an amount equal to 105% of the Revolving Loan Commitments then in effect, then, within five (5) Business Days after receipt of such notice, the applicable Borrower shall prepay its respective Revolving Loans and/or Cash Collateralize its respective Letter of Credit Usage in an aggregate amount sufficient to reduce the Total Utilization of Revolving Loan Commitments (less any outstanding Letters of Credit that have been Cash Collateralized) as of such date of payment to an amount not to exceed 100% of the Revolving Loan Commitment Amount then in effect; provided, however, that, subject to the provisions of subsection 2.11, the Borrowers shall not be required to Cash Collateralize the Letter of Credit Usage pursuant to this subsection 2.4B(iii)(f) unless after the prepayment in full of the Revolving Loans the Total Utilization of

Revolving Loan Commitments exceeds the Revolving Loan Commitment Amount then in effect, (ii) if Administrative Agent notifies Company at any time that the Letter of Credit Usage at such time exceeds an amount equal to 105% of the sublimit for Letters of Credit then in effect, then, within five (5) Business Days after receipt of such notice, the applicable Borrower shall Cash Collateralize its respective portion of the Letter of Credit Usage in an aggregate amount sufficient to reduce the Letter of Credit Usage as of such date of payment to an amount not to exceed 100% of such sublimit for Letters of Credit then in effect and (iii) if Administrative Agent notifies Company at any time that the Total Utilization of Revolving Loan Commitments attributable to the Foreign Co-Borrowers at such time exceeds an amount equal to 105% of the Foreign Co-Borrower Sublimit then in effect, then, within five (5) Business Days after receipt of such notice, the Foreign Co-Borrowers shall prepay its respective Revolving Loans and/or Cash Collateralize its respective Letter of Credit Usage in an aggregate amount sufficient to reduce the Total Utilization of Revolving Loan Commitments attributable to the Foreign Co-Borrowers (less any outstanding Letters of Credit issued on account of the Foreign Co-Borrowers that have been Cash Collateralized) as of such date of payment to an amount not to exceed 100% of the Foreign Co-Borrower Sublimit then in effect. In the case of each of clauses (i), (ii) and (iii), Administrative Agent may, at any time and from time to time after the initial deposit of such Cash Collateral, request that additional Cash Collateral be provided in order to protect against the results of further exchange rate fluctuations. If Administrative Agent notifies Company at any time that the Outstanding Amount of all Revolving Loans denominated in Alternative Currencies at such time exceeds an amount equal to 105% of the Alternative Currency Sublimit then in effect, then, within five (5) Business Days after receipt of such notice, the applicable Borrower shall prepay its respective Revolving Loans in an aggregate amount sufficient to reduce such Outstanding Amount as of such date of payment to an amount not to exceed 100% of the Alternative Currency Sublimit then in effect.

(iv) Application of Prepayments and Unscheduled Reductions of Revolving Loan Commitment Amount.

(a) Application of Voluntary Prepayments by Type of Loans and Order of Maturity. Any voluntary prepayments pursuant to subsection 2.4B(i) shall be applied as specified by the applicable Borrower in the applicable notice of prepayment; provided that in the event such Borrower fails to specify the Loans to which any such prepayment shall be applied, such prepayment shall be applied first, if applicable, to repay such Borrower's outstanding Swing Line Loans to the full extent thereof (without a corresponding reduction of the Revolving Loan Commitment Amount), and second to repay such Borrower's outstanding Revolving Loans to the full extent thereof.

(b) Application of Mandatory Prepayments by Type of Loans. Except as provided in subsection 2.4D, any amount required to be applied as a mandatory prepayment of the Loans pursuant to subsections 2.4B(iii)(e) shall be applied first to the extent of any remaining portion of such amount, to prepay the Swing Line Loans to the full extent thereof, and second, to the extent of any remaining portion of such amount, to prepay the Revolving Loans to the full extent thereof.

(c) [Intentionally omitted].

(d) Application of Prepayments to Base Rate Loans and Eurocurrency Rate Loans. Considering Incremental Term Loans, Incremental Revolving Loans and

Revolving Loans being prepaid separately, any prepayment thereof shall be applied first to Base Rate Loans to the full extent thereof before application to Eurocurrency Rate Loans, in each case in a manner that minimizes the amount of any payments required to be made by the applicable Borrower pursuant to subsection 2.6D; provided, however, that such Borrower may elect that the remainder of such prepayments not applied to prepay Base Rate Loans be deposited in the Collateral Account and applied thereafter to prepay the Eurocurrency Rate Loan or Loans with Interest Periods expiring on a date or dates nearest the date of deposit in accordance with this subsection 2.4B(iv), upon expiration of such Interest Periods.

If after giving effect to any reduction of the Revolving Loan Commitments provided for in this Section 2.4, the Alternative Currency Sublimit exceeds the Revolving Loan Commitment Amount, such sublimit shall be automatically reduced by the amount of such excess.

C. General Provisions Regarding Payments.

(i) Manner and Time of Payment. Except as expressly provided for herein and except with respect to principal of and interest on Loans denominated in Alternative Currency, all payments by any Borrower of principal, interest, fees and other Obligations shall be made in Dollars in same day funds, without defense, setoff or counterclaim, free of any restriction or condition, and delivered to Administrative Agent not later than 12:00 Noon (New York City time) on the date due at the Funding and Payment Office for the account of Lenders; funds received by Administrative Agent after that time on such due date shall be deemed to have been paid by the applicable Borrower on the next succeeding Business Day. Except as otherwise expressly provided herein, all payments by any Borrower hereunder with respect to principal and interest on Loans denominated in an Alternative Currency shall be made to Administrative Agent, for the account of the respective Lenders to which such payment is owed, at the applicable Funding and Payment Office in such Alternative Currency and in Same Day Funds not later than the Applicable Time specified by Administrative Agent (of which the applicable Borrower shall have received at least three (3) Business Days' advance notice) on the dates specified herein. Without limiting the generality of the foregoing, Administrative Agent may require that any payments due under this Agreement be made in the United States. If, for any reason, any Borrower is prohibited by any Law from making any required payment hereunder in an Alternative Currency, the Borrowers shall make such payment in Dollars in the Dollar Equivalent of the Alternative Currency payment amount.

Unless Administrative Agent shall have received notice from a Borrower prior to the date on which any payment is due to Administrative Agent for the account of the Lenders or Issuing Lender hereunder that such Borrower will not make such payment, Administrative Agent may assume that such Borrower has made such payment on such date in accordance herewith and may, in reliance upon such assumption, distribute to the Lenders or Issuing Lender, as the case may be, the amount due. In such event, if the applicable Borrower has not in fact made such payment, then each of the Lenders or Issuing Lender, as the case may be, severally agrees to repay to Administrative Agent forthwith on demand the amount so distributed to such Lender or Issuing Lender, in immediately available funds with interest thereon, for each day from and including the date such amount is distributed to it to but excluding the date of payment to Administrative Agent, at the Overnight Rate.

(ii) Application of Payments to Principal and Interest. All payments in respect of the principal amount of any Loan shall include payment of accrued interest on the principal amount being repaid or prepaid, and all such payments shall be applied to the payment of interest before application to principal.

(iii) Apportionment of Payments. Except as otherwise provided in subsection 2.12, aggregate principal and interest payments in respect of Revolving Loans shall be apportioned among all outstanding Revolving Loans to which such payments relate, in each case proportionately to the Revolving Lenders' respective Pro Rata Shares; provided, that all payments in respect of Revolving Loans shall first be applied in the following priority to repay any amounts owing to (i) first, Swing Line Lender due to the failure of any Revolving Lender to (A) fund a Revolving Loan for the purpose of repaying any Refunded Swing Line Loan pursuant to subsection 2.1A(iii)(b) or (B) purchase a risk participation in an unpaid Swing Line Loan pursuant to subsection 2.1A(iii)(c), and (ii) second, Issuing Lender due to the failure of any Revolving Lender to (A) fund a Revolving Loan for the purpose of repaying any unreimbursed amounts of a drawing under a Letter of Credit pursuant to subsection 3.3B or (B) fund a participation in any such unreimbursed Letter of Credit drawing pursuant to subsection 3.3C; provided further that any payments on the Revolving Loans remaining after the application of the foregoing proviso shall be allocated to each Revolving Lender, excluding Defaulting Lenders, in an amount equal to each such Revolving Lender's Pro Rata Share of the aggregate payments on the Revolving Loans prior to the application of the foregoing proviso and each Defaulting Lender shall be entitled to receive its Pro Rata Share of any such payments less the amount applied in accordance with the foregoing proviso attributable to such Defaulting Lender. Except as otherwise provided in subsection 2.12 , Administrative Agent shall promptly distribute to each Revolving Lender, at the account specified in the payment instructions delivered to Administrative Agent by such Lender, its Pro Rata Share of all such payments received by Administrative Agent and the commitment fees and letter of credit fees of such Lender, if any, when received by Administrative Agent pursuant to subsections 2.3 and 3.2. Notwithstanding the foregoing provisions of this subsection 2.4C(iii), if, pursuant to the provisions of subsection 2.6C, any Notice of Conversion/Continuation is withdrawn as to any Affected Lender or if any Affected Lender makes Base Rate Loans in lieu of its Pro Rata Share of any Eurocurrency Rate Loans, Administrative Agent shall give effect thereto in apportioning interest payments received thereafter.

(iv) Payments on Business Days. Whenever any payment to be made hereunder shall be stated to be due on a day that is not a Business Day, such payment shall be made on the next succeeding Business Day and such extension of time shall be included in the computation of the payment of interest hereunder or of the commitment fees hereunder, as the case may be.

(v) Notation of Payment. Each Lender agrees that before disposing of any Note held by it, or any part thereof (other than by granting participations therein), that Lender may make a notation thereon of all Loans evidenced by that Note and all principal payments previously made thereon and of the date to which interest thereon has been paid; provided that the failure to make (or any error in the making of) a notation of any Loan made under such Note shall not limit or otherwise affect the obligations of the Borrowers hereunder or under such Note with respect to any Loan or any payments of principal or interest on such Note.

D. Application of Proceeds of Collateral and Payments after Event of Default. Upon the occurrence and during the continuation of an Event of Default, if requested by Requisite Lenders, or upon acceleration of the Obligations pursuant to Section 8, (a) all payments received by Administrative Agent, whether from any Borrower, any Subsidiary Guarantor or otherwise, and (b) all proceeds received by Administrative Agent in respect of any sale of, collection from, or other realization upon all or any part of the Collateral under any Collateral Document may, in the discretion of Administrative Agent, be held by Administrative Agent as Collateral for, and/or (then or at any time thereafter) applied in full or in part by Administrative Agent and, if applied by Administrative Agent, shall, subject to subsections 2.11 and 2.12 be applied on behalf of the applicable Loan Party, in each case, in the following order of priority:

(i) to the payment of all costs and expenses of such sale, collection or other realization, all other expenses, liabilities and advances made or incurred by Administrative Agent in connection therewith, and all amounts for which Administrative Agent is entitled to compensation (including the fees described in subsection 2.3 and reasonable and documented compensation to Administrative Agent's sub-agents and counsel), reimbursement and indemnification under any Loan Document and all advances made by Administrative Agent thereunder for the account of the applicable Loan Party, and to the payment of all costs and expenses paid or incurred by Administrative Agent in connection with the Loan Documents, all in accordance with subsections 9.4, 10.2 and 10.3 and the other terms of this Agreement and the Loan Documents;

(ii) thereafter, to the payment of all other Obligations of the applicable Borrower and obligations of the Loan Parties under any Secured Cash Management Agreement and Secured Hedge Agreement for the ratable benefit of the holders thereof (subject to the provisions of subsection 2.4C(iii) hereof); and

(iii) thereafter, to the payment to or upon the order of such Loan Party or to whosoever may be lawfully entitled to receive the same or as a court of competent jurisdiction may direct.

Notwithstanding the foregoing, (a) obligations arising under Secured Hedge Agreements and Secured Cash Management Agreements may, in Administrative Agent's discretion, be excluded from the application described above if Administrative Agent has not received written notice thereof, together with such supporting documentation as Administrative Agent may request, from the applicable Hedge Counterparty or Cash Management Bank, as the case may be and (b) Excluded Swap Obligations with respect to any Loan Party shall not be paid with amounts received from such Loan Party, but appropriate adjustments shall be made with respect to payments from other Loan Parties to preserve the allocation to Obligations otherwise set forth above in this Section. Each Hedge Counterparty and each Cash Management Bank not a party to this Agreement who obtains the benefit of the foregoing provision or any Collateral by virtue of the provisions hereof or of any Guaranty or any Collateral Document shall be deemed to have acknowledged and accepted the appointment of Administrative Agent pursuant to the terms of Section 9 hereof for itself and its Affiliates as if a "Lender" party to this Agreement.

2.5 Use of Proceeds.

A. [Intentionally omitted].

B. Revolving Loans; Swing Line Loans. The proceeds of Revolving Loans and any Swing Line Loans shall be applied by the applicable Borrower (i) to fund the refinancing of all Indebtedness outstanding under the Existing Credit Agreement and the payment of fees and expenses payable on the Closing Date, and (ii) thereafter for working capital and other general corporate purposes, including, without limitation, Permitted Acquisitions, intercompany loans to Foreign Subsidiaries that are Loan Parties (including intercompany Loans pursuant to the Revolver Intercompany Loan Agreement) and Consolidated Capital Expenditures; provided, however, that the proceeds of Swing Line Loans shall not be used to refinance outstanding Swing Line Loans.

C. Margin Regulations. No portion of the proceeds of any borrowing under this Agreement shall be used by any Borrower or any of its Subsidiaries in any manner that might cause the borrowing or the application of such proceeds to violate Regulation U, Regulation T or Regulation X of the Board of Governors of the Federal Reserve System or any other regulation of such Board or to violate

the Exchange Act, in each case as in effect on the date or dates of such borrowing and such use of proceeds.

2.6 Special Provisions Governing Eurocurrency Rate Loans.

Notwithstanding any other provision of this Agreement to the contrary, the following provisions shall govern with respect to Eurocurrency Rate Loans as to the matters covered:

A. Determination of Applicable Interest Rate. On each Interest Rate Determination Date, Administrative Agent shall determine in accordance with the terms of this Agreement (which determination shall, absent manifest error, be final and conclusive and binding upon all parties) the interest rate that shall apply to the Eurocurrency Rate Loans for which an interest rate is then being determined for the applicable Interest Period and shall promptly give notice thereof (in writing or by telephone confirmed in writing) to Company and each applicable Lender.

B. Inability to Determine Applicable Interest Rate. In the event that Administrative Agent or the Requisite Lenders shall have determined in good faith in its (or their) reasonable discretion (which determination shall, absent manifest error, be final and conclusive and binding upon all parties hereto), on any Interest Rate Determination Date that (i) deposits (whether in Dollars or an Alternative Currency) are not being offered to banks in the applicable interbank market for the applicable amount and Interest Period of such Eurocurrency Rate Loan, or (ii) by reason of circumstances affecting the applicable interbank market, adequate and fair means do not exist for ascertaining the interest rate applicable to such Loans (including Base Rate Loans determined by reference to the Eurocurrency Rate, and whether denominated in Dollars or an Alternative Currency) on the basis provided for in the definition of Eurocurrency Rate (or clause (c) of the definition of Base Rate), Administrative Agent shall on such date give notice (by telefacsimile or by telephone confirmed in writing) to Company and each Lender of such determination, whereupon (a) no Loans may be made or maintained as, or converted to, Eurocurrency Rate Loans in the affected currency or currencies, (b) in the event of a determination described in clause (ii) above with respect to the Eurocurrency Rate component of the Base Rate, the utilization of the Eurocurrency Rate component in determining the Base Rate shall be suspended, in each case of clauses (a) and (b), until such time as Administrative Agent notifies Company and Lenders that the circumstances giving rise to such notice no longer exist and (c) any Notice of Borrowing or Notice of Conversion/Continuation given by a Borrower with respect to the Loans in respect of which such determination was made shall be deemed to be for a Base Rate Loan unless such Borrower shall have rescinded such Notice of Borrowing or Notice of Conversion/Continuation by promptly giving written notice of such rescission to Administrative Agent.

C. Illegality or Impracticability of Eurocurrency Rate Loans. In the event that on any date any Lender shall have determined in good faith in its reasonable discretion (which determination shall, absent manifest error, be final and conclusive and binding upon all parties hereto) that the making, maintaining or continuation of its Loans (whether denominated in Dollars or an Alternative Currency) to a Foreign Obligor, or whose interest is determined by reference to the Eurocurrency Rate, or the charging of interest rates based on upon the Eurocurrency Rate, (i) has become unlawful, or any Government Authority has asserted that it is unlawful, as a result of compliance by such Lender in good faith with any law, treaty, governmental rule, regulation, guideline or order (or would conflict with any such treaty, governmental rule, regulation, guideline or order not having the force of law even though the failure to comply therewith would not be unlawful) or (ii) has become impracticable, or would cause such Lender material hardship, as a result of contingencies occurring after the date of this Agreement which materially and adversely affect the applicable interbank market or the position of such Lender in that market (including in the event that any Government Authority has imposed material restrictions on the authority of such Lender to purchase or sell, or to take deposits of, Dollars or any Alternative Currency in the

applicable interbank market) (except to the extent that the Eurocurrency Rate with respect to such Eurocurrency Rate Loan does not adequately and fairly reflect the cost to such Lender of funding such Eurocurrency Rate Loan in which case the determination of the Requisite Lenders shall be required as set forth in the succeeding paragraph), then, and in any such event, such Lender shall be an "Affected Lender" and it shall promptly give notice (by telefacsimile or by telephone confirmed in writing) to Company and Administrative Agent of such determination. Administrative Agent shall promptly notify each other Lender of the receipt of such notice. Thereafter (a) the obligation of the Affected Lender to make or continue Loans as, or to convert Loans to, Eurocurrency Rate Loans in the affected currency or currencies or, in the case of Eurocurrency Rate Loans in Dollars, to convert Base Rate Loans to Eurocurrency Rate Loans, shall be suspended, (b) if such notice asserts the illegality or impracticability of such Lender making or maintaining Base Rate Loans the interest rate on which is determined by reference to the Eurocurrency Rate component of the Base Rate, the interest rate on which Base Rate Loans of such Lender shall, if necessary to avoid such illegality, be determined by Administrative Agent without reference to the Eurocurrency Rate component of the Base Rate, in each case of clauses (a) and (b), until such notice shall be withdrawn by the Affected Lender, (c) to the extent such determination by the Affected Lender relates to a Eurocurrency Rate Loan then being requested by a Borrower pursuant to a Notice of Borrowing or a Notice of Conversion/Continuation, the Affected Lender shall make such Loan as (or convert such Loan to, as the case may be) a Base Rate Loan, (d) the Affected Lender's obligation to maintain or continue its outstanding Eurocurrency Rate Loans (the **"Affected Loans"**) shall be terminated at the earlier to occur of the expiration of the Interest Period then in effect with respect to the Affected Loans or when required by law, (e) the Affected Loans shall upon demand by the Affected Lender be prepaid by a Borrower or, if applicable and such Loans are denominated in Dollars, automatically convert into Base Rate Loans (the interest rate on which Base Rate Loans of such Lender shall, if necessary to avoid such illegality, be determined by Administrative Agent without reference to the Eurocurrency Rate component of the Base Rate) on the date of such termination and (f) if such notice asserts the illegality of such Lender determining or charging interest rates based upon the Eurocurrency Rate, Administrative Agent shall during the period of such suspension compute the Base Rate applicable to such Lender without reference to the Eurocurrency Rate component thereof until Administrative Agent is advised in writing by such Lender that is no longer illegal for such Lender to determine or charge interest based upon the Eurocurrency Rate. Upon any such prepayment or conversion, the applicable Borrower shall also pay accrued interest on the amount so prepaid or converted. Notwithstanding the foregoing, to the extent a determination by an Affected Lender as described above relates to a Eurocurrency Rate Loan then being requested by a Borrower pursuant to a Notice of Borrowing or a Notice of Conversion/Continuation, such Borrower shall have the option, subject to the provisions of subsection 2.6D, to rescind such Notice of Borrowing or Notice of Conversion/Continuation as to all Lenders by giving notice (by telefacsimile or by telephone confirmed in writing) to Administrative Agent of such rescission on the date on which the Affected Lender gives notice of its determination as described above. Administrative Agent shall promptly notify each other Lender of the receipt of such notice. Except as provided in the immediately preceding sentence, nothing in this subsection 2.6C shall affect the obligation of any Lender other than an Affected Lender to make or maintain Loans as, or to convert Loans to, Eurocurrency Rate Loans in accordance with the terms of this Agreement.

If the Requisite Lenders determine that for any reason in connection with any request for a Eurocurrency Rate Loan or a conversion to or continuation thereof that the Eurocurrency Rate for any requested Interest Period with respect to a proposed Eurocurrency Rate Loan does not adequately and fairly reflect the cost to such Lenders of funding such Loan, Administrative Agent will promptly so notify Company and each Lender. Thereafter, the obligation of the Lenders to make or maintain Eurocurrency Rate Loans shall be suspended until Administrative Agent (upon the instruction of the Requisite Lenders) revokes such notice. Any Notice of Borrowing or Notice of Conversion/Continuation given by a Borrower with respect to the Eurocurrency Rate Loans in respect of which such determination was made shall be deemed to be for a Base Rate Loan unless such Borrower shall, subject to the provisions of

subsection 2.6D, have rescinded such Notice of Borrowing or Notice of Conversion/Continuation by giving written notice of such rescission to Administrative Agent on the date that Company received notice from Administrative Agent of such determination.

D. Compensation for Breakage or Non-Commencement of Interest Periods. The Borrowers shall compensate each Lender for, and hold each Lender harmless from, upon written request by that Lender pursuant to subsection 2.8, all reasonable and documented losses, expenses and liabilities (including any interest paid by that Lender to lenders of funds borrowed by it to make or carry its Eurocurrency Rate Loans and any loss, expense or liability sustained by that Lender in connection with the liquidation or re-employment of such funds) which that Lender may sustain: (i) if for any reason (other than a failure to fund or other default by that Lender) a borrowing of any Eurocurrency Rate Loan does not occur on a date specified therefor in a Notice of Borrowing or a telephonic request therefor, or a conversion to or continuation of any Eurocurrency Rate Loan does not occur on a date specified therefor in a Notice of Conversion/Continuation or a telephonic request therefor, (ii) if any prepayment or other principal payment or any conversion of any of its Eurocurrency Rate Loans (including any prepayment or conversion occasioned by the circumstances described in subsection 2.6C) occurs on a date prior to the last day of an Interest Period applicable to that Loan, (iii) if any prepayment of any of its Eurocurrency Rate Loans is not made on any date specified in a notice of prepayment given by Company, (iv) as a consequence of any other default by Company in the repayment of its Eurocurrency Rate Loans when required by the terms of this Agreement, (v) if any assignment of a Eurocurrency Rate Loan occurs on a date prior to the last day of an Interest Period applicable to that Loan as a result of a request by a Borrower pursuant to subsection 2.9, or (vi) any failure by any Borrower to make payment of any Loan or drawing under any Letter of Credit (or interest due thereon) denominated in an Alternative Currency on its scheduled due date or any payment thereof in a different currency; provided, that the foregoing shall exclude any loss of anticipated profit. The Borrower shall also pay any customary administrative fees charged by such Lender in connection with the foregoing.

E. Booking of Eurocurrency Rate Loans. Any Lender may make, carry or transfer Eurocurrency Rate Loans at, to, or for the account of any of its branch offices or the office of an Affiliate of that Lender.

F. Assumptions Concerning Funding of Eurocurrency Rate Loans. Calculation of all amounts payable to a Lender under this subsection 2.6 and under subsection 2.7A shall be made as though that Lender had funded each of its Eurocurrency Rate Loans at the Eurocurrency Rate for such Loan by a matching deposit or other borrowing in the applicable currency in the applicable interbank market for such currency, in a comparable amount and for a comparable period, whether or not its Eurocurrency Rate Loans had been funded in such manner.

G. Eurocurrency Rate Loans After Default. After the occurrence of and during the continuation of an Event of Default, (i) the Borrowers may not elect to have a Loan be made or maintained as, or converted to, a Eurocurrency Rate Loan after the expiration of any Interest Period then in effect for that Loan and (ii) subject to the provisions of subsection 2.6D, any Notice of Borrowing or Notice of Conversion/Continuation given by a Borrower with respect to a requested borrowing or conversion/continuation that has not yet occurred shall be deemed to be for a Base Rate Loan or, if the conditions to making a Loan set forth in subsection 4.2 cannot then be satisfied, to be rescinded by such Borrower.

2.7 Increased Costs; Taxes; Capital Adequacy.

A. Compensation for Increased Costs. Subject to the provisions of subsection 2.7B (which shall be controlling with respect to the matters covered thereby), in the event that any Lender

(including Issuing Lender) shall determine in good faith in its reasonable discretion (which determination shall, absent manifest error, be final and conclusive and binding upon all parties hereto) that any Change in Law:

(i) subjects such Lender to any additional tax of any kind whatsoever with respect to this Agreement or any of its obligations hereunder (including with respect to issuing or maintaining any Letters of Credit or purchasing or maintaining any participations therein or maintaining any Commitment hereunder) or any payments to such Lender of principal, interest, fees or any other amount payable hereunder (except for the imposition of, or any change in the rate of, any Indemnified Taxes (to the extent governed by Section 2.7B) and any Excluded Tax payable by such Lender);

(ii) imposes, modifies or holds applicable any reserve, special deposit, compulsory loan, insurance charge or similar requirement against assets held by, or deposits or other liabilities in or for the account of, or advances or loans by, or other credit extended by, or any other acquisition of funds by, any office of such Lender (other than any such reserve or other requirements with respect to Eurocurrency Rate Loans made by it that are reflected in the definition of Eurocurrency Rate); or

(iii) [reserved]; or

(iv) imposes any other condition (other than with respect to Taxes) on or affecting such Lender or its obligations hereunder or the applicable interbank market;

and the result of any of the foregoing is to increase the cost to such Lender of agreeing to make, making or maintaining its Loans or Commitments or agreeing to issue, issuing or maintaining any Letter of Credit or agreeing to purchase, purchasing or maintaining any participation therein or to reduce any amount received or receivable by such Lender with respect thereto; then, in any such case, the applicable Borrower shall promptly pay to such Lender, upon receipt of the statement referred to in subsection 2.8A, such additional amount or amounts (in the form of an increased rate of, or a different method of calculating, interest or otherwise as such Lender in its sole discretion shall determine) as may be necessary to compensate such Lender on an after-tax basis for any such increased cost or reduction in amounts received or receivable hereunder. Failure or delay on the part of any Lender to demand compensation pursuant to the foregoing provisions of this subsection 2.7A shall not constitute a waiver of such Lender's right to demand such compensation; provided no Borrower shall be required to compensate a Lender pursuant to this subsection 2.7A for any increased cost or reduction in respect of a period occurring more than six months prior to the date on which such Lender notifies the applicable Borrower of such Change in Law and such Lender's intention to claim compensation therefor, except, if the Change in Law giving rise to such increased cost or reduction is retroactive, no such time limitation shall apply so long as such Lender requests compensation within six months from the date on which the applicable Government Authority informed such Lender of such Change in Law.

B. Taxes.

(i) Payments to Be Free and Clear. Any and all payments by or on account of any obligation of a Borrower under this Agreement and the other Loan Documents shall to the extent permissible under applicable law be made free and clear of, and without any deduction or withholding on account of, any Indemnified Taxes or Other Taxes. Without limiting or duplicating the foregoing, the applicable Borrower shall timely pay any Other Taxes to the relevant Government Authority in accordance with applicable laws.

(ii) Grossing-up of Payments. If a Borrower or any other Person is required by law to make any deduction or withholding on account of any Tax from any sum paid or payable by such Borrower to Administrative Agent or any Lender under any of the Loan Documents:

(a) the applicable Borrower shall notify Administrative Agent of any such requirement or any change in any such requirement as soon as such Borrower becomes aware of it;

(b) the applicable Borrower, or other Person, as the case may be, shall timely pay any such Tax to the relevant Government Authority when such Tax is due, in accordance with applicable law;

(c) unless such Tax is an Excluded Tax, the sum payable by the applicable Borrower shall be increased to the extent necessary to ensure that, after making the required deductions (including deductions applicable to additional sums payable under this subsection 2.7B(ii)), Administrative Agent or such Lender, as the case may be, receives on the due date a net sum equal to the sum it would have received had no such deduction been required or made; and

(d) within 30 days after paying any sum from which it is required by law to make any such deduction, and within 30 days after the due date of payment of any Tax which it is required by clause (b) above to pay, the applicable Borrower shall deliver to Administrative Agent the original or a certified copy of an official receipt or other document satisfactory to the other affected parties to evidence the payment and its remittance to the relevant Government Authority.

(iii) A payment shall not be increased under subsection (ii) above by reason of a deduction or withholding on account of Tax imposed by the United Kingdom, if on the date on which the payment falls due: (1) the payment could have been made to the relevant Lender without such deduction or withholding if that Lender had been a UK Qualifying Lender, but on that date that Lender is not or has ceased to be a UK Qualifying Lender other than as a result of any Change in Law; or (2) the relevant Lender is a UK Qualifying Lender solely by virtue of sub-paragraph (ii) of the definition of UK Qualifying Lender and an officer of HM Revenue & Customs has given (and not revoked) a direction under section 931 of the UK ITA which relates to the payment, that Lender has received from the relevant Borrower a certified copy of that direction and the payment could not have been made to that Lender without such deduction or withholding had that direction not been given; or (3) the relevant Lender is a UK Qualifying Lender solely by virtue of sub-paragraph (ii) of the definition of UK Qualifying Lender, the relevant Lender has not given a UK Tax Confirmation to the Borrowers, or has not notified the Borrowers of any material change in position from that set out in the UK Tax Confirmation, and the payment could have been made to that Lender without such deduction or withholding had that Lender given a UK Tax Confirmation to the Borrowers on the basis that the UK Tax Confirmation would have enabled the Borrowers to have formed a reasonable belief that the payment was an "excepted payment" for the purpose of section 930 of the UK ITA; or (4) the relevant Lender is a UK Treaty Lender and the relevant Borrower is able to demonstrate that the payment could have been made to that Lender without such deduction or withholding had that Lender complied with its obligations under subsections (iv) and (v) below.

(iv) Subject to subsection (v), a UK Treaty Lender and the Borrowers shall co-operate in completing any procedural formalities necessary for any relevant Borrower to obtain

authorization to make any payment to which that Lender is entitled without any deduction or withholding on account of Tax imposed by the United Kingdom.

(v) (1) A UK Treaty Lender which becomes a party on the day on which this Agreement is entered into that holds a passport under the HMRC DT Treaty Passport scheme, and which wishes that scheme to apply to this Agreement, shall confirm its scheme reference number and its jurisdiction of tax residence in writing to the Borrowers upon entering into this Agreement; and (2) a Lender which becomes a party after the date of this Agreement that holds a passport under the HMRC DT Treaty Passport scheme, and which wishes that scheme to apply to this Agreement, shall confirm its scheme reference number and its jurisdiction of tax residence in writing to the Borrowers upon becoming a party to this Agreement.

(vi) If a Lender has confirmed its scheme reference number and jurisdiction of tax residence in accordance with subsection (v) and: (1) a relevant UK Borrower has not made a UK Borrower DTTP Filing in respect of that Lender; or (2) a relevant UK Borrower has made a UK Borrower DTTP Filing in respect of that Lender, but: (a) that UK Borrower DTTP Filing has been rejected by HM Revenue & Customs; (b) HM Revenue & Customs has not given the relevant UK Borrower authority to make payments to that Lender without deduction or withholding within 30 Business Days of the date of the UK Borrower DTTP Filing; or (c) HM Revenue & Customs gave but subsequently withdrew authority for the relevant UK Borrower to make payments to that Lender without deduction or withholding or such authority has otherwise terminated or expired, and in each case, the relevant UK Borrower has notified that Lender in writing, that Lender and the relevant UK Borrower shall co-operate in completing any additional procedural formalities necessary for that UK Borrower to obtain authorization to make payments to that Lender without deduction or withholding on account of Tax imposed by the United Kingdom.

(vii) Indemnification by the Borrowers.

(a) The Borrowers shall indemnify Administrative Agent and each Lender, within ten (10) days after demand therefor, for the full amount of any Indemnified Taxes or Other Taxes (including for the full amount of any Indemnified Taxes or Other Taxes imposed or asserted on or attributable to amounts payable under this subsection 2.7B(vii)) paid by Administrative Agent or such Lender, as the case may be, and any penalties and interest arising therefrom or with respect thereto, whether or not such Indemnified Taxes or Other Taxes were correctly or legally imposed or asserted by the relevant Government Authority (and, upon paying such amount, the Borrowers shall be subrogated to the claims of the Administrative Agent and Lenders with respect to any such amount that was not correctly or legally imposed). A certificate as to the amount of such payment or liability and the basis for and calculation thereof delivered to the applicable Borrower by a Lender (with a copy to Administrative Agent), or by Administrative Agent on its own behalf or on behalf of a Lender, shall be conclusive absent manifest error.

(b) Without limiting the provisions of the foregoing, each Lender shall, and does hereby, indemnify the Borrowers and Administrative Agent, and shall make payment in respect thereof within ten (10) days after demand therefor, against any and all Taxes and any and all related losses, claims, liabilities, penalties, interest and expenses (including the fees, charges and disbursements of any counsel for the Borrowers or Administrative Agent) incurred by or asserted against a Borrower or Administrative Agent by any Government Authority as a result of the failure by such Lender to deliver,

or as a result of the inaccuracy, inadequacy or deficiency of, any documentation required to be delivered by such Lender to a Borrower or Administrative Agent pursuant to subsection 2.7B(viii). Each Lender hereby authorizes Administrative Agent to set off and apply any and all amounts at any time owing to such Lender under this Agreement or any other Loan Document against any amount due to the Administrative Agent under this clause (b). The agreements in this clause (b) shall survive the resignation and/or replacement of the Administrative Agent, any assignment of rights by, or the replacement of, a Lender, and the payment of the Loans, the cancellation or expiration of the Letters of Credit and the reimbursement of any amounts drawn thereunder, and the termination of this Agreement.

(c) Notwithstanding anything in subsection 10.3 to the contrary, the provisions of subsection 2.7B shall be controlling with respect to a Borrower's indemnification and other obligations in respect of Taxes except with respect to stamp, documentary and similar taxes.

(viii) Tax Status of Lenders. Unless not legally entitled to do so:

(a) any Lender shall deliver such forms or other documentation prescribed by applicable law or reasonably requested by a Borrower or Administrative Agent as will enable such Borrower or Administrative Agent to determine whether or not such Lender is subject to backup withholding or information reporting requirements;

(b) without prejudice to subsections 2.7B(iii)-(vi), any Lender that is entitled to an exemption from or reduction of any Tax with respect to payments hereunder or under any other Loan Document shall deliver to the applicable Borrower and Administrative Agent, on or prior to the date on which such Lender becomes a Lender under this Agreement (and from time to time thereafter, as may be necessary in the determination of such Borrower or Administrative Agent, each in the reasonable exercise of its discretion), such properly completed and duly executed forms or other documentation prescribed by applicable law as will permit such payments to be made without withholding or at a reduced rate of withholding;

(c) without limiting the generality of the foregoing, in the event that a Borrower is resident for tax purposes in the United States, any Foreign Lender shall deliver to such Borrower and Administrative Agent (in such number of copies as shall be requested by the recipient) on or prior to the date on which such Foreign Lender becomes a Lender under this Agreement (and from time to time thereafter, as may be necessary in the determination of such Borrower or Administrative Agent, each in the reasonable exercise of its discretion), whichever of the following is applicable:

(1) properly completed and duly executed copies of Internal Revenue Service Form W-8BEN (or any successor forms) claiming eligibility for benefits of an income tax treaty to which the United States is a party,

(2) properly completed and duly executed copies of Internal Revenue Service Form W-8ECI (or any successor forms),

(3) in the case of a Foreign Lender claiming the benefits of the "portfolio interest" exemption under Section 871(h) or 881(c) of the Internal Revenue Code, (A) a statement substantially in the form of Exhibit XII-1, XII-2,

XII-3 or XII-4 (each, a "U.S. Tax Compliance Certificate"), as applicable, and (B) properly completed and duly executed copies of Internal Revenue Service Form W-8BEN (or any successor forms); or, to the extent a Foreign Lender is not the beneficial owner, executed originals of Internal Revenue Form W-8IMY (or any successor forms), accompanied by Internal Revenue Service Form W-8ECI, IRS Form W-8BEN (or any successor forms), a U.S. Tax Compliance Certificate substantially in the form of Exhibit XII-2 or Exhibit XII-3, IRS Form W-9, and/or other certification documents from each beneficial owner, as applicable; provided that if the Foreign Lender is a partnership and one or more direct or indirect partners of such Foreign Lender are claiming the portfolio interest exception, such Foreign Lender may provide a U.S. Tax Compliance Certificate substantially in the form of Exhibit XII-4 on behalf of each such direct and indirect partner, and

(4) properly completed and duly executed copies of any other form prescribed by applicable law as a basis for claiming exemption from or a reduction in any Tax,

in each case together with such supplementary documentation as may be prescribed by applicable law to permit the applicable Borrower and Administrative Agent to determine the withholding or deduction required to be made, if any;

(d) without limiting the generality of the foregoing, in the event that a Borrower is resident for tax purposes in the United States, any Lender that is not a Foreign Lender and has not otherwise established to the reasonable satisfaction of such Borrower and Administrative Agent that it is an exempt recipient (as defined in Section 6049(b)(4) of the Internal Revenue Code and the United States Treasury Regulations thereunder) shall deliver to such Borrower and Administrative Agent (in such number of copies as shall be requested by the recipient) on or prior to the date on which such Lender becomes a Lender under this Agreement (and from time to time thereafter as prescribed by applicable law or upon the request of such Borrower or Administrative Agent), duly executed and properly completed copies of Internal Revenue Service Form W-9;

(e) without limiting the generality of the foregoing, each Lender hereby agrees, from time to time after the initial delivery by such Lender of such forms, whenever a lapse in time or change in circumstances renders such forms, certificates or other evidence so delivered obsolete or inaccurate in any material respect, that such Lender shall promptly (1) deliver to Administrative Agent and the applicable Borrower two (2) original copies of renewals, amendments or additional or successor forms, properly completed and duly executed by such Lender, together with any other certificate or statement of exemption required in order to confirm or establish that such Lender is entitled to an exemption from or reduction of any Tax with respect to payments to such Lender under the Loan Documents and, if applicable, that such Lender does not act for its own account with respect to any portion of such payment, or (2) notify Administrative Agent and the applicable Borrower of its inability to deliver any such forms, certificates or other evidence;

(f) In the event that Borrower is resident for tax purposes in the United States, any Agent that is organized under the laws of the United States, any state thereof or the District of Columbia shall deliver to Borrower on or prior to the date on which

such Agent becomes an Agent under this Agreement (and from time to time thereafter upon the request of Borrower) two copies of Internal Revenue Service Form W-9 (or any successor form) certifying that such Agent is exempt from United States federal backup withholding Tax and such other documentation as will enable any payments made to such Agent to be made without withholding and will enable Borrower to determine whether or not such Agent is subject to United States federal backup withholding Tax or information reporting requirements;

(g) If a payment made to a Lender under any Loan Document would be subject to U.S. Federal withholding Tax imposed by FATCA if such Lender were to fail to comply with the applicable reporting requirements of FATCA (including those contained in Section 1471(b) or 1472(b) of the Internal Revenue Code, as applicable), such Lender shall deliver to Borrower and Administrative Agent at the time or times prescribed by law and at such time or times reasonably requested by Borrower or Administrative Agent such documentation prescribed by applicable law (including as prescribed by Section 1471(b)(3)(C)(i) of the Internal Revenue Code) and such additional documentation reasonably requested by Borrower or Administrative Agent as may be necessary for Borrower and Administrative Agent to comply with their obligations under FATCA and to determine that such Lender has complied with such Lender's obligations under FATCA or to determine the amount to deduct and withhold from such payment. Solely for purposes of this clause (h), "FATCA" shall include any amendments made to FATCA after the date of this Agreement; and

(h) If any Lender, Administrative Agent or other recipient determines, in good faith, that it has received a refund of any Taxes paid or reimbursed by the Loan Parties, such recipient shall promptly pay to Borrower hereunder an amount equal to the refund (but only to the extent of indemnity payments made, or additional amounts paid, by Borrower under this Agreement with respect to the Taxes giving rise to such refund), net of all reasonable out-of-pocket expenses incurred in securing such refund by such recipient and without interest (other than any interest paid by the relevant Governmental Authority with respect to such refund); provided, that Borrower, upon the request of such recipient, agrees to repay the amount paid over to Borrower (plus any penalties, interest or other charges imposed by the relevant Governmental Authority) to such recipient in the event such recipient is required to repay such refund to such Governmental Authority. Notwithstanding anything to the contrary in this clause (i), in no event will any Lender, Administrative Agent or other recipient be required to pay any amount to Borrower pursuant to this clause (i) the payment of which would place such Lender, Administrative Agent or other recipient in a less favorable net after-Tax position than it would have been in if the Tax subject to indemnification and giving rise to such refund had not been deducted, withheld or otherwise imposed and the indemnification payments or additional amounts with respect to such Tax had never been paid. This paragraph shall not be construed to require such recipient to make available its tax returns (or any other information relating to its taxes which it deems confidential) to Borrower or any other person.

C. Capital Adequacy Adjustment. If any Lender shall have determined that any Change in Law regarding capital adequacy or liquidity requirements has or would have the effect of reducing the rate of return on the capital of such Lender or any corporation controlling such Lender as a consequence of, or with reference to, such Lender’s Loans or Commitments or Letters of Credit or participations therein or other obligations hereunder with respect to the Loans or the Letters of Credit to a level below that which such Lender or such controlling corporation could have achieved but for such Change in Law

(taking into consideration the policies of such Lender or such controlling corporation with regard to capital adequacy and liquidity) by an amount deemed by such Lender to be material, then, within ten (10) Business Days after receipt by Company from such Lender of the statement referred to in subsection 2.8A, the applicable Borrower shall pay to such Lender such additional amount or amounts as will compensate such Lender or such controlling corporation for such reduction. Failure or delay on the party of any Lender to demand compensation pursuant to the foregoing provisions of this subsection 2.7C shall not constitute a waiver of such Lender's right to demand such compensation; provided no Borrower shall be required to compensate a Lender pursuant to this subsection 2.7C for any reduction in respect of a period occurring more than six months prior to the date on which such Lender notifies Company of such Change in Law and such Lender's intention to claim compensation therefor, except, if the Change in Law giving rise to such reduction is retroactive, no such time limitation shall apply so long as such Lender requests compensation within six months from the date on which the applicable Government Authority informed such Lender of such Change in Law.

2.8 Statement of Lenders; Obligation of Lenders and Issuing Lender to Mitigate.

A. Statements. Each Lender claiming compensation or reimbursement pursuant to subsection 2.6D, or 2.7 shall deliver to Company (with a copy to Administrative Agent) a written statement, setting forth in reasonable detail the basis of the calculation of such compensation or reimbursement, which statement shall be final and conclusive and binding upon all parties hereto absent manifest error.

B. Mitigation.

Each Lender and Issuing Lender agrees that, as promptly as practicable after the officer of such Lender or Issuing Lender responsible for administering the Loans or Letters of Credit of such Lender or Issuing Lender, as the case may be, becomes aware of the occurrence of an event or the existence of a condition that would cause such Lender to become an Affected Lender or that would entitle such Lender or Issuing Lender to receive payments under subsection 2.7, it will use reasonable efforts to make, issue, fund or maintain the Commitments of such Lender or the Loans or Letters of Credit of such Lender or Issuing Lender through another lending or letter of credit office of such Lender or Issuing Lender, if (i) as a result thereof the circumstances which would cause such Lender to be an Affected Lender would cease to exist or the additional amounts which would otherwise be required to be paid to such Lender or Issuing Lender pursuant to subsection 2.7 would be materially reduced and (ii) would not subject such Lender or Issuing Lender, as the case may be, to any unreimbursed cost or expense and, as determined by such Lender or Issuing Lender in its sole discretion, such action would not otherwise be disadvantageous to such Lender or Issuing Lender; provided that such Lender or Issuing Lender will not be obligated to utilize such other lending or letter of credit office pursuant to this subsection 2.8B unless the Borrowers agree to pay all reasonable and documented incremental expenses incurred by such Lender or Issuing Lender as a result of utilizing such other lending or letter of credit office as described above. Notwithstanding anything to the contrary contained in this Agreement, no Lender shall be entitled to receive any amount under subsection 2.6C or section 2.7 as a result of a change in any lending office which is greater than such Lender would have been entitled to receive immediately prior to such change in lending office, unless the transfer occurred at a time when circumstances giving rise to the claim for such amount did not exist.

2.9 Replacement of a Lender.

If Company receives a statement of amounts due pursuant to subsection 2.8A from a Lender claiming compensation or reimbursement pursuant to subsection 2.7, a Revolving Lender becomes a Defaulting Lender, a Lender (a **"Non-Consenting Lender"**) refuses to consent to an amendment,

modification or waiver of this Agreement (other than a consent to participate in the extensions of credit provided for in subsection 2.10) that, (1) pursuant to subsection 10.6, requires consent of 100% of the Lenders (other than Defaulting Lenders) or 100% of the Lenders (other than Defaulting Lenders) with Obligations directly affected and (2) Requisite Lenders have otherwise consented to or a Lender becomes an Affected Lender, (any such Lender, a **"Subject Lender"**), so long as (i) no Potential Event of Default or Event of Default shall have occurred and be continuing and Company has obtained a commitment from another Lender or an Eligible Assignee (none of whom shall constitute a Defaulting Lender at the time of such replacement) to purchase at par the Subject Lender's Loans and assume the Subject Lender's Commitments and all other obligations of the Subject Lender hereunder, (ii) such Lender is not an Issuing Lender with respect to any Letters of Credit outstanding (unless all such Letters of Credit are terminated or arrangements acceptable to such Issuing Lender (such as a "back-to-back" letter of credit) are made) and (iii), if applicable, the Subject Lender is unwilling to withdraw the notice delivered to Company pursuant to subsection 2.8 and/or is unwilling to remedy its default upon ten (10) days prior written notice to the Subject Lender and Administrative Agent, then Company may, at its sole expense and effort, upon notice to such Lender and Administrative Agent, require such Lender to assign and delegate all of its interests, rights (other than existing rights to payments pursuant to subsections 2.7) and obligations under the Agreement and the related Loan Documents to another Lender or an Eligible Assignee;

provided that, prior to or concurrently with such replacement, (1) the Subject Lender shall have received payment in full of all principal, interest, fees and other amounts (including all amounts under subsections 2.6D, or 2.7 (if applicable) and all amounts under subsection 10.1B with respect to any deficiencies owed by any Subject Lender that is a Defaulting Lender) through such date of replacement and a release from its obligations under the Loan Documents, (2) the processing fee required to be paid by subsection 10.1B(i) shall have been paid to Administrative Agent, (3) all of the requirements for such assignment contained in subsection 10.1B, including, without limitation, the consent of Administrative Agent (if required) and the receipt by Administrative Agent of an executed Assignment Agreement executed by the assignee (Administrative Agent being hereby authorized to execute any Assignment Agreement on behalf of a Subject Lender relating to the assignment of Loans and/or Commitments of such subject Lender) and other supporting documents, have been fulfilled, (4) in the case of any such assignment resulting from the claim for compensation under subsection 2.7A or payments required to be made under subsection 2.7B, such assignment will result in a reduction in such compensation or payments thereafter, and (5) such assignment does not conflict with applicable laws and (6) in the event such Subject Lender is a Non-Consenting Lender, each assignee shall consent, at the time of such assignment, to each matter in respect of which such Subject Lender was a Non-Consenting Lender and Company also requires each other Subject Lender that is a Non-Consenting Lender to assign its Loans and Commitments. For the avoidance of doubt, if a Lender is a Non-Consenting Lender solely because it refused to consent to an amendment, modification or waiver that required the consent of 100% of Lenders (other than Defaulting Lenders) with Obligations directly affected thereby (which amendment, modification or waiver did not accordingly require the consent of 100% of all Lenders (other than Defaulting Lenders)), the Loans and Commitments of such Non-Consenting Lender that are subject to the assignments required by this subsection 2.9 shall include all Loans and Commitments of such Non-Consenting Lender.

2.10 Incremental Term Loan Commitments and Revolving Loan Commitments.

A. Company may, by written notice to Administrative Agent from time to time prior to the Third Amendment Effective Date, request Incremental Term Loan Commitments and/or Incremental Revolving Loan Commitments in an amount not to exceed the Incremental Amount from one or more Incremental Term Lenders and/or Incremental Revolving Lenders (which may include any existing Lender) willing to provide such Incremental Term Loans and/or Incremental Revolving Loans, as the case may be, in their own discretion; provided, that each Incremental Term Lender and/or Incremental Revolving Lender, if not already a Lender hereunder, shall be subject to the approval of Administrative

Agent (which approval shall not be unreasonably withheld or delayed). Such notice shall set forth (i) the amount of the Incremental Term Loan Commitments and/or Incremental Revolving Loan Commitments being requested in a minimum amount of $5,000,000 and increments of $1,000,000 in excess thereof or equal to the remaining Incremental Amount), (ii) the date on which such Incremental Term Loan Commitments and/or Incremental Revolving Loan Commitments are requested to become effective (the **"Increased Amount Date"**) and (iii) whether any such Incremental Revolving Loan Commitments are to be Revolving Loan Commitments or commitments to make revolving loans with terms different (subject to the provisions of clause (C) below) from the Revolving Loans (**"Other Revolving Loans"**).

B. The Borrowers and each Incremental Term Lender and/or Incremental Revolving Lender shall execute and deliver to Administrative Agent an Incremental Assumption Agreement and such other documentation as Administrative Agent shall reasonably specify to evidence the Incremental Term Loan Commitment of such Incremental Term Lender and/or Incremental Revolving Loan Commitment of such Incremental Revolving Loan Lender. Each Incremental Assumption Agreement shall specify the terms of the Incremental Term Loans and/or Incremental Revolving Loans to be made thereunder; provided, that, without the prior written consent of the Requisite Lenders, (i) the final maturity date of any Incremental Term Loans or Other Revolving Loans shall be no earlier than the Revolving Loan Commitment Termination Date, (ii) no Potential Event of Default or Event of Default shall exist immediately prior to or after giving effect to such Incremental Term Loans or Other Revolving Loans, (iii) the terms and documentation in respect of any Incremental Term Loan, to the extent not consistent with the Revolving Loans, will be reasonably satisfactory to the Administrative Agent, (iv) the weighted average life to maturity of any Incremental Term Loan shall be no shorter than the weighted average life to maturity of the Revolving Loans, (v) any Incremental Term Loans or Other Revolving Loans shall constitute Obligations and will be secured and guaranteed with the other Obligations on a pari passu basis and (vi) the interest rate margin in respect of any Incremental Term Loan shall not exceed the applicable Eurocurrency Rate Margin or Base Rate Margin for the Revolving Loans by more than 0.50% (it being understood that any such increase may take the form of fees or original issue discount (**"OID"**), with OID being equated to the interest rates in a manner determined by Administrative Agent based on an assumed four-year life to maturity), or if it does so exceed such applicable Eurocurrency Rate Margin or Base Rate Margin, such applicable Eurocurrency Rate Margin or Base Rate Margin shall be increased so that the interest rate margin in respect of such Incremental Term Loan (giving effect to any fees or OID issued in connection with such Incremental Term Loan or Other Revolving Loan) is no more than 0.50% higher than the applicable Eurocurrency Rate Margin or Base Rate Margin for the Revolving Loans. Administrative Agent shall promptly notify each Lender as to the effectiveness of each Incremental Assumption Agreement. Each of the parties hereto hereby agrees that, upon the effectiveness of any Incremental Assumption Agreement, this Agreement shall be amended to the extent (but only to the extent) necessary to reflect the existence and terms of the Incremental Term Loan Commitments and/or Incremental Revolving Loan Commitments evidenced thereby as provided for in subsection 10.6 (such terms may include mandatory prepayments resulting from, among other things, asset sales, debt and equity issuances and insurance and condemnation proceeds). Any such deemed amendment may be memorialized in writing by Administrative Agent with Company's consent (not to be unreasonably withheld) and furnished to the other parties hereto.

C. Notwithstanding the foregoing, no Incremental Term Loan Commitment or Incremental Revolving Loan Commitment shall become effective under this subsection 2.10 unless (i) on the date of such effectiveness, the conditions set forth in subsection 4.2 shall be satisfied and Administrative Agent shall have received a certificate to that effect dated such date and executed by the chief financial officer of the applicable Borrower, (ii) Administrative Agent shall have received legal opinions, board resolutions and other closing certificates and documentation as required by the relevant Incremental Assumption Agreement and consistent with those delivered on the Closing Date under subsection 4.1 and such additional documents and filings as Administrative Agent may reasonably require to assure that the

Incremental Term Loans and/or Incremental Revolving Loans are secured by the Collateral ratably with the existing Revolving Loans, and (iii) Company would be in Pro Forma Compliance after giving effect to such Incremental Term Loan Commitment and/or Incremental Revolving Loan Commitments and the Loans to be made thereunder and the application of the proceeds therefrom as if made and applied on such date.

D. Participation in any such Incremental Term Loans or Other Revolving Loans shall be offered to each of the existing Lenders, but no Lender shall have any obligation to provide all or any portion of any such Incremental Term Loans or Other Revolving Loans.

E. For the avoidance of doubt, no Incremental Term Loans, Incremental Revolving Loans or Other Revolving Loans shall be available following the Third Amendment Effective Date.

2.11 Cash Collateral.

A. Certain Credit Support Events. Upon the request of Administrative Agent or Issuing Lender (i) if Issuing Lender has honored any full or partial drawing request under any Letter of Credit and such drawing has resulted in a reimbursement obligation under such Letter of Credit, which has not been reimbursed, or (ii) if, as of the Letter of Credit Expiration Date, any Letter of Credit Usage for any reason remains outstanding, Borrowers shall, in each case, immediately (and in any event within three (3) Business Days if attributable to a Defaulting Lender) Cash Collateralize the then Outstanding Amount of all Letter of Credit Usage. At any time that there shall exist a Defaulting Lender, immediately (and in any event within three (3) Business Days) upon the request of Administrative Agent, Issuing Lender or Swing Line Lender, Borrowers shall deliver to Administrative Agent Cash Collateral in an amount sufficient to cover all Fronting Exposure (after giving effect to subsection 2.12A(iv) and any Cash Collateral provided by the Defaulting Lender).

B. Grant of Security Interest. All Cash Collateral (other than credit support not constituting funds subject to deposit) shall be maintained in blocked, non-interest bearing deposit accounts at Citizens Bank of Pennsylvania. Borrowers, and to the extent provided by any Lender, such Lender, hereby grants to (and subjects to the control of) Administrative Agent, for the benefit of Administrative Agent, Issuing Lender and the Lenders (including Swing Line Lender), and agrees to maintain, a First Priority Lien in all such cash, deposit accounts and all balances therein, and all other property so provided as collateral pursuant hereto, and in all proceeds of the foregoing, all as security for the obligations to which such Cash Collateral may be applied pursuant to subsection 2.11C. If at any time Administrative Agent reasonably determines that Cash Collateral is subject to any right or claim of any Person other than Administrative Agent as herein provided, or that the total amount of such Cash Collateral is less than the applicable Fronting Exposure and other obligations secured thereby, Borrowers or the relevant Defaulting Lender will, promptly upon demand by Administrative Agent, pay or provide to Administrative Agent additional Cash Collateral in an amount sufficient to eliminate such deficiency.

C. Application. Notwithstanding anything to the contrary contained in this Agreement, Cash Collateral provided under any of this subsection 2.1 or subsections 2.1A(iii), 3.1, 2.12 or Section 8 in respect of Letters of Credit or Swing Line Loans shall be held and applied to the satisfaction of the specific Letter of Credit Usage, Swing Line Loans, obligations to fund participations therein (including, as to Cash Collateral provided by a Defaulting Lender, any interest accrued on such obligation) and other obligations for which the Cash Collateral was so provided, prior to any other application of such property as may be provided for herein.

D. Release. Cash Collateral (or the appropriate portion thereof) provided to reduce Fronting Exposure or other obligations shall be released promptly following (i) the elimination of the applicable

Fronting Exposure or other obligations giving rise thereto (including by the termination of Defaulting Lender status of the applicable Lender (or, as appropriate, its assignee following compliance with subsection 10.1)) or (ii) Administrative Agent's reasonable good faith determination that there exists excess Cash Collateral; provided, however, (x) that Cash Collateral furnished by or on behalf of a Loan Party shall not be released during the continuance of a Potential Event of Default or Event of Default (and following application as provided in this subsection 2.11 may be otherwise applied in accordance with subsection 2.4D), and (y) the Person providing Cash Collateral in respect of Fronting Exposure and Issuing Lender or Swing Line Lender, as applicable, may agree that Cash Collateral shall not be released but instead held to support future anticipated Fronting Exposure or other obligations.

2.12 Defaulting Lenders.

A. Adjustments. Notwithstanding anything to the contrary contained in this Agreement, if any Lender becomes a Defaulting Lender, then, until such time as that Lender is no longer a Defaulting Lender, to the extent permitted by applicable Law:

(i) Waivers and Amendments. That Defaulting Lender's right to approve or disapprove any amendment, waiver or consent with respect to this Agreement shall be restricted as set forth in subsection 10.6.

(ii) Reallocation of Payments. Any payment of principal, interest, fees or other amounts received by Administrative Agent for the account of that Defaulting Lender (whether voluntary or mandatory, at maturity, pursuant to Section 8 or otherwise, and including any amounts made available to Administrative Agent by that Defaulting Lender pursuant to subsection 10.4), shall be applied at such time or times as may be determined by Administrative Agent as follows: first, to the payment of any amounts owing by that Defaulting Lender to Administrative Agent hereunder; second, to the payment on a pro rata basis of any amounts owing by that Defaulting Lender to Issuing Lender or Swing Line Lender hereunder; third, if so determined by Administrative Agent or requested by Issuing Lender or Swing Line Lender, to be held as Cash Collateral for future funding obligations of that Defaulting Lender of any participation in any Swing Line Loan or Letter of Credit; fourth, as the applicable Borrower may request (so long as no Potential Event of Default or Event of Default exists), to the funding of any Loan in respect of which that Defaulting Lender has failed to fund its portion thereof as required by this Agreement, as determined by Administrative Agent; fifth, if so determined by Administrative Agent and the applicable Borrower, to be held in a non-interest bearing deposit account and released in order to satisfy obligations of that Defaulting Lender to fund Loans under this Agreement; sixth, to the payment of any amounts owing to the Lenders, Issuing Lender or Swing Line Lender as a result of any judgment of a court of competent jurisdiction obtained by any Lender, Issuing Lender or Swing Line Lender against that Defaulting Lender as a result of that Defaulting Lender's breach of its obligations under this Agreement; seventh, so long as no Potential Event of Default or Event of Default exists, to the payment of any amounts owing to a Borrower as a result of any judgment of a court of competent jurisdiction obtained by such Borrower against that Defaulting Lender as a result of that Defaulting Lender's breach of its obligations under this Agreement; and eighth, to that Defaulting Lender or as otherwise directed by a court of competent jurisdiction; provided that if (x) such payment is a payment of the principal amount of any Loans under any facility hereunder or drawings resulting in reimbursement obligations under a Letter of Credit in respect of which that Defaulting Lender has not fully funded its appropriate share and (y) such Loans or reimbursement obligations under a Letter of Credit which were not so funded were made at a time when the conditions set forth in subsection 4.2 were satisfied or waived, such payment shall be applied solely to pay the Loans of, and reimbursement obligations under a Letter of Credit not so funded owed to, all Non-

Defaulting Lenders under the applicable facility hereunder on a pro rata basis (and ratably under all applicable facilities hereunder computed in accordance with the Defaulting Lenders' respective funding deficiencies) prior to being applied to the payment of any Loans of, or reimbursement obligations under a Letter of Credit no so funded owed to, that Defaulting Lender under the applicable facility hereunder. Any payments, prepayments or other amounts paid or payable to a Defaulting Lender that are applied (or held) to pay amounts owed by a Defaulting Lender or to post Cash Collateral pursuant to this subsection 2.12A(ii) shall be deemed paid to and redirected by that Defaulting Lender, and each Lender irrevocably consents hereto.

(iii) Certain Fees. That Defaulting Lender (x) shall not be entitled to receive any commitment fee pursuant to subsection 2.3A for any period during which that Lender is a Defaulting Lender (and Borrowers shall not be required to pay any such fee that otherwise would have been required to have been paid to that Defaulting Lender) and (y) shall be limited in its right to receive Letter of Credit fees as provided in subsection 3.2.

(iv) Reallocation of Pro Rata Share to Reduce Fronting Exposure. During any period in which there is a Revolving Lender that is a Defaulting Lender, for purposes of computing the amount of the obligation of each Non-Defaulting Lender to acquire, refinance or fund participations in Letters of Credit or Swing Line Loans pursuant to subsections 3.3 and 2.1A(iii), respectively, the "Pro Rata Share" of each Non-Defaulting Lender shall be computed without giving effect to the Commitment of that Defaulting Lender; provided, that, (i) each such reallocation shall be given effect only if, at the date the applicable Lender becomes a Defaulting Lender, no Potential Event of Default or Event of Default exists; and (ii) the aggregate obligation of each Non-Defaulting Lender to acquire, refinance or fund participations in Letters of Credit and Swing Line Loans shall not exceed the positive difference, if any, of (1) the Revolving Loan Commitment of that Non-Defaulting Lender minus (2) the aggregate Outstanding Amount of the Revolving Loans of that Lender.

B. Defaulting Lender Cure. If Company, Administrative Agent, Swing Line Lender and Issuing Lender agree in writing in their sole discretion that a Defaulting Lender with a Revolving Loan Commitment should no longer be deemed to be a Defaulting Lender, Administrative Agent will so notify the parties hereto, whereupon as of the effective date specified in such notice and subject to any conditions set forth therein (which may include arrangements with respect to any Cash Collateral), that Revolving Lender will, to the extent applicable, purchase that portion of outstanding Revolving Loans of the other Revolving Lenders or take such other actions as Administrative Agent may determine to be necessary to cause the Revolving Loans and funded and unfunded participations in Letters of Credit and Swing Line Loans to be held on a pro rata basis by the Revolving Lenders in accordance with their Pro Rata Shares (without giving effect to subsection 2.12A(iv)), whereupon that Revolving Lender will cease to be a Defaulting Lender; provided that no adjustments will be made retroactively with respect to fees accrued or payments made by or on behalf of a Borrower while that Revolving Lender was a Defaulting Lender; and provided, further, that except to the extent otherwise expressly agreed by the affected parties, no change hereunder from Defaulting Lender to Lender will constitute a waiver or release of any claim of any party hereunder arising from that Lender's having been a Defaulting Lender.

2.13 Designation of Co-Borrower; Joint and Several Liability of the Borrowers.

(i) The Company may at any time and from time to time designate (a) any Material Domestic Subsidiary reasonably satisfactory to the Administrative Agent as a Domestic Co-Borrower, or (b) any Material Foreign Subsidiary reasonably satisfactory to the Administrative Agent as a Foreign Co-Borrower, in each case by delivery to the Administrative Agent of a Co-Borrower Joinder Agreement executed by such Subsidiary, the Company and the Administrative

Agent, and upon such delivery such Subsidiary shall for all purposes of this Agreement be a Domestic Co-Borrower or a Foreign Co-Borrower, as the case may be, and a party to this Agreement. Notwithstanding the preceding sentence, no Co-Borrower Joinder Agreement shall become effective as to any Domestic Co-Borrower or any Foreign Co-Borrower if it shall be unlawful for such Subsidiary to become a Borrower hereunder or for any Lender to make Loans to such Subsidiary as provided herein (including, without limitation, because of the failure by any such Subsidiary to be in compliance with the Patriot Act). The Material Subsidiaries of such Domestic Co-Borrower or Foreign Co-Borrower (if it is not already a Guarantor) shall execute and deliver a Subsidiary Guaranty, Foreign Subsidiary Guaranty or amendment or supplement thereto, as applicable, in accordance with the terms of subsection 6.8B. If requested, the Company and the applicable Subsidiary shall (i) deliver to the Administrative Agent such reaffirmation agreements, legal opinions, board resolutions and other closing certificates, documents and agreements together with such amendments and/or supplements to the Collateral Documents as the Administrative Agent shall reasonably request (including, without limitation, documentation of the type identified in clauses A, F – J and L of Section 4.1) to ensure that such Subsidiary shall be a Domestic Borrower or a Foreign Co-Borrower hereunder subject to the terms of, and as to which the Administrative Agent and the Lenders shall have the benefits intended to be granted under, this Agreement and the other applicable Loan Documents and (ii) satisfy such other conditions as the Loan Parties and the Administrative Agent shall agree. Without limiting the foregoing, the Company shall, with respect to Foreign Subsidiaries, provide the Administrative Agent with as much advance notice and information as reasonably possible prior to the formation or designation of a Foreign Subsidiary that is proposed to be a Foreign Co-Borrower to enable the Administrative Agent and the Lenders to determine whether the Administrative Agent and each Lender is able to establish and maintain a borrowing relationship with such Foreign Subsidiary in accordance with this Agreement and the other Loan Documents under all applicable laws, rules or regulations of any applicable Governmental Authority.

(ii) Each of the Borrowers is accepting joint and several liability hereunder in consideration of the financial accommodation to be provided by the Lenders under this Agreement, for the mutual benefit, directly and indirectly, of each of the Borrowers and in consideration of the undertakings of each of the Borrowers to accept joint and several liability for the obligations of each of them. Each of the Borrowers jointly and severally hereby irrevocably and unconditionally accepts, not merely as a surety but also as a co-debtor, joint and several liability with respect to the payment and performance of all of the Obligations, it being the intention of the parties hereto that all the Obligations shall be the joint and several obligations of each of the Borrowers without preferences or distinction among them.

2.14 Lender Status Confirmation.

Each Lender which becomes a party to this Agreement after the date of this Agreement shall indicate, in the Assignment Agreement it executes on becoming a party, which of the following categories it falls in: (a) not a UK Qualifying Lender; (b) a UK Qualifying Lender (other than a UK Treaty Lender); or (c) a UK Treaty Lender; provided, if such a Lender fails to indicate its status in accordance with this subsection 2.14 then such Lender shall be treated for the purposes of this Agreement (including by the Borrowers) as if it is not a Qualifying Lender until such time as it notifies Administrative Agent which category applies (and Administrative Agent, upon receipt of such notification, shall inform the Borrowers); provided, for the avoidance of doubt, an Assignment Agreement shall not be invalidated by any failure of a Lender to indicate its status in accordance with this subsection 2.14.

SECTION 3. LETTERS OF CREDIT

3.1 Issuance of Letters of Credit and Lenders' Purchase of Participations Therein.

A. Letters of Credit. Company may request, in accordance with the provisions of this subsection 3.1, from time to time during the period from the Closing Date to but excluding the 30th day prior to the Revolving Loan Commitment Termination Date, that Issuing Lender issue Letters of Credit denominated in Dollars or in one or more Alternative Currencies for the account of Company or the other Borrowers for the general corporate purposes of Company, the other Borrowers or a Subsidiary of Company. Subject to the terms and conditions of this Agreement and in reliance upon the representations and warranties of Company herein set forth, Issuing Lender shall issue such Letters of Credit, in form and substance reasonably acceptable to the Issuing Lender, in accordance with the provisions of this subsection 3.1; provided that Company shall not request that Issuing Lender issue (and Issuing Lender shall not issue):

(i) any Letter of Credit if, after giving effect to such issuance, the Total Utilization of Revolving Loan Commitments would exceed the Revolving Loan Commitment Amount then in effect;

(ii) any Letter of Credit if, after giving effect to such issuance, the Letter of Credit Usage would exceed (a) with respect to all Letters of Credit, $25,000,000 or (b) with respect to all Letters of Credit denominated in Alternative Currencies, the Dollar Equivalent of $10,000,000;

(iii) any Standby Letter of Credit having an expiration date later than the earlier of (a) the Letter of Credit Expiration Date and (b) the date which is one year from the date of issuance of such Standby Letter of Credit; provided that (i) any such Standby Letter of Credit may, at the election of the Company, be extended for one or more successive periods not to exceed one year each; provided, however, that in no event shall an expiration date of any Standby Letter of Credit so extended be later than the Revolving Loan Commitment Termination Date (unless such Letter of Credit is Cash Collateralized on or prior to the date that is fifteen days prior to the Revolving Loan Commitment Termination Date in a manner acceptable to Issuing Lender); (ii) such Standby Letter of Credit may not be extended if an Event of Default has occurred and is continuing (and has not been waived in accordance with subsection 10.6) at the time of such extension and (iii) Standby Letters of Credit may have an expiration date later than the Letter of Credit Expiration Date to the extent such Letter of Credit is Cash Collateralized on or prior to the date that is fifteen days prior to the Letter of Credit Expiration Date in a manner acceptable to Issuing Lender;

(iv) except as otherwise agreed by Administrative Agent and Issuing Lender, any Letter of Credit denominated in a currency other than Dollars or an Alternative Currency; or

(v) any Letter of Credit in a requested currency, if Issuing Lender does not as of the issuance date of such requested Letter of Credit issue Letters of Credit in such requested currency.

Notwithstanding anything to the contrary herein, Issuing Lender shall be under no obligation to issue, renew, extend or amend any Letter of Credit if at the time of such issuance, renewal, extension or amendment there is any Defaulting Lender, unless Issuing Lender has entered into arrangements reasonably satisfactory to it and Company or any of its Subsidiaries for whose account such Letter of Credit has been requested or issued to eliminate such Issuing Lender's risk with respect to the Defaulting Lender, including (a) by Cash Collateralizing (in Dollars) such Defaulting Lender's Pro Rata Share of Letter of Credit Usage in accordance with subsections 2.11 and 2.12 or (b) reallocating such Defaulting Lender's Fronting Exposure to Non-Defaulting Lenders in accordance with subsection 2.12.

The Borrowers' reimbursement obligations in respect of each Existing Letter of Credit, and each Revolving Lender's participation obligations in connection therewith, shall be governed by the terms of this Agreement. Citizens Bank of Pennsylvania shall be the Issuing Lender on all Letters of Credit issued after the Closing Date. The Existing Letters of Credit shall, as of the Closing Date, be deemed to have been issued as Letters of Credit hereunder and subject to and governed by the terms of this Agreement.

For the avoidance of doubt, to the extent a Letter of Credit is Cash Collateralized on or prior to the date that is fifteen days prior to the Revolving Loan Commitment Termination Date in a manner acceptable to Issuing Lender pursuant to this Section 3.1A, the Lenders hereunder shall be released from their reimbursement obligations with respect to such Letters of Credit.

B. Mechanics of Issuance.

(i) Request for Issuance. Whenever Company desires the issuance of a Letter of Credit, it shall deliver to Administrative Agent a Request for Issuance no later than 12:00 Noon (New York City time) at least three Business Days, or such shorter period as may be agreed to by Issuing Lender in any particular instance, in advance of the proposed date of issuance. Issuing Lender, in its reasonable discretion, may require changes in the text of the proposed Letter of Credit or any documents described in or attached to the Request for Issuance. In furtherance of the provisions of subsection 10.8, and not in limitation thereof, Company may submit Requests for Issuance by telefacsimile or email and Administrative Agent and Issuing Lender may rely and act upon any such Request for Issuance without receiving an original signed copy thereof. No Letter of Credit shall require payment against a conforming demand for payment to be made thereunder on the same business day (under the laws of the jurisdiction in which the office of Issuing Lender to which such demand for payment is required to be presented is located) on which such demand for payment is presented if such presentation is made after 12:00 Noon (in the time zone of such office of the Issuing Lender) on such business day.

(ii) [Intentionally omitted].

(iii) Issuance of Letter of Credit. Upon satisfaction or waiver (in accordance with subsection 10.6) of the conditions set forth in subsection 4.3, Issuing Lender shall issue the requested Letter of Credit in accordance with Issuing Lender's standard operating procedures.

(iv) Notification to Revolving Lenders. Upon the issuance of or amendment to any Letter of Credit Issuing Lender shall promptly notify Administrative Agent and Company of such issuance or amendment in writing and such notice shall be accompanied by a copy of such Letter of Credit or amendment. Upon receipt of such notice (or, if Administrative Agent is the Issuing Lender, together with such notice), Administrative Agent shall notify each Revolving Lender in writing of such issuance or amendment and the amount of such Revolving Lender's respective participation in such Letter of Credit or amendment, and, if so requested by a Revolving Lender, Administrative Agent shall provide such Lender with a copy of such Letter of Credit or amendment

C. Revolving Lenders' Purchase of Participations in Letters of Credit. On the Closing Date with respect to each Existing Letter of Credit and immediately upon the issuance of each other Letter of Credit, each Revolving Lender shall be deemed to, and hereby agrees to, have irrevocably purchased from Issuing Lender a participation in such Letter of Credit and any drawings honored thereunder in an amount equal to such Revolving Lender's Pro Rata Share of the maximum amount that is or at any time may become available to be drawn thereunder.

3.2 Letter of Credit Fees.

Company agrees to pay the following amounts, in Dollars, with respect to Letters of Credit issued hereunder:

(i) with respect to each Letter of Credit, (a) a fronting fee, payable directly to the applicable Issuing Lender for its own account, at a rate per annum equal to 0.125%, computed on the Dollar Equivalent of the daily amount available to be drawn under such Letter of Credit and (b) subject to subsection 2.12A, a letter of credit fee, payable to Administrative Agent for the account of Revolving Lenders, equal to the applicable Eurocurrency Rate Margin for Revolving Loans, plus, upon the application of increased rates of interest pursuant to subsection 2.2E, 2% per annum, multiplied by the Dollar Equivalent of the daily amount available to be drawn under such Letter of Credit, each such fronting fee or letter of credit fee to be payable in arrears on and to (but excluding) each March 31, June 30, September 30 and December 31 of each year and computed on the basis of a 360-day year for the actual number of days elapsed; provided that, in accordance with subsection 2.12, if any Revolving Lender becomes a Defaulting Lender and a Borrower has provided Cash Collateral with respect to such Defaulting Lender's Pro Rata Share of Letter of Credit Usage, such Defaulting Lender shall not be entitled to its Pro Rata Share of such letter of credit fee during the time that Cash Collateral is provided by the applicable Borrower and such share of the letter of credit fee shall be retained by Company; and

(ii) with respect to the issuance, amendment or transfer of each Letter of Credit and each payment of a drawing made thereunder (without duplication of the fees payable under clause (i) above), documentary and processing charges payable directly to the applicable Issuing Lender for its own account in accordance with such Issuing Lender's standard schedule for such charges in effect at the time of such issuance, amendment, transfer or payment, as the case may be.

For purposes of calculating any fees payable under clause (i) of this subsection 3.2, the daily amount available to be drawn under any Letter of Credit shall be determined in accordance with subsection 1.7.

3.3 Drawings and Reimbursement of Amounts Paid Under Letters of Credit.

A. Responsibility of Issuing Lender With Respect to Drawings. In determining whether to honor any drawing under any Letter of Credit by the beneficiary thereof, Issuing Lender shall be responsible only to examine the documents delivered under such Letter of Credit with reasonable care so as to ascertain whether they appear on their face to be in accordance with the terms and conditions of such Letter of Credit.

B. Reimbursement by Company of Amounts Paid Under Letters of Credit. In the event Issuing Lender has determined to honor a drawing under a Letter of Credit issued by it, Issuing Lender shall immediately notify Company and Administrative Agent, and Company shall reimburse such Issuing Lender on or before the Business Day immediately following the date on which such drawing is honored (the **"Reimbursement Date"**) in Same Day Funds the amount of such drawing, such reimbursement to be in the currency in which such Letter of Credit is denominated unless (A) Issuing Lender (at its option) shall have specified in such notice that it will require reimbursement in Dollars, or (B) in the absence of any such requirement for reimbursement in Dollars, Company shall have notified Issuing Lender promptly following receipt of the notice of drawing that Company will reimburse Issuing Lender in Dollars. In the case of any such reimbursement in Dollars of a drawing under a Letter of Credit denominated in an Alternative Currency, Issuing Lender shall notify Company of the Dollar Equivalent of the amount of the drawing promptly following the determination thereof. Anything contained in this

Agreement to the contrary notwithstanding, (i) unless Company shall have notified Administrative Agent and such Issuing Lender prior to 12:00 Noon (New York City time) on the date such drawing is honored that Company intends to reimburse such Issuing Lender for the amount of such drawing with funds other than the proceeds of Revolving Loans, Company shall be deemed to have given a timely Notice of Borrowing to Administrative Agent requesting Revolving Lenders to make Revolving Loans that are Base Rate Loans on the Reimbursement Date in an amount in Dollars (based on the Dollar Equivalent amount in the case of a drawing under a Letter of Credit denominated in an Alternative Currency) equal to the amount of such drawing and (ii) subject to satisfaction or waiver of the conditions specified in subsection 4.3B, Revolving Lenders shall, on the Reimbursement Date, make Revolving Loans that are Base Rate Loans in the amount of such drawing, the proceeds of which shall be applied directly by Administrative Agent to reimburse Issuing Lender for the amount of such drawing; and provided, further that if for any reason proceeds of Revolving Loans are not received by Issuing Lender on the Reimbursement Date in an amount equal to the amount of such drawing, Company shall reimburse Issuing Lender, on demand, in an amount in Dollars (based on the Dollar Equivalent amount with respect to any Letter of Credit denominated in an Alternative Currency) in Same Day Funds equal to the excess of the amount of such drawing over the aggregate amount of such Revolving Loans, if any, which are so received. Nothing in this subsection 3.3B shall be deemed to relieve any Revolving Lender from its obligation to make Revolving Loans on the terms and conditions set forth in this Agreement, and Company shall retain any and all rights it may have against any Revolving Lender resulting from the failure of such Revolving Lender to make such Revolving Loans under this subsection 3.3B. If any portion of any such amount paid (or deemed to be paid) to Issuing Lender should be recovered by or on behalf of Company from Issuing Lender in any bankruptcy proceeding, in any assignment for the benefit of creditors or otherwise, the loss of the amount so recovered shall be ratably shared among all Lenders in the manner contemplated by subsection 10.5.

C. Payment by Lenders of Unreimbursed Amounts Paid Under Letters of Credit.

(i) Payment by Revolving Lenders. In the event that Company shall fail for any reason to reimburse Issuing Lender as provided in subsection 3.3B in an amount equal to the amount of any payment by Issuing Lender under a Letter of Credit issued by it, Issuing Lender shall promptly notify Administrative Agent, who shall promptly notify each Revolving Lender of the unreimbursed amount of such honored drawing and of such Revolving Lender's respective participation therein based on such Revolving Lender's Pro Rata Share. Each Revolving Lender (other than Issuing Lender) shall make available (and Administrative Agent may apply Cash Collateral provided for this purpose) an amount equal to its respective participation, in Dollars (based on the Dollar Equivalent amount with respect to any Letter of Credit denominated in an Alternative Currency), in Same Day Funds, at the Funding and Payment Office, not later than 12:00 Noon (New York City time) on the first Business Day after the date notified by Administrative Agent, and Administrative Agent shall make available to Issuing Lender, in Same Day Funds, at the office of Issuing Lender on such Business Day the aggregate amount of the payments so received by Administrative Agent. In the event that any Revolving Lender fails to make available to Administrative Agent on such Business Day the amount of such Revolving Lender's participation in such Letter of Credit as provided in this subsection 3.3C, Issuing Lender shall be entitled to recover such amount on demand from such Revolving Lender together with interest thereon at the Overnight Rate for three Business Days and thereafter at the Base Rate, plus any administrative, processing or similar fees customarily charged by Issuing Lender in connection with the foregoing. Nothing in this subsection 3.3C shall be deemed to prejudice the right of Administrative Agent to recover, for the benefit of Revolving Lenders, from Issuing Lender any amounts made available to Issuing Lender pursuant to this subsection 3.3C in the event that it is determined by the final judgment of a court of competent jurisdiction that the payment with respect to a Letter of Credit by Issuing Lender in respect of which payments were

made by Revolving Lenders constituted gross negligence, bad faith or willful misconduct on the part of Issuing Lender.

(ii) Distribution to Lenders of Reimbursements Received From Company. In the event Issuing Lender shall have been reimbursed by other Revolving Lenders pursuant to subsection 3.3C(i) for all or any portion of any payment by Issuing Lender under a Letter of Credit issued by it, and Administrative Agent or Issuing Lender thereafter receives any payments from Company in reimbursement of such payment under the Letter of Credit, to the extent any such payment is received by Issuing Lender, it shall distribute such payment to Administrative Agent, and Administrative Agent shall distribute to each other Revolving Lender that has paid all amounts payable by it under subsection 3.3C(i) with respect to such payment such Revolving Lender's Pro Rata Share of all payments subsequently received by Administrative Agent or by Issuing Lender from Company. Any such distribution shall be made to a Revolving Lender at the account specified in subsection 2.4C(iii).

D. Interest on Amounts Paid Under Letters of Credit.

(i) Payment of Interest by Company. Company agrees to pay to Administrative Agent, with respect to payments under any Letters of Credit issued by Issuing Lender, interest on the amount paid by Issuing Lender in respect of each such payment from the date a drawing is honored to but excluding the date such amount is reimbursed by Company (including any such reimbursement out of the proceeds of Revolving Loans pursuant to subsection 3.3B) at a rate equal to (a) for the period from the date such drawing is honored to but excluding the Reimbursement Date, the rate then in effect under this Agreement with respect to Revolving Loans that are Base Rate Loans and (b) thereafter, a rate which is 2% per annum in excess of the non-default rate of interest otherwise payable under this Agreement with respect to Revolving Loans that are Base Rate Loans. Interest payable pursuant to this subsection 3.3D(i) shall be computed on the basis of a 365-day or 366-day year, as the case may be, for the actual number of days elapsed in the period during which it accrues and shall be payable on demand or, if no demand is made, on the date on which the related drawing under a Letter of Credit is reimbursed in full.

(ii) Distribution of Interest Payments by Administrative Agent. Promptly upon receipt by Administrative Agent of any payment of interest pursuant to subsection 3.3D(i) with respect to a payment under a Letter of Credit, (a) Administrative Agent shall distribute to (x) each Revolving Lender (including the Issuing Lender) out of the interest received by Administrative Agent in respect of the period from the date such drawing is honored to but excluding the date on which Issuing Lender is reimbursed for the amount of such payment (including any such reimbursement out of the proceeds of Revolving Loans pursuant to subsection 3.3B), the amount that such Revolving Lender would have been entitled to receive in respect of the letter of credit fee that would have been payable in respect of such Letter of Credit for such period pursuant to subsection 3.2 if no drawing had been honored under such Letter of Credit, and (y) Issuing Lender the amount, if any, remaining after payment of the amounts applied pursuant to clause (x), and (b) in the event Issuing Lender shall have been reimbursed by other Revolving Lenders pursuant to subsection 3.3C(i) for all or any portion of such payment, Administrative Agent shall distribute to each Revolving Lender (including such Issuing Lender) that has paid all amounts payable by it under subsection 3.3C(i) with respect to such payment such Revolving Lender's Pro Rata Share of any interest received by Administrative Agent in respect of that portion of such payment so made by Revolving Lenders for the period from the date on which Issuing Lender was so reimbursed to but excluding the date on which such portion of such payment is reimbursed by Company.

Any such distribution shall be made to a Revolving Lender at the account specified in subsection 2.4C(iii).

3.4 Obligations Absolute.

The obligation of Company to reimburse Issuing Lender for payments under the Letters of Credit issued by it and to repay any Revolving Loans made by Revolving Lenders pursuant to subsection 3.3B and the obligations of Revolving Lenders under subsection 3.3C(i) shall be unconditional and irrevocable and shall be paid strictly in accordance with the terms of this Agreement under all circumstances including any of the following circumstances:

(i) any lack of validity or enforceability of any Letter of Credit;

(ii) the existence of any claim, set-off, defense or other right which Company or any Lender may have at any time against a beneficiary or any transferee of any Letter of Credit (or any Persons for whom any such transferee may be acting), any Issuing Lender or other Revolving Lender or any other Person or, in the case of a Revolving Lender, against Company, whether in connection with this Agreement, the transactions contemplated herein or any unrelated transaction (including any underlying transaction between Company or one of its Subsidiaries and the beneficiary for which any Letter of Credit was procured);

(iii) any draft or other document presented under any Letter of Credit proving to be forged, fraudulent, invalid or insufficient in any respect or any statement therein being untrue or inaccurate in any respect;

(iv) payment by the applicable Issuing Lender under any Letter of Credit against presentation of a draft or other document which does not substantially comply with the terms of such Letter of Credit;

(v) any adverse change in the business, operations, properties, assets, condition (financial or otherwise) or prospects of Company or any of its Subsidiaries;

(vi) any breach of this Agreement or any other Loan Document by any party thereto;

(vii) the fact that an Event of Default or a Potential Event of Default shall have occurred and be continuing; or

(viii) any adverse change in the relevant exchange rates or in the availability of the relevant Alternative Currency to Company or any Subsidiary or in the relevant currency markets generally;

provided, in each case, that payment by Issuing Lender under the applicable Letter of Credit shall not have constituted gross negligence, bad faith or willful misconduct of Issuing Lender under the circumstances in question (as determined by a final judgment of a court of competent jurisdiction).

3.5 Nature of Issuing Lenders' Duties.

As between the Borrowers and Issuing Lender, each Borrower assumes all risks of the acts and omissions of, or misuse of the Letters of Credit issued by Issuing Lender by, the respective beneficiaries of such Letters of Credit. In furtherance and not in limitation of the foregoing, Issuing Lender shall not be responsible for: (i) the form, validity, sufficiency, accuracy, genuineness or legal effect of any document submitted by any party in connection with the application for and issuance of any such Letter of Credit, even if it should in fact prove to be in any or all respects invalid, insufficient, inaccurate,

fraudulent or forged; (ii) the validity or sufficiency of any instrument transferring or assigning or purporting to transfer or assign any such Letter of Credit or the rights or benefits thereunder or proceeds thereof, in whole or in part, which may prove to be invalid or ineffective for any reason; (iii) failure of the beneficiary of any such Letter of Credit to comply fully with any conditions required in order to draw upon such Letter of Credit; (iv) errors, omissions, interruptions or delays in transmission or delivery of any messages, by mail, cable, telegraph, telex or otherwise, whether or not they be in cipher; (v) errors in interpretation of technical terms; (vi) any loss or delay in the transmission or otherwise of any document required in order to make a drawing under any such Letter of Credit or of the proceeds thereof; (vii) the misapplication by the beneficiary of any such Letter of Credit of the proceeds of any drawing under such Letter of Credit; or (viii) any consequences arising from causes beyond the control of such Issuing Lender, including any act or omission by a Government Authority, and none of the above shall affect or impair, or prevent the vesting of, any of such Issuing Lender's rights or powers hereunder.

In furtherance and extension and not in limitation of the specific provisions set forth in the first paragraph of this subsection 3.5, any action taken or omitted by any Issuing Lender under or in connection with the Letters of Credit issued by it or any documents and certificates delivered thereunder, if taken or omitted in good faith, shall not put such Issuing Lender under any resulting liability to the Borrowers.

Notwithstanding anything to the contrary contained in this subsection 3.5, Company shall retain any and all rights it may have against any Issuing Lender for any liability arising out of the gross negligence or willful misconduct of such Issuing Lender, or a material breach of the terms of this Agreement, as determined by a final judgment of a court of competent jurisdiction.

SECTION 4. CONDITIONS TO LOANS AND LETTERS OF CREDIT

The obligations of Lenders to make Loans and Issuing Lender to issue Letters of Credit hereunder are subject to the satisfaction or waiver of the following conditions.

4.1 Conditions to Initial Revolving Loans and Swing Line Loans.

The obligations of Lenders to make any Revolving Loans and Swing Line Loans to be made on the Closing Date are, in addition to the conditions precedent specified in subsection 4.2 , subject to prior or concurrent satisfaction of the following conditions:

A. **Loan Party Documents.** On or before the Closing Date, Company shall, and shall cause each other Loan Party to, deliver to Lenders or to Administrative Agent the following with respect to Company or such Loan Party, as the case may be, each, unless otherwise noted, dated the Closing Date:

(i) copies of the Organizational Documents of such Person, certified by the Secretary of State of its jurisdiction of organization or, if such document is of a type that may not be so certified, certified by the secretary or similar officer of the applicable Loan Party, together with a good standing certificate (or equivalent document, if applicable) from the Secretary of State of its jurisdiction of organization each dated a recent date prior to the Closing Date;

(ii) copies of the Organizational Documents of each Co-Borrower, certified by an Officer of the Co-Borrower, together with a good standing certificate (or equivalent document, if applicable) from the Secretary of State of its jurisdiction of organization each dated a recent date prior to the Closing Date;

(iii) resolutions of the Governing Body of such Person approving and authorizing the execution, delivery and performance of the Loan Documents to which it is a party, certified as of the Closing Date by the secretary or similar officer, or a duly appointed signatory, of such Person as being in full force and effect without modification or amendment;

(iv) signature and incumbency certificates of the officers of such Person executing the Loan Documents to which it is a party; and

(v) executed originals of the Loan Documents to which such Person is a party.

B. Fees. Company shall have paid to Administrative Agent, for distribution (as appropriate) to Administrative Agent, the Agents and Lenders, the fees payable on the Closing Date referred to in subsection 2.3.

C. Corporate and Capital Structure; Ownership. The corporate organizational structure, capital structure and ownership of Company and its Subsidiaries shall be as set forth on Schedule 4.1C annexed hereto; provided, however, that the ownership of Company shall not be included on such schedule.

D. Representations and Warranties; Performance of Agreements. Company shall have delivered to Administrative Agent an Officer's Certificate, in form and substance reasonably satisfactory to Administrative Agent, to the effect that (i) the representations and warranties in Section 5 are true and correct in all material respects on and as of the Closing Date and that Company shall have performed in all material respects all agreements and satisfied all conditions which this Agreement provides shall be performed or satisfied in all material respects by it on or before the Closing Date except as otherwise disclosed to and agreed to in writing by Administrative Agent; provided that, if a representation and warranty, covenant or condition is qualified as to materiality, the applicable materiality qualifier set forth in this subsection 4.1D shall be disregarded with respect to such representation and warranty, covenant or condition for purposes of this condition, (ii) no Potential Event of Default or Event of Default exists, (iii) there does not exist any pending or ongoing, action, suit, investigation, litigation or proceeding in any court or before any other Government Authority to prevent the making of the Loans under this Agreement and (iv) the Loan Parties are in pro forma compliance with each of the initial financial covenants set forth in Section 7.6 (as evidenced through detailed calculations of such financial covenants on a schedule to such certificate) as of the last day of the month ending at least twenty (20) days preceding the Closing Date.

E. Financial Statements; Pro Forma Balance Sheet; Projections. On or before the Closing Date, Lenders shall have received from Company (i) the audited and unaudited financial statements of Company and its Subsidiaries described in Schedule 5.3, (ii) a pro forma balance sheet of the Company and its Subsidiaries as of the last day of the month that ended at least twenty (20) days prior to the Closing Date and (iii) projected financial statements (including balance sheets and income and cash flow statements) for the five-year period after December 31, 2012.

F. Opinions of Counsel to Loan Parties. Lenders shall have received executed copies of one or more favorable written opinions of (i) Bingham McCutchen LLP, counsel for Loan Parties and (ii) Rossway Moore Swan, P.L., special Florida counsel for Loan Parties, each dated as of the Closing Date and reasonably satisfactory to Administrative Agent and as to such matters as Administrative Agent acting on behalf of Lenders may reasonably request.

G. Solvency Assurances. On the Closing Date, Administrative Agent and Lenders shall have received an Officer's Certificate of Company dated the Closing Date, substantially in the form of Exhibit VII annexed hereto and with appropriate attachments, demonstrating that, after giving effect to

the consummation of the transactions contemplated by the Loan Documents, Company and all of its Subsidiaries on a consolidated basis will be Solvent.

H. Evidence of Insurance. Administrative Agent shall have received a certificate (together with endorsements) from Company's insurance broker or other evidence reasonably satisfactory to it that all insurance required to be maintained pursuant to subsection 6.4 is in full force and effect and that Administrative Agent on behalf of Lenders has been named as additional insured and/or loss payee thereunder to the extent required under subsection 6.4.

I. Necessary Governmental Authorizations and Consents; Expiration of Waiting Periods, Etc. Company shall have obtained all Governmental Authorizations and all consents of other Persons, in each case that are necessary in connection with the transactions contemplated by the Loan Documents and the continued operation of the business conducted by Company and its Subsidiaries in substantially the same manner as conducted prior to the Closing Date. Each such Governmental Authorization and consent shall be in full force and effect, except in a case where the failure to obtain or maintain a Governmental Authorization or consent, either individually or in the aggregate, could not reasonably be expected to result in a Material Adverse Effect. No action, request for stay, petition for review or rehearing, reconsideration, or appeal with respect to any of the foregoing shall be pending.

J. Security Interests in Personal Property. Administrative Agent shall have received evidence reasonably satisfactory to it that Company and Subsidiary Guarantors shall have taken or caused to be taken all such actions, executed and delivered or caused to be executed and delivered all such agreements, documents and instruments, and made or caused to be made all such filings and recordings (other than the filing or recording of items described in clauses (ii), (iii) and (iv) below) that may be necessary in the reasonable opinion of Administrative Agent in order to create in favor of Administrative Agent, for the benefit of the Secured Parties, a valid and (upon such filing and recording) perfected First Priority security interest in the Collateral. Such actions shall include the following:

(i) Stock Certificates and Instruments. Delivery to Administrative Agent of (a) certificates (which certificates shall be accompanied by irrevocable undated stock powers, duly endorsed in blank and otherwise satisfactory in form and substance to Administrative Agent) representing all Capital Stock required to be pledged pursuant to the Security Agreement and (b) all promissory notes or other instruments (duly endorsed, where appropriate, in a manner satisfactory to Administrative Agent) evidencing any Collateral, unless otherwise consented to by Administrative Agent in its sole discretion;

(ii) Lien Searches and UCC Termination Statements. Delivery to Administrative Agent of (a) the results of a recent search, satisfactory to Administrative Agent, of all effective UCC financing statements and fixture filings and all judgment and tax lien filings which may have been made with respect to any personal property of any Loan Party, to the extent applicable, together with copies of all such filings disclosed by such search, and (b) duly completed UCC termination statements, and authorization of the filing thereof from the applicable secured party, as may be necessary to terminate any effective UCC financing statements or fixture filings disclosed in such search (other than any such financing statements or fixture filings in respect of Liens permitted to remain outstanding pursuant to the terms of this Agreement).

(iii) UCC Financing Statements. Delivery to Administrative Agent of duly completed UCC financing statements with respect to all personal property Collateral of such Loan Party, for filing in all jurisdictions as may be necessary in the reasonable opinion of Administrative Agent to perfect the security interests created in such Collateral pursuant to the Collateral Documents; and

(iv) IP Filing Office Documentation. Delivery to Administrative Agent of all documents or instruments required to be filed with any IP Filing Office in order to create or perfect Liens in respect of any IP Collateral or evidence the interest of Administrative Agent and Lenders therein, in the United States, together with releases duly executed (if necessary) of security interests by all applicable Persons for filing in all applicable jurisdictions as may be necessary to terminate any effective filings in any IP Filing Office in respect of any IP Collateral (other than any such filings in respect of Liens permitted to remain outstanding pursuant to the terms of this Agreement). Notwithstanding anything herein or in any other Loan Document to the contrary, Company and the Subsidiary Guarantors shall not have any obligation to file any security agreements or notices thereof with respect to, or to perfect any security interest of Administrative Agent in, any IP Collateral in any jurisdiction other than the United States of America.

K. Matters Relating to Existing Indebtedness of Company and its Subsidiaries. On the Closing Date, Company and its Subsidiaries shall have (i) repaid in full all Indebtedness under the Existing Credit Agreement, (ii) terminated any commitments to lend or make other extensions of credit thereunder and (iii) delivered to Administrative Agent all documents or instruments necessary to release all Liens securing Indebtedness or other obligations of Company and its Subsidiaries thereunder.

L. Patriot Act Compliance. Administrative Agent shall have received, prior to the Closing Date, all documentation and other information required by bank regulatory authorities under the applicable "know your customer" and anti-money laundering rules and regulations, including the Patriot Act.

4.2 Conditions to All Loans.

The obligation of each Lender to make its Loans on each Funding Date are subject to the following further conditions precedent:

A. Administrative Agent shall have received before that Funding Date, in accordance with the provisions of subsection 2.1B, a duly executed Notice of Borrowing, in each case signed by a duly authorized Officer of the applicable Borrower.

B. As of that Funding Date:

(i) The representations and warranties contained herein and in the other Loan Documents shall be true, correct and complete in all material respects on and as of that Funding Date to the same extent as though made on and as of that date, except to the extent such representations and warranties specifically relate to an earlier date, in which case such representations and warranties shall have been true, correct and complete in all material respects on and as of such earlier date; provided, that, if a representation and warranty is qualified as to materiality, the materiality qualifier set forth in this subsection 4.2B(i) shall be disregarded with respect to such representation and warranty for purposes of this condition;

(ii) No event shall have occurred and be continuing or would result from the consummation of the borrowing contemplated by such Notice of Borrowing that would constitute an Event of Default or a Potential Event of Default; and

(iii) In the case of any Loan to be denominated in an Alternative Currency, there shall not have occurred any change in national or international financial, political or economic conditions or currency exchange rates or exchange controls which in the reasonable opinion of

Administrative Agent or the Requisite Lenders would make it impracticable for such Loan to be denominated in the relevant Alternative Currency.

4.3 Conditions to Letters of Credit.

The issuance of any Letter of Credit by Issuing Lender hereunder is subject to the following conditions precedent:

A. On or before the date of issuance of the initial Letter of Credit pursuant to this Agreement, the initial Loans shall have been made.

B. On or before the date of issuance of such Letters of Credit, Administrative Agent shall have received, in accordance with the provisions of subsection 3.1B(i), an originally executed Request for Issuance (or a facsimile or emailed copy thereof) in each case signed by a duly authorized Officer of Company and such other documents or information as the Issuing Lender may reasonably require in connection with the issuance of such Letters of Credit.

C. On the date of issuance of such Letter of Credit, all conditions precedent described in subsections 4.2B(i) and 4.2B(ii) shall be satisfied to the same extent as if the issuance of such Letter of Credit were the making of a Loan and the date of issuance of such Letter of Credit were a Funding Date.

D. In the case of any Letter of Credit to be denominated in an Alternative Currency, there shall not have occurred any change in national or international financial, political or economic conditions or currency exchange rates or exchange controls which in the reasonable opinion of Administrative Agent or Issuing Lender would make it impracticable for such Letter of Credit to be denominated in the relevant Alternative Currency.

SECTION 5. COMPANY'S REPRESENTATIONS AND WARRANTIES

In order to induce Lenders to enter into this Agreement and to make the Loans, to induce Issuing Lenders to issue Letters of Credit and to induce Revolving Lenders to purchase participations therein, each Borrower represents and warrants to each Lender:

5.1 Organization, Powers, Qualification, Good Standing, Business and Subsidiaries.

A. Organization and Powers. Each Borrower is an entity duly organized or formed, validly existing and in good standing (where applicable) under the laws of the jurisdiction of its incorporation or organization. Each Borrower has all requisite power and authority to own and operate its properties, to carry on its business as now conducted and as proposed to be conducted, to enter into the Loan Documents to which it is a party and to carry out the transactions contemplated thereby.

B. Qualification and Good Standing. Each Borrower is qualified to do business and in good standing (where applicable) and validly existing (where applicable) in every jurisdiction wherever necessary to carry out its business and operations, except in jurisdictions where the failure to be so qualified or in good standing could not reasonably be expected to result in a Material Adverse Effect.

C. Subsidiaries. As of the Closing Date and each date that the financial statements referenced in subsections 6.1(ii) and 6.1(iii) are delivered, all of the Subsidiaries of Company and their jurisdictions of organization are identified in Schedule 5.1 annexed hereto, as said Schedule 5.1 may be supplemented from time to time pursuant to the provisions of subsection 6.1(xiii). The Capital Stock of (i) each of the Domestic Subsidiaries of Company identified in Schedule 5.1 annexed hereto (as so

supplemented) is duly authorized, validly issued, fully paid and nonassessable and (ii) each of the Foreign Subsidiaries of Company identified in Schedule 5.1 annexed hereto (as so supplemented) is duly authorized and validly issued. Each of the Subsidiaries of Company identified in Schedule 5.1 annexed hereto (as so supplemented) is duly organized, validly existing and/or, where applicable, in good standing under the laws of its respective jurisdiction of organization or formation set forth therein, has all requisite power and authority to own and operate its properties and to carry on its business as now conducted and as proposed to be conducted, and is qualified to do business and in good standing (where applicable) in every jurisdiction wherever necessary to carry out its business and operations, in each case except where failure to be so qualified or in good standing or a lack of such power and authority could not reasonably be expected to result in a Material Adverse Effect. Schedule 5.1 annexed hereto (as so supplemented) correctly sets forth the ownership interest of Company and each of its Subsidiaries in each of the Subsidiaries, joint ventures and partnerships of Company identified therein. As of the Closing Date, the Material Domestic Subsidiaries of Company are as set forth on Schedule 5.1C.

5.2 Authorization of Borrowing, etc.

A. Authorization of Borrowing. The execution, delivery and performance of the Loan Documents have been duly authorized by all necessary action on the part of each Loan Party that is a party thereto.

B. No Conflict. The execution, delivery and performance by Loan Parties of the Loan Documents to which they are parties and the consummation of the transactions contemplated by the Loan Documents do not and will not (i) violate any provision of any law or any governmental rule or regulation applicable to Company or any Loan Party, (ii) violate any provision of the Organizational Documents of Company or any Loan Party, (iii) violate any order, judgment or decree of any court or other Government Authority binding on Company or any Loan Party, (iv) conflict with, result in a breach of or constitute (with due notice or lapse of time or both) a default under any Contractual Obligation of Company or any Loan Party, (v) result in or require the creation or imposition of any Lien upon any of the properties or assets of Company or any Loan Party (other than any Liens created under any of the Loan Documents in favor of Administrative Agent (for the benefit of the Secured Parties) or otherwise permitted by this Agreement) or (vi) require any approval of stockholders or any approval or consent of any Person under any Contractual Obligation of Company or any of its Subsidiaries, except for such approvals or consents which will be obtained on or before the Closing Date and disclosed in writing to Lenders and except, in the case of clauses (i), (iii) and (iv), to the extent such violation or conflict could not reasonably be expected to result in a Material Adverse Effect.

C. Governmental Consents. The execution, delivery and performance by Loan Parties of the Loan Documents to which they are parties and the consummation of the transactions contemplated by the Loan Documents do not and will not require any Governmental Authorization except those as have been obtained or made and are in full force and effect and those the failure of which to obtain could not reasonably be expected to have a Material Adverse Effect.

D. Binding Obligation. Each of the Loan Documents has been duly executed and delivered by each Loan Party that is a party thereto and is the legally valid and binding obligation of such Loan Party, enforceable against such Loan Party in accordance with its respective terms, except as may be limited by bankruptcy, insolvency, reorganization, fraudulent conveyance, moratorium or similar laws relating to or affecting creditors' rights generally or by equitable principles relating to enforceability (whether considered in a proceeding in equity or at law).

E. Compliance with Laws. Each of the Loan Parties is in compliance with all Requirements of Law, organizational documents, government permits and government licenses except to

the extent such non-compliance could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

F. Use of Proceeds. The proceeds of Revolving Loans and Swingline Loans shall be used by the Borrowers solely to the extent permitted by Section 2.5.

5.3 Financial Condition.

Company has heretofore delivered to Administrative Agent the financial statements and information set forth in Schedule 5.3. All such statements other than pro forma financial statements were prepared in conformity with IFRS and fairly present, in all material respects, the financial position (on a consolidated basis, to the extent indicated on such Schedule) of the entities described in such financial statements as at the respective dates thereof and the results of operations and cash flows (on a consolidated basis, to the extent indicated on such Schedule) of the entities described therein for each of the periods then ended, subject, in the case of any such unaudited financial statements, to changes resulting from audit and normal year-end adjustments and the absence of footnotes.

5.4 No Material Adverse Change; No Restricted Junior Payments.

Since June 30, 2012, no event or change has occurred that has resulted in or evidences, either in any case or in the aggregate, a Material Adverse Effect. Neither Company nor any of its Subsidiaries has directly or indirectly declared, ordered, paid or made, or set apart any sum or property for, any Restricted Junior Payment or agreed to do so except as permitted by subsection 7.5. To the knowledge of an Officer of the Company, no Internal Control Event is occurring.

5.5 Title to Properties; Liens; Real Property; Intellectual Property.

A. Title to Properties; Liens. Company and its Subsidiaries have (i) good, sufficient and legal title to (in the case of fee interests in real property), (ii) valid leasehold interests in (in the case of leasehold interests in real or personal property), (iii) valid license rights in (in the case of license rights in Intellectual Property) or (iv) good title to (in the case of all other personal property), all of their respective properties and assets reflected in the financial statements referred to in subsection 5.3 or in the most recent financial statements delivered pursuant to subsection 6.1, in each case except for assets disposed of since the date of such financial statements in the ordinary course of business or as otherwise permitted under subsection 7.7, and except for such irregularities or deficiencies in title which individually or in the aggregate, could not reasonably be expected to result in a Material Adverse Effect or materially diminish the value of any material portion of the Collateral. Except as permitted by this Agreement, all such properties and assets are free and clear of Liens.

B. Real Property. As of the Closing Date, Schedule 5.5B annexed hereto contains a true, accurate and complete list of (i) all fee interests in any Real Property Assets and (ii) all material leases, subleases or assignments of leases (together with all amendments, modifications, supplements, renewals or extensions of any thereof), if any, affecting each Real Property Asset, regardless of whether a Loan Party is the landlord or tenant (whether directly or as an assignee or successor in interest) under such lease, sublease or assignment. As of the Closing Date, except as specified in Schedule 5.5B annexed hereto, each agreement listed in clause (ii) of the immediately preceding sentence is in full force and effect and Company does not have knowledge of any default that has occurred and is continuing thereunder, and each such agreement constitutes the legally valid and binding obligation of each applicable Loan Party, enforceable against such Loan Party in accordance with its terms, except as enforcement may be limited by bankruptcy, insolvency, reorganization, fraudulent conveyance,

moratorium or other laws relating to or affecting creditors' rights generally or by equitable principles (whether considered in a proceeding in equity or at law).

C. Intellectual Property. As of the Closing Date, to the knowledge of Company or any of its Subsidiaries, Company and its Subsidiaries own or have the right to use, all Intellectual Property used in the conduct of their business, except where the failure to own or have such right to use in the aggregate could not reasonably be expected to result in a Material Adverse Effect. To the knowledge of Company or any of its Subsidiaries, no claim has been asserted and is pending by any Person challenging or questioning the use of any such Intellectual Property or the validity or enforceability of any such Intellectual Property, nor does Company know of any valid basis for any such claim, except for such claims that in the aggregate could not reasonably be expected to result in a Material Adverse Effect. To the knowledge of Company or any of its Subsidiaries, as of the Closing Date, the use of such Intellectual Property by Company and its Subsidiaries does not infringe on the rights of any Person, except for such claims and infringements that, in the aggregate, could not reasonably be expected to result in a Material Adverse Effect. All United States registrations of and United States applications for material Intellectual Property owned by any Loan Party, and all material, exclusive license agreements under which the Loan Parties license United States registered or applied for Intellectual Property of third parties material to the conduct of their business, in each case, on the Closing Date are listed on Schedule 5.5C annexed hereto.

D. Collateral Documents. Subject to legal reservations, the Collateral Documents create valid and enforceable security interests in, and Liens on, the Collateral purported to be covered thereby. Except as set forth in the Collateral Documents, such security interests and Liens are currently (or will be, upon (a) the filing of appropriate financing statements with the Secretary of State of the state of incorporation or organization for each Loan Party, the filing of appropriate assignments or notices with the United States Patent and Trademark Office and the United States Copyright Office, in each case in favor of the Administrative Agent, on behalf of the Lenders, (b) the filing of appropriate documents with each corporate, intellectual property, real estate or other public register in the applicable Relevant Jurisdictions, (c) delivery of notices of charge, assignment or other Liens to third parties and (d) the Administrative Agent obtaining control or possession over those items of Collateral in which a security interest is perfected through control or possession) perfected security interests and Liens in favor of the Administrative Agent, for the benefit of the Secured Parties, prior to all other Liens other than Liens permitted hereunder.

5.6 Litigation; Adverse Facts; Labor Matters; Insurance.

(i) There are no Proceedings (whether or not purportedly on behalf of Company or any of its Subsidiaries) at law or in equity, or before or by any court or other Government Authority (including any Environmental Claims) that are pending or, to the knowledge of Company, threatened against or affecting Company or any of its Subsidiaries or any property of Company or any of its Subsidiaries and that, individually or in the aggregate, could reasonably be expected to result in a Material Adverse Effect. Neither Company nor any of its Subsidiaries (a) is in violation of any applicable laws (including Environmental Laws) that, individually or in the aggregate, could reasonably be expected to result in a Material Adverse Effect, or (b) is subject to or in default with respect to any final judgments, writs, injunctions, decrees, rules or regulations of any court or other Government Authority that, individually or in the aggregate, could reasonably be expected to result in a Material Adverse Effect.

(ii) Except as set forth on Schedule 5.6 as of the Closing Date, (a) there are no collective bargaining agreements covering the employees of the Loan Parties or any of their Subsidiaries as of the Closing Date and none of the Loan Parties or their Subsidiaries (I) has suffered any strikes, walkouts, work stoppages or other material labor difficulty within the last five years or (II) has knowledge of any potential or pending strike, walkout or work stoppage, (b) no unfair labor practice complaint is pending

against any Loan Party or any of its Subsidiaries and (c) there are no strikes, walkouts, work stoppages or other material labor difficulty pending or threatened against any Loan Party, in each case which could reasonably be expected to result in a Material Adverse Effect.

(iii) The insurance coverage of the Loan Parties and their Subsidiaries complies in all material respects with the requirements set forth in Section 6.4B.

5.7 Payment of Taxes.

Except to the extent permitted by subsection 6.3, all tax returns and reports of Company and its Subsidiaries required to be filed by any of them have been timely filed, and all taxes shown on such tax returns to be due and payable and all assessments, fees and other governmental charges upon Company and its Subsidiaries and upon their respective properties, assets, income, businesses and franchises that are due and payable have been paid when due and payable except where the failure to do so, individually or in the aggregate, could not reasonably be expected to result in a Material Adverse Effect. Company knows of no material proposed tax assessment against Company or any of its Subsidiaries that is not being actively contested by Company or such Subsidiary in good faith and by appropriate proceedings; provided that such reserves or other appropriate provisions, if any, as shall be required in conformity with IFRS shall have been made or provided therefor.

5.8 Performance of Agreements; Material Contracts.

Neither Company nor any of its Subsidiaries is in default in the performance, observance or fulfillment of any of the obligations, covenants or conditions contained in any of its Contractual Obligations, and no condition exists that, with the giving of notice or the lapse of time or both, would constitute such a default, except where the consequences, direct or indirect, of such default or defaults, if any, could not reasonably be expected to result in a Material Adverse Effect.

5.9 Governmental Regulation.

Neither Company nor any of its Subsidiaries is an "investment company," or an "affiliated company" or a "principal underwriter" of an "investment company" as such terms are defined in the Investment Company Act of 1940.

5.10 Securities Activities.

A. Neither Company nor any of its Subsidiaries is engaged principally, or as one of its important activities, in the business of extending credit for the purpose of purchasing or carrying any Margin Stock.

B. No part of the proceeds of the Loans made to any Borrower will be used to purchase or carry any such margin stock or to extend credit to others for the purpose of purchasing or carrying any such margin stock or for any purpose, in each case, that violates, or is inconsistent with, the provisions of Regulation T, U or X of the Board of Governors of the Federal Reserve System.

5.11 Employee Benefit Plans.

A. Company, each of its Subsidiaries and each of their respective ERISA Affiliates are in material compliance with all applicable provisions and requirements of ERISA and the regulations and published interpretations thereunder with respect to each Employee Benefit Plan that is not a Multiemployer Plan, and have performed all their material obligations under each Employee Benefit

Plan. Each Employee Benefit Plan that is intended to qualify under Section 401(a) of the Internal Revenue Code has been determined by the Internal Revenue Service to be so qualified in form, as evidenced by a current determination letter, and Company and each of its Subsidiaries and ERISA Affiliates are not aware of any facts pertaining to the operation of any such Employee Benefit Plan that would be expected to result in disqualification of any such plan.

B. No ERISA Event has occurred or is reasonably expected to occur except for such ERISA Events that could not reasonably be expected to result in a Material Adverse Effect.

C. Except to the extent required under Section 4980B of the Internal Revenue Code or except as set forth in Schedule 5.11 annexed hereto, no Employee Benefit Plan provides health or welfare benefits (through the purchase of insurance or otherwise) for any retired or former employee of Company or any of its Domestic Subsidiaries, other than Employee Benefit Plans that have been taken into account in developing the FAS 106 cost figure disclosed to Lenders.

D. As of the most recent annual valuation date for any Pension Plan, the amount of unfunded benefit liabilities (as defined in Section 4001 (a) (18) of ERISA), individually or in the aggregate for all Pension Plans (excluding for purposes of such computation any Pension Plans with respect to which assets exceed benefit liabilities), would not, were Company or its Subsidiaries to be required to immediately fund such unfunded benefit liabilities on a plan termination basis, have a Material Adverse Effect.

E. As of the most recent annual valuation date for each Multiemployer Plan for which the actuarial report is available, the potential liability of Company, its Subsidiaries and their respective ERISA Affiliates for a complete withdrawal from such Multiemployer Plan (within the meaning of Section 4203 of ERISA), when aggregated with such potential liability for a complete withdrawal from all Multiemployer Plans, based on information available pursuant to Section 4221(e) of ERISA, would not, were Company or its Subsidiaries to be required to immediately fund such liabilities, have a Material Adverse Effect.

5.12 Certain Fees.

No broker's or finder's fee or commission will be payable with respect to this Agreement or any of the transactions contemplated hereby, and each Borrower hereby indemnifies Lenders against, and agrees that it will hold Lenders harmless from, any claim, demand or liability for any such broker's or finder's fees alleged to have been incurred in connection herewith or therewith and any expenses (including reasonable fees, expenses and disbursements of counsel) arising in connection with any such claim, demand or liability.

5.13 Environmental Protection.

(i) neither Company nor any of its Subsidiaries nor any of their respective Facilities or operations are subject to any outstanding written order, consent decree or settlement agreement with any Person relating to (a) any Environmental Law, (b) any Environmental Claim, or (c) any Hazardous Materials Activity that, individually or in the aggregate, could reasonably be expected to result in a Material Adverse Effect.

(ii) neither Company nor any of its Subsidiaries has received any letter or request for information under Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. § 9604) or any comparable state law, except that have been fully resolved or are not likely to result in a Material Adverse Effect.

(iii) there are and, to Company's knowledge, have been no conditions, occurrences, or Hazardous Materials Activities that could reasonably be expected to form the basis of an Environmental Claim against Company or any of its Subsidiaries that, individually or in the aggregate, could reasonably be expected to result in a Material Adverse Effect.

(iv) Company has an environmental management system that demonstrates a commitment to environmental compliance and guides each of its Subsidiaries' operations on (a) preparing and updating written procedures covering material regulatory areas, (b) document compliance, (c) tracking changes in applicable Environmental Laws and modifying operations to comply with new requirements thereunder, (d) training employees to comply with applicable environmental requirements and updating such training as necessary, (e) investigating environmental incidents and implementing improvement actions and (f) performing regular internal compliance audits and ensuring correction of any incidents of non-compliance detected by means of such audits.

(v) compliance with all requirements pursuant to or under Environmental Laws would not, individually or in the aggregate, be reasonably expected to result in a Material Adverse Effect.

5.14 Solvency.

The Loan Parties, taken as a whole, are and, upon the incurrence of any Obligations by the Loan Parties on any date on which this representation is made, will be, (taking into account any and all rights of contribution of each Loan Party) Solvent.

5.15 Matters Relating to Collateral; Absence of Third-Party Filings.

Except such as may have been filed in favor of Administrative Agent (for the benefit of the Secured Parties) as contemplated by the Collateral Documents and to evidence permitted lease obligations and other Liens permitted pursuant to subsection 7.2A, (i) no effective UCC financing statement, fixture filing or other instrument similar in effect covering all or any part of the Collateral is on file in any filing or recording office and (ii) no effective filing covering all or any part of the IP Collateral is on file in any IP Filing Office (or any similar office in a Relevant Jurisdiction).

5.16 Disclosure.

No representation or warranty of Company or any of its Subsidiaries contained in any Loan Document or in any other document or certificate furnished (in each case as modified or supplemented by other information so furnished) to Lenders by or on behalf of Company or any of its Subsidiaries for use in connection with the transactions contemplated by this Agreement at the time furnished contains any untrue statement of a material fact or omits to state a material fact (known to Company, in the case of any document not furnished by it) necessary in order to make the statements contained herein or therein, taken as a whole, not materially misleading in light of the circumstances in which the same were made. Any projections, pro forma financial information and other written information of general economic nature contained in such materials are based upon good faith estimates and assumptions believed by Company to be reasonable at the time made, it being recognized by Lenders that (i) any such projections are subject to significant uncertainties and contingencies, many of which are beyond the Company's control, (ii) no assurance is given by the Company that such projections will be realized, and (iii) such projections as to future events are not to be viewed as facts and that actual results during the period or periods covered by any such projections may differ from the projected results and such differences may be material. As of the date hereof, there are no facts known to Company (other than effects resulting from changes of a general economic nature or in legal standards or regulatory conditions) that, individually or in the

aggregate, could reasonably be expected to result in a Material Adverse Effect and that have not been disclosed herein or in the Loan Documents.

5.17 Foreign Assets Control Regulations, etc.

To the knowledge of Company, neither the making of the Loans to, or issuance of Letters of Credit on behalf of, Company nor its use of the proceeds thereof will violate the Trading with the Enemy Act, as amended, or any of the foreign assets control regulations of the United States Treasury Department (31 CFR, Subtitle B, Chapter V, as amended) or any enabling legislation or executive order relating thereto. Without limiting the foregoing, neither Company nor any of its Subsidiaries and, to the knowledge of Company, none of its Affiliates (a) is (or will become) a Sanctioned Person or (b) engages or will engage in any dealings or transactions, or be otherwise associated, with any Sanctioned Person in violation of any Sanctions Laws. Company and its Subsidiaries and, to the knowledge of Company, its Affiliates are in compliance, in all material respects, with the Patriot Act. None of the Loan Parties or their Subsidiaries or, to the knowledge of Company, their respective Affiliates is in violation of any Sanctions Laws.

5.18 Representations as to Foreign Obligors.

Each of Company and each other Foreign Obligor (for itself) represents and warrants to Administrative Agent and the Lenders that:

(i) Such Foreign Obligor is subject to civil and commercial laws with respect to its obligations under this Agreement and the other Loan Documents to which it is a party (collectively as to such Foreign Obligor, the "**Applicable Foreign Obligor Documents**"), and the execution, delivery and performance by such Foreign Obligor of the Applicable Foreign Obligor Documents constitute and will constitute private and commercial acts and not public or governmental acts. Neither such Foreign Obligor nor any of its property has any immunity from jurisdiction of any court or from any legal process (whether through service or notice, attachment prior to judgment, attachment in aid of execution, execution or otherwise) under the laws of the jurisdiction in which such Foreign Obligor is organized and existing in respect of its obligations under the Applicable Foreign Obligor Documents.

(ii) The Applicable Foreign Obligor Documents are in proper legal form under the laws of the jurisdiction in which such Foreign Obligor is organized and existing for the enforcement thereof against such Foreign Obligor under the Laws of such jurisdiction, and to ensure the legality, validity, enforceability, priority or admissibility in evidence of the Applicable Foreign Obligor Documents. It is not necessary to ensure the legality, validity, enforceability, priority or admissibility in evidence of the Applicable Foreign Obligor Documents that the Applicable Foreign Obligor Documents be filed, registered or recorded with, or executed or notarized before, any court or other authority in the jurisdiction in which such Foreign Obligor is organized and existing or that any registration charge or stamp or similar tax or duty be paid on or in respect of the Applicable Foreign Obligor Documents or any other document, except for (x) any such filing, registration, recording, execution or notarization as has been made or will be made in accordance with this Agreement or is not required to be made until the Applicable Foreign Obligor Document or any other document is sought to be enforced and (y) any charge, duty or tax as has been timely paid.

(iii) There is no tax, levy, impost, duty, fee, assessment or other governmental charge, or any deduction or withholding, imposed by any Government Authority in or of the jurisdiction in which such Foreign Obligor is organized and existing either (x) on or by virtue of the execution or delivery of the Applicable Foreign Obligor Documents or (y) on any payment to be made by such Foreign Obligor

pursuant to the Applicable Foreign Obligor Documents; or (z) the transfer of title, ownership or the enforcement of any Lien under, or in respect of any asset secured pursuant to, the Collateral Documents.

(iv) For the purposes of the Council Regulation (EC) N° 1346/2000 of 29 May 2000 on insolvency proceedings (the "EU Regulation") or, for insolvency proceedings opened after 26 June 2017, Regulation (EU) 2015/848 of the European Parliament and of the Council of 20 May 2015 on insolvency proceedings (recast) (the "Regulation (recast)")), in relation to any Foreign Obligor which is incorporated in a member state of the European Union, such Foreign Obligor's center of main interest (as that term is used in Article 3(1) of the EU Regulation or, for insolvency proceedings opened after 26 June 2017, the Regulation (recast)) is situated in its jurisdiction of incorporation and it has no "establishment" (as that term is used in Article 2(h) of the EU Regulation or, for insolvency proceedings opened after 26 June 2017, in article 2, point (10) of the Regulation (recast)) in any jurisdiction other than its jurisdiction of incorporation.

5.19 Senior Debt Status; No Burdensome Restrictions.

The Obligations constitute "Senior Indebtedness", "Designated Senior Indebtedness" or any similar designation under and as defined in any agreement governing any subordinated indebtedness and the subordination provisions set forth in each such agreement are legally valid and enforceable against the parties thereto. None of the Loan Parties or their Subsidiaries is a party to any agreement or instrument or subject to any other obligation or any charter or corporate restriction or any provision of any applicable law, rule or regulation which, individually or in the aggregate, could reasonably be expected to have a Material Adverse Effect.

5.20 Employee Matters.

(i) Neither Company nor any of its Subsidiaries is engaged in any unfair labor practice that could reasonably be expected to have a Material Adverse Effect.

(ii) There is (a) no unfair labor practice complaint pending against Company or any of its Subsidiaries, or to the best knowledge of Company, threatened against any of them before an ombudsman, works council or other tribunal in any Relevant Jurisdiction, and no grievance or arbitration proceeding arising out of or under any collective bargaining agreement that is so pending against Company or any of its Subsidiaries or to the best knowledge of Company, threatened against any of them, (b) no strike or work stoppage in existence, or to the best knowledge of Company, threatened involving Company or any of its Subsidiaries, and (c) to the best knowledge of Company, no union representation question existing with respect to the employees of Company or any of its Subsidiaries and, to the best knowledge of Company, no union organization activity that is taking place, except (with respect to any matter specified in clause (a), (b) or (c) above, either individually or in the aggregate) such as is not reasonably likely to have a Material Adverse Effect.

SECTION 6. COMPANY'S AFFIRMATIVE COVENANTS

Company covenants and agrees that, so long as any of the Commitments hereunder shall remain in effect and until payment in full of all of the Loans and other Obligations (other than (x) Unasserted Obligations and (y) obligations and liabilities under Secured Cash Management Agreements and Secured Hedge Agreements) and the cancellation or expiration of all Letters of Credit (other than Letters of Credit as to which other arrangements with respect thereto satisfactory to Administrative Agent and Issuing Bank shall have been made), unless Requisite Lenders shall otherwise give prior written consent,

Company shall perform, and shall cause each of its Subsidiaries to perform, all covenants in this Section 6.

6.1 Financial Statements and Other Reports.

Company will maintain, and cause each of its Subsidiaries to maintain, a system of accounting established and administered in accordance with sound business practices to permit preparation of financial statements in conformity with IFRS. Company will deliver to Administrative Agent for the benefit of Lenders:

(i) Events of Default, etc.: promptly upon any officer of Company obtaining knowledge (a) of any condition or event that constitutes an Event of Default or Potential Event of Default, or becoming aware that any Lender has given any notice (other than to Administrative Agent) or taken any other action with respect to a claimed Event of Default or Potential Event of Default or (b) of the occurrence of any event or change that has caused or evidences, either in any case or in the aggregate, a Material Adverse Effect, an Officer's Certificate specifying the nature and period of existence of such condition, event or change, or specifying the notice given or action taken by any such Person and the nature of such claimed Event of Default, Potential Event of Default, event or condition, and what action Company has taken, is taking and proposes to take with respect thereto;

(ii) Quarterly Financials: as soon as available and in any event within forty-five (45) days after the end of each Fiscal Quarter, copies of the unaudited condensed consolidated and consolidating balance sheet of Company and its Subsidiaries as at the end of such Fiscal Quarter and the related unaudited condensed consolidated and consolidating statements of income and cash flows of Company and its Subsidiaries for such Fiscal Quarter (with respect to condensed consolidated and consolidating statements of income) and for the period from the beginning of the then current Fiscal Year to the end of such Fiscal Quarter, setting forth in each case in comparative form the corresponding figures for the corresponding periods of the previous Fiscal Year, all in reasonable detail and (a) certified by the chief financial officer of Company that they fairly present, in all material respects, the financial condition of Company and its Subsidiaries as at the dates indicated and the results of their operations and their cash flows for the periods indicated, prepared in accordance with IFRS and (b) including management discussion and analysis of operating results inclusive of operating metrics in comparative form;

(iii) Year-End Financials: as soon as available and in any event (a) upon the earlier of (A) one-hundred twenty (120) days after the end of each Fiscal Year (beginning with the Fiscal Year ending December 31, 2015) and (B) the filing of Company's Form 20-F for such Fiscal Year with the Securities and Exchange Commission of the United States, the consolidated balance sheet of Company and its Subsidiaries as at the end of such Fiscal Year and the related consolidated statements of income and cash flows of Company and its Subsidiaries for such Fiscal Year, setting forth in each case in comparative form the corresponding figures for the previous Fiscal Year, all in reasonable detail and certified by the chief financial officer of Company that they fairly present, in all material respects, the financial condition of Company and its Subsidiaries as at the dates indicated and the results of their operations and their cash flows for the periods indicated, (b) within one-hundred twenty (120) days after the end of each Fiscal Year (beginning with the Fiscal Year ending December 31, 2015) the consolidated and consolidating balance sheet of the Company and its Subsidiaries as at the end of such Fiscal Year and the related consolidated and consolidating statements of income and cash flows of the Company and its Subsidiaries for such Fiscal Year, setting forth in each case in comparative form the corresponding figures for the previous Fiscal Year, all in reasonable detail and certified by the chief financial officer of the Company that they fairly present, in all material respects, the financial condition of the Company and its Subsidiaries as at the dates indicated and the results of their operations and their cash flows for the periods indicated (which shall include bridge financial statements to the audited statements delivered

pursuant to clause (a)), and (c) in connection with the delivery of the financial statements referred to in clause (a), a report thereon of an independent registered public accounting firm of recognized national standing selected by Company, which report shall be unqualified, shall express no doubts, assumptions or qualifications (whether in the opinion itself or in any explanatory paragraph within such report) concerning the ability of Company and its Subsidiaries to continue as a going concern, and shall state that such consolidated and consolidating financial statements fairly present, in all material respects, the consolidated and consolidating financial position of Company and its Subsidiaries as at the dates indicated and the results of their operations and their cash flows for the periods indicated prepared in accordance with International Financial Reporting Standards (except as otherwise disclosed in such financial statements) and that the examination by such accountants in connection with such consolidated and consolidating financial statements has been made in accordance with standards of the Public Company Accounting Oversight Board (United States); provided that posting of such information on the EDGAR Website shall constitute delivery for purposes of this subsection 6.1(iii) to the extent such posting provides all information required by this clause (iii) including consolidating financial statements;

(iv) Compliance Certificates: together with each delivery of financial statements pursuant to subdivision (ii) above, (a) an Officer's Certificate of Company stating that the signers have reviewed the terms of this Agreement and have made, or caused to be made under their supervision, a review in reasonable detail of the transactions and condition of Company and its Subsidiaries during the accounting period covered by such financial statements and that such review has not disclosed the existence during or at the end of such accounting period, and that the signers do not have knowledge of the existence as at the date of such Officer's Certificate, of any condition or event that constitutes an Event of Default or Potential Event of Default, or, if any such condition or event existed or exists, specifying the nature and period of existence thereof and what action Company has taken, is taking and proposes to take with respect thereto; (b) a Compliance Certificate (which delivery may, unless Administrative Agent, or a Lender requests executed originals, be by electronic communication including fax or electronic mail and shall be deemed to be an original authentic counterpart thereof for all purposes) (1) demonstrating in reasonable detail compliance during and at the end of the applicable accounting periods with the financial covenants contained in Section 7.6, in each case to the extent compliance with such restrictions is required to be tested at the end of the applicable accounting period and (2) which shall include the amount of all Restricted Junior Payments made pursuant to subsection 7.5(vi) during the applicable accounting period; and (c) a certificate of the Company demonstrating in reasonable detail that the Aggregate Sales Percentage as of the end of the applicable period was not less than 80% and the Aggregate Asset Percentage as of the end of the applicable period was not less than 70%.

(v) Reconciliation Statements: if, as a result of any change in accounting principles and policies from those used in the preparation of the audited financial statements referred to in subsection 5.3 (including any determination by Company referred to in the last paragraph of subsection 2.2(A)), the consolidated financial statements of Company and its Subsidiaries delivered pursuant to subdivisions (ii), (iii) or (xi) of this subsection 6.1 will differ in any material respect from the consolidated financial statements that would have been delivered pursuant to such subdivisions had no such change in accounting principles and policies been made, then, if requested (and to the extent requested) by Administrative Agent in the exercise of its reasonable credit judgment, (a) together with the first delivery of financial statements pursuant to subdivision (ii), (iii) or (xi) of this subsection 6.1 following such change, consolidated financial statements (or the relevant portions thereof) of Company and its Subsidiaries for (y) the current Fiscal Year to the effective date of such change and (z) the two full Fiscal Years immediately preceding the Fiscal Year in which such change is made, in each case prepared on a pro forma basis as if such change had been in effect during such periods, and (b) together with each delivery of financial statements pursuant to subdivision (ii), (iii) or (xi) of this subsection 6.1 following such change, if required pursuant to subsection 1.2, a written statement of the chief accounting officer or chief financial officer of Company setting forth the differences (including any differences that would

affect any calculations relating to the financial covenants set forth in subsection 7.6) which would have resulted if such financial statements had been prepared without giving effect to such change;

(vi) Accountants' Reports: promptly upon receipt thereof (unless restricted by applicable professional standards), copies of all material reports submitted to Company by the independent registered public accounting firm in connection with each annual, interim or special audit of the financial statements of Company and its Subsidiaries made by such independent registered public accounting firm, including any comment letter submitted by such independent registered public accounting firm to management in connection with their annual audit;

(vii) Public Filings and Press Releases: promptly upon their becoming available, copies of (a) all financial statements, reports, notices and proxy statements sent or made available generally by Company to its security holders or by any Subsidiary of Company to its security holders other than Company or another Subsidiary of Company, (b) all regular and periodic reports and all registration statements (other than on Form S-8 or a similar form) and prospectuses, if any, filed by Company or any of its Subsidiaries with any securities exchange or with the Securities and Exchange Commission or any governmental or private regulatory authority, (c) all press releases and other statements made available generally by Company or any of its Subsidiaries to the public concerning material developments in the business of Company or any of its Subsidiaries, and (d) any earnings announcement or similar statement of the Company and its Subsidiaries made available generally by the Company or any of its Subsidiaries to the public; provided that posting of such information on the EDGAR Website (or, in the case of press releases, posting on Company's website on the Internet at the website address www.glbsm.com, www.ferroglobe.com or another website address provided by Company in a written notice to Administrative Agent) shall constitute delivery for purposes of this subsection 6.1(vii);

(viii) Litigation or Other Proceedings: within fifteen (15) Business Days of any Officer of Company obtaining knowledge of (1) the institution of, or non-frivolous written threat of, any Proceeding against or affecting Company or any of its Subsidiaries or any property of Company or any of its Subsidiaries not previously disclosed in writing by Company to Administrative Agent or (2) any material development in any Proceeding that, in any case:

(x) if adversely determined, after giving effect to the coverage and policy limits of insurance policies issued to Company and its Subsidiaries could reasonably be expected to result in a Material Adverse Effect; or

(y) seeks to enjoin or otherwise prevent the consummation of, or to recover any damages or obtain relief as a result of, the transactions contemplated hereby;

written notice thereof together with such other information as may be reasonably available to Company to enable Lenders and their counsel to evaluate such matters;

(x) ERISA Events: promptly upon an Officer becoming aware of the occurrence of or forthcoming occurrence of any ERISA Event which could reasonably be expected to result in a Material Adverse Effect, a written notice specifying the nature thereof, what action Company, any of its Subsidiaries or any of their respective ERISA Affiliates has taken, is taking or proposes to take with respect thereto and, when known, any action taken or threatened by the Internal Revenue Service, the Department of Labor or the PBGC with respect thereto;

(xi) ERISA Notices: with reasonable promptness, copies of (a) all notices received by Company, any of its Subsidiaries or any of their respective ERISA Affiliates from a Multiemployer Plan sponsor concerning an ERISA Event which could reasonably be expected to result in a Material Adverse

Effect; and (b) copies of such other documents or governmental reports or filings relating to any Employee Benefit Plan as Administrative Agent shall reasonably request;

(xii) Financial Plans: promptly after approved by the Company's board of directors and in any event no later than 60 days after the beginning of each Fiscal Year, projections of Company and its Subsidiaries prepared on a monthly basis for such Fiscal Year, in substantially the same form and substance as the projections delivered to Administrative Agent prior to the Closing Date;

(xiii) New Subsidiaries: (a) immediately upon any Person becoming a Material Subsidiary of Company after the Closing Date and (b) with respect to any other Subsidiaries of the Company formed after the date hereof, concurrently with the delivery of the financial statements referenced in subsections 6.1(ii) and 6.1(iii), a written notice setting forth with respect to such Person (x) the date on which such Person became a Subsidiary of Company and (y) all of the data required to be set forth in Schedule 5.1 annexed hereto with respect to all Subsidiaries of Company (it being understood that such written notice shall be deemed to supplement Schedule 5.1 annexed hereto for all purposes of this Agreement);

(xiv) Patriot Act, Etc.: with reasonable promptness, information to confirm compliance with the representations contained in subsection 5.17 reasonably requested by any Lender through Administrative Agent;

(xv) Senior Notes: promptly, any notices of (A) material events given to the holders of the Senior Notes and (B) any amendments, modifications or waivers to the Senior Notes or the Senior Note Indenture;

(xvi) Monthly Financials: as soon as available and in any event within forty-five (45) days after the end of each fiscal month (other than any fiscal month that is the last fiscal month of any Fiscal Quarter and/or Fiscal Year), copies of the unaudited condensed consolidated balance sheet of Company and its Subsidiaries as at the end of such month and the related unaudited condensed consolidated statements of income of Company and its Subsidiaries for such month and for the period from the beginning of the then current Fiscal Year to the end of such month, setting forth in each case (beginning with the monthly statements for March 2018) in comparative form the corresponding figures for the corresponding periods of the previous year, all in reasonable detail, certified by the chief financial officer of Company that they fairly present, in all material respects, the financial condition of Company and its Subsidiaries as at the dates indicated and the results of their operations for the periods indicated, prepared in accordance with IFRS;

(xvii) Conference Call. if requested by any of the Lenders, within ten (10) days of the delivery of the quarterly financial statements referred to in Section 6.1(ii), the management of the Company shall host a conference call for the Lenders to discuss such financial statements. No fewer than three days prior to each conference call, the Company shall notify the Lenders of the time and date of such conference call and shall provide each Lender with access instructions to such conference call; and

(xviii) Other Information: with reasonable promptness, such other information with respect to the operation, business affairs and financial condition of Company or any of its Subsidiaries as from time to time may be reasonably requested by any Lender acting through Administrative Agent.

6.2 Existence, Etc.

Except as permitted under subsection 7.7, Company will, and will cause each of its Subsidiaries to, at all times preserve and keep in full force and effect its existence in the jurisdiction of organization specified on Schedule 5.1 and all rights and franchises material to its business; provided, however that

neither Company nor any of its Subsidiaries shall be required to preserve any such right or franchise if Company or such Subsidiary shall determine that the preservation thereof is no longer desirable in the conduct of the business of Company or such Subsidiary, as the case may be, and that the loss thereof would not in the aggregate have a Material Adverse Effect.

6.3 Payment of Taxes and Claims; Tax.

A. Company will, and will cause each of its Subsidiaries to, pay all material taxes, assessments and other material governmental charges imposed upon it or any of its properties or assets or in respect of any of its income, businesses or franchises before any penalty accrues thereon, and all claims (including claims for labor, services, materials and supplies) for sums that have become due and payable and that by law have or may become a Lien upon any of its properties or assets, prior to the time when any penalty or fine shall be incurred with respect thereto; provided that no such tax, assessment, charge or claim need be paid if (x) it is being contested in good faith by appropriate proceedings, so long as (i) such reserve or other appropriate provision, if any, as shall be required in conformity with IFRS shall have been made therefor and (ii) in the case of a tax, assessment, charge or claim which has or may become a Lien against any of the Collateral, such proceedings conclusively operate to stay the sale of any portion of the Collateral to satisfy such charge or claim or (y) the failure to pay could not reasonably be expected to have, either individually or in the aggregate, a Material Adverse Effect.

B. Company will not, nor will it permit any of its Subsidiaries to, file or consent to the filing of any consolidated income tax return with any Person (other than Company or any of its Subsidiaries).

6.4 Maintenance of Properties; Insurance.

A. Maintenance of Properties. Company will, and will cause each of its Subsidiaries to, maintain or cause to be maintained in good repair, working order and condition, ordinary wear and tear excepted, all material tangible properties used or useful in the business of Company and its Subsidiaries and from time to time will make or cause to be made all appropriate repairs, renewals and replacements thereof all as in the judgment of Company or such Subsidiary may be necessary so that the business carried on in connection therewith may be properly conducted at all times; provided that nothing in this subsection 6.4A shall prevent (i) Company or any of its Subsidiaries from discontinuing the operation and maintenance of any of its tangible properties if such discontinuance is, in the judgment of Company or such Subsidiary, desirable in the conduct of its business and that does not in the aggregate have a Material Adverse Effect or (ii) any Company or any of its Subsidiaries from consummating any transaction permitted by this Agreement.

B. Insurance. Company will maintain or cause to be maintained, with financially sound and reputable insurers, such public liability insurance, third party property damage insurance, business interruption insurance and casualty insurance with respect to liabilities, losses or damage in respect of the assets, properties and businesses of Company and its Subsidiaries as may customarily be carried or maintained under similar circumstances by Persons of established reputation engaged in similar businesses, in each case in such amounts (giving effect to self-insurance), with such deductibles, covering such risks and otherwise on such terms and conditions as shall be customary for such Persons. Without limiting the generality of the foregoing, Company will maintain or cause to be maintained replacement value casualty insurance on the Collateral under such policies of insurance, with such insurance companies, in such amounts, with such deductibles, and covering such risks as are at all times carried or maintained under similar circumstances by Persons of established reputation engaged in similar businesses. Each such policy of insurance shall (a) name Administrative Agent for the benefit of Lenders as an additional insured thereunder as its interests may appear with respect to liabilities of the Loan Parties and (b) in the case of each casualty insurance policy, contain a loss payable clause or

endorsement, reasonably satisfactory in form and substance to Administrative Agent, that names Administrative Agent for the benefit of Lenders as the loss payee thereunder for any covered loss with respect to the properties of the Loan Parties in excess of $5,000,000 and provides for at least 30 days prior written notice to Administrative Agent of any modification or cancellation of such policy. In connection with the renewal of each such policy of insurance, Company promptly shall deliver to Administrative Agent a certificate from Company's insurance broker or other evidence reasonably satisfactory to Administrative Agent that Administrative Agent on behalf of Lenders has been named as additional insured and/or loss payee thereunder, to the extent provided above.

6.5 Inspection Rights; Lender Meeting.

A. Inspection Rights. Subject to requirements of applicable law and to the rights of tenants or licensees of such property, Company shall, and shall cause each of its Subsidiaries to, permit Lenders, through Administrative Agent or its designated representatives or, after the occurrence and during the continuance of an Event of Default, any authorized representatives designated by any Lender to visit and inspect any of the properties of Company or of any of its Subsidiaries, to inspect, copy and take extracts from its and their financial and accounting records and shareholder or debt instruments registers (provided, that such information shall be handled in accordance with subsection 10.18 hereof), and to discuss its and their affairs, finances and accounts with its and their officers and independent public accountants (provided that Company may, if it so chooses, be present at or participate in any such discussion), all upon reasonable notice and at such reasonable times during normal business hours not more than once in any Fiscal Year or at any time or from time to time following the occurrence and during the continuation of an Event of Default.

B. Lender Meeting. Company will, upon the request of Administrative Agent or Requisite Lenders, participate in a meeting of Administrative Agent and Lenders once during each Fiscal Year to be held at Company's principal offices (or at such other location as may be agreed to by Company and Administrative Agent) at such time as may be agreed to by Company and Administrative Agent.

6.6 Compliance with Laws, etc.

Company shall comply, and shall cause each of its Subsidiaries to comply, with the requirements of all applicable laws, rules, regulations and orders of any Government Authority (including all Environmental Laws, Anti-Corruption Laws and Sanctions Laws), except where noncompliance could not reasonably be expected to result in a Material Adverse Effect.

6.7 Environmental Matters.

A. Environmental Disclosure. Company will deliver to Administrative Agent and Lenders:

(i) Environmental Audits and Reports. As soon as practicable following receipt thereof, copies of all material environmental audits, investigations, analyses and reports of any kind or character, whether prepared by personnel of Company or any of its Subsidiaries or by independent consultants, Government Authorities or any other Persons, with respect to significant environmental matters at any Facility that, individually or in the aggregate, could reasonably be expected to result in a Material Adverse Effect or with respect to any Environmental Claims that, individually or in the aggregate, could reasonably be expected to result in a Material Adverse Effect.

(ii) Notice of Certain Releases, Remedial Actions, Etc. Promptly upon the occurrence thereof, written notice describing in reasonable detail (a) any remedial action taken by Company or any other Person in response to (1) any Hazardous Materials Activities the existence of which could reasonably be expected to result in one or more Environmental Claims having, individually or in the aggregate, a Material Adverse Effect, or (2) any Environmental Claims that, individually or in the aggregate, could reasonably be expected to result in a Material Adverse Effect, and (b) Company's discovery of any occurrence or condition on any real property adjoining or in the vicinity of any Facility that could cause such Facility or any part thereof to be subject to any material restrictions on the ownership, occupancy, transferability or use thereof under any Environmental Laws that could reasonably be expected to have a Material Adverse Effect.

(iii) Written Communications Regarding Environmental Claims, Releases, Etc. As soon as practicable following the sending or receipt thereof by Company or any of its Subsidiaries regarding any matter that, individually or in the aggregate, could reasonably be expected to result in a Material Adverse Effect, a copy of any and all written communications with respect to (a) any Environmental Claims, (b) any Release required to be reported to any Government Authority, and (c) any request for information from any Government Authority that suggests such Government Authority is investigating whether Company or any of its Subsidiaries may be potentially responsible for any Hazardous Materials Activity.

(iv) Notice of Certain Proposed Actions Having Environmental Impact. Prompt written notice describing in reasonable detail (a) any proposed acquisition of stock, assets, or property by Company or any of its Subsidiaries that could reasonably be expected to (1) expose Company or any of its Subsidiaries to, or result in, Environmental Claims that could reasonably be expected to result in, individually or in the aggregate, a Material Adverse Effect or (2) affect the ability of Company or any of its Subsidiaries to maintain in full force and effect all material Governmental Authorizations required under any Environmental Laws for their respective operations of which the failure to maintain could reasonably be expected to result in, individually or in the aggregate, a Material Adverse Effect and (b) any proposed action to be taken by Company or any of its Subsidiaries to modify current operations in a manner that could reasonably be expected to subject Company or any of its Subsidiaries to any additional obligations or requirements under any Environmental Laws that could reasonably be expected to result in, individually or in the aggregate, a Material Adverse Effect.

B. Company's Actions Regarding Hazardous Materials Activities, Environmental Claims and Violations of Environmental Laws.

Company shall as promptly as practicable under the circumstances take, and shall cause each of its Subsidiaries promptly to take, any and all actions necessary to (i) cure any violation of applicable Environmental Laws by Company or its Subsidiaries that could reasonably be expected to result in, individually or in the aggregate, a Material Adverse Effect and (ii) make an appropriate response to any Environmental Claim against Company or any of its Subsidiaries and discharge any obligations it may have to any Person thereunder where failure to do so could reasonably be expected to result in, individually or in the aggregate, a Material Adverse Effect; provided, that nothing in this subsection shall preclude Company from (x) contesting in good faith such alleged violations of applicable Environmental Laws or (y) asserting reasonable defenses to such Environmental Claims.

6.8 Execution of Subsidiary Guaranty and Personal Property Collateral Documents After the Closing Date.

Subject, in all cases, to the Agreed Guaranty Principles and the Agreed Security Principles:

A. Execution of Subsidiary Guaranty and Personal Property Collateral Documents. In the event that any Subsidiary of Company existing on the Closing Date that has not previously executed the Subsidiary Guaranty hereafter becomes a Material Domestic Subsidiary, or in the event that any Person becomes a Material Domestic Subsidiary of Company after the date hereof, and, in each case, such Subsidiary is not prohibited from guaranteeing or providing security for the Obligations by either (x) applicable law or (y) solely with respect to (i) a Person that becomes a Subsidiary of Company after the Closing Date pursuant to (a) a Permitted Acquisition or (b) an Investment in a Joint Venture (provided that such Investment is permitted pursuant to subsection 7.3 hereof) or (ii) Subsidiaries of Company on the Closing Date that are not Material Subsidiaries, legally valid contractual restrictions (that, in the case of clause (i)(a) above, existed prior to the date of such Permitted Acquisition and were not created in anticipation of such acquisition or, in the case of clause (ii) above, existed on the Closing Date), Company will promptly notify Administrative Agent of that fact and cause such Material Domestic Subsidiary (other than a Material Domestic Subsidiary of Globe that is also a Foreign Corporation or is a Subsidiary of a Foreign Corporation) to execute and deliver to Administrative Agent a counterpart of the Subsidiary Guaranty and the Security Agreement and to take all such further actions and execute all such further documents and instruments (including actions, documents and instruments comparable to those described in subsection 4.1J) as may be necessary or, in the reasonable opinion of Administrative Agent, desirable to create in favor of Administrative Agent, for the benefit of the Secured Parties, a valid and perfected First Priority Lien on all of the personal and mixed property assets of such Material Domestic Subsidiary described in the applicable forms of Collateral Documents. In addition, as provided in the Security Agreement, Company shall, or shall cause the Subsidiary that owns the Capital Stock of such Material Domestic Subsidiary (provided that the pledge of the Capital Stock of such Subsidiary is not prohibited by (x) applicable law or, (y) solely with respect to (i) a Person that becomes a Subsidiary of Company after the Closing Date pursuant to (a) a Permitted Acquisition or (b) an Investment in a Joint Venture (provided that such Investment is permitted pursuant to subsection 7.3 hereof) or (ii) Subsidiaries of Company on the Closing Date that are not Material Subsidiaries, legally valid contractual restrictions (that, in the case of clause (i)(a) above, existed prior to the date of such Permitted Acquisition and were not created in anticipation of such acquisition or, in the case of clause (ii) above, existed on the Closing Date), to, execute and deliver to Administrative Agent a supplement to the Security Agreement and to deliver to Administrative Agent all certificates representing such Capital Stock of such Material Domestic Subsidiary (or, in the case of a Material Domestic Subsidiary of Globe that is also a Foreign Corporation, 65% of the Capital Stock of such Subsidiary), accompanied by irrevocable undated stock powers, duly endorsed in blank.

Notwithstanding anything to the contrary contained herein:

(a) any Person that is a borrower or a guarantor under the Senior Notes (including the French Subsidiary, GFA SAU and the Spanish Subsidiary) shall be required to become a Subsidiary Guarantor hereunder and pledge certain assets as Collateral pursuant to the guaranty and collateral requirements set forth in this Section 6.8A, subject to the Agreed Guaranty Principles and the Agreed Security Principles, and in relation to GFA SAU and the Spanish Subsidiary, and the French Subsidiary, subject to the limitations set out in Sections 6.8A(d) and 6.8A(e), respectively,

(b) as soon as reasonably practicable after the Third Amendment Effective Date and in any event on or prior to the earlier of June 30, 2017 (or such later date as agreed by the Administrative Agent) and the date falling 60 days after the earlier of (i) the date on which the Company completes the Energy Sale and (ii) the date on which the Energy Sale is terminated, either (x) an entity acquired or formed by the Company or one of its Subsidiaries for purposes of consummating the Energy Sale, which entity will hold assets that are unrelated to the hydro-electric operations of Company (in the event that the

Energy Sale is completed) or (y) FerroAtlántica S.A., a company organized in Spain (in the event that the Energy Sale is not consummated prior to such date), as applicable (such entity, the "Spanish Subsidiary"), shall be required to become a Subsidiary Guarantor hereunder and pledge certain assets as Collateral pursuant to the guaranty and collateral requirements set forth in this Section 6.8A (or enter into such other arrangements acceptable to the Administrative Agent to provide credit and collateral support),

(c) in no event shall (i) the Aggregate Sales Percentage be less than 80% at any time or (ii) the Aggregate Asset Percentage be less than 70% at any time, it being understood and agreed that, the Company shall cause additional Subsidiaries (other than any Subsidiary that is a Joint Venture that is restricted from becoming a Subsidiary Guarantor pursuant to the terms of the applicable joint venture agreement) to become Subsidiary Guarantors and pledge certain assets as Collateral to the extent necessary to comply with this clause (c) within sixty (60) days (or such longer period as agreed to by the Administrative Agent in its sole discretion) after such percentages are not satisfied; provided that, FerroPem and GFA SAU shall be included in such calculations from the Third Amendment Effective Date until 60 days following the Third Amendment Effective Date (or such longer period as agreed to by the Administrative Agent in its sole discretion), and

(d) Limitations on obligations of Foreign Subsidiary Guarantor incorporated in Spain:

Notwithstanding the foregoing and any other provisions of this Agreement, the obligations and liabilities of any Foreign Subsidiary Guarantor incorporated in Spain under this Clause 6 or any other provision of this Agreement, shall be deemed not to be assumed by such Foreign Subsidiary Guarantor incorporated in Spain to the extent that they constitute or may constitute unlawful financial assistance within the meaning of article 150 of the Spanish Companies Law (where the company is a Spanish public company (*Sociedad Anónima*)) or article 143 of the Spanish Companies Law (where the company is a Spanish limited liability company (*Sociedad de Responsabilidad Limitada*)). Accordingly, the obligations and liabilities of any Foreign Subsidiary Guarantor incorporated in Spain under this Clause 6 or any other provision of this Agreement shall not include and shall not be extended to any repayment obligations in respect of financing used in or towards the payment of or refinancing of the purchase price or subscription for the shares or quotas in the Foreign Subsidiary Guarantor incorporated in Spain and/or the acquisition of or subscription for the shares or quotas in its controlling corporation directly or indirectly (or, where the company is a Spanish limited liability company (*Sociedad de Responsabilidad Limitada*), of any company of its group). The guarantee, indemnity and other obligations of any Foreign Subsidiary Guarantor incorporated in Spain incorporated as a Spanish limited liability company (*Sociedad de Responsabilidad Limitada*) expressed to be assumed by it under the guarantee of any Foreign Subsidiary Guarantor incorporated in Spain shall not include and shall not extend to any obligations which could reasonably be expected to result in a breach of article 401 of the Spanish Capital Companies Act, and

(e) French Guaranty limitations:

(i) In the case of a Foreign Subsidiary Guarantor incorporated in France (a "French Guarantor"), its obligations under the French Guaranty and any Loan Document shall apply only insofar as required to:

(A) guarantee the payment obligations under the Loan Documents of its direct or indirect Subsidiaries which are or become a Loan Party from time to time under this Agreement and which are incurred by those Subsidiaries as Borrowers (if they are not French Loan Parties) or as Borrowers and/or Foreign Subsidiary Guarantors (if they are French Loan Parties); and

(B) guarantee the payment obligations of other Borrowers or Subsidiary Guarantors which are not direct or indirect Subsidiaries of such French Guarantor, provided that in such case such guarantee shall (1) be limited to the payment obligations of all such other Borrowers or Subsidiary Guarantors under the Loan Documents and (2) not exceed an amount equal to the aggregate of all amounts borrowed by such other Borrowers or Subsidiary Guarantors under this Agreement (either directly in their capacity as Borrowers or indirectly by way of intra group loan(s) made to such other Borrowers or Subsidiary Guarantors directly or indirectly by any other Borrower(s)) and (without double counting) on-lent to such French Guarantor by way of intra-group loan(s), directly or indirectly from such other Borrowers or Subsidiary Guarantors and outstanding from time to time (such amount being the "Maximum Guaranteed Amount").

(ii) Any payment made by a French Guarantor under paragraph (i)(B) above shall reduce pro tanto the outstanding amount of the intra-group loans due by such French Guarantor to that Borrower or Subsidiary Guarantor under the intra-group loans referred to in that paragraph.

(iii) For the avoidance of doubt, any payment made by a French Guarantor in respect of the payment obligations of a Borrower or a Subsidiary Guarantor referred to in paragraph (i)(B) above shall reduce the relevant Maximum Guaranteed Amount. Notwithstanding any other provision of this Section 6.8 A, the French Guaranty or any other Loan Documents, no French Guarantor shall secure liabilities under any Loan Document which would result in such French Guarantor not complying with French financial assistance rules as set out in article L. 225-216 of the French Commercial Code (Code de commerce) and/or would constitute a misuse of corporate assets within the meaning of article L.241-3, L.242-6 or L.244-1 of the French Commercial Code (Code de commerce) or any other applicable laws or regulations having the same effect, as interpreted by French courts.

(iv) It is acknowledged that such French Guarantor is not acting jointly and severally with the other Subsidiary Guarantors as to their obligations pursuant to the guarantee given in accordance with this Section 6.8 and any guaranty agreement.

(v) The representations and warranties made in Section 5 hereof and any covenants made by any French Guarantor shall be strictly limited to matters related to such French Guarantor and its Subsidiaries.

For the purpose of this clause, "Subsidiary" means, in relation to any company, another company which is controlled by it within the meaning of article L. 233-3 I. of the French Commercial Code (*Code de commerce*).

B. [Reserved].

C. Subsidiary Organizational Documents, Legal Opinions, Etc. Company shall deliver to Administrative Agent, together with such Loan Documents, (i) certified copies of such Subsidiary's Organizational Documents, together with, if such Subsidiary is a Domestic Subsidiary, a good standing certificate from the Secretary of State of the jurisdiction of its organization and, to the extent generally available, a certificate or other evidence of good standing as to payment of any applicable franchise or similar taxes from the appropriate taxing authority of such jurisdiction, each to be dated a recent date prior to their delivery to Administrative Agent, (ii) a certificate executed by the secretary or similar officer of such Subsidiary as to (a) the fact that the attached resolutions of the Governing Body of such Subsidiary approving and authorizing the execution, delivery and performance of such Loan Documents are in full force and effect and have not been modified or amended and (b) the incumbency and signatures of the officers of such Subsidiary executing such Loan Documents and (iii) a favorable opinion of counsel to such Subsidiary, in form and substance reasonably satisfactory to Administrative Agent and its

counsel, as to (a) the due organization and good standing of such Subsidiary, (b) the due authorization, execution and delivery by such Subsidiary of such Loan Documents, (c) the enforceability of such Loan Documents against such Subsidiary and (d) such other matters (including matters relating to the creation and perfection of Liens in any Collateral pursuant to such Loan Documents) as Administrative Agent may reasonably request, all of the foregoing to be reasonably satisfactory in form and substance to Administrative Agent and its counsel; provided, that Administrative Agent may agree in its sole discretion, that obtaining any such opinion is impossible, impractical or unreasonably burdensome or expensive, and Administrative Agent may, in its sole discretion, consent to a waiver of the delivery of any such opinion (notwithstanding any provision of subsection 10.6, in acting pursuant to the foregoing proviso, the Lenders hereby authorize Administrative Agent, in its sole discretion and from time to time, to grant such waivers).

D. Release of Guaranties, Collateral, etc. A Loan Party shall automatically be released from its obligations hereunder, under its Guaranty and the other Loan Documents to which it is a party, and any pledge of the Capital Stock of such Loan Party's Subsidiaries shall be released automatically (to the fullest extent permitted by law), upon (a) certification to the Administrative Agent that such Loan Party is no longer (i) a Material Subsidiary and (ii) after giving effect to the release of such Loan Party as a Guarantor, the Loan Parties shall be in compliance with the Aggregate Sales Percentage and Aggregate Asset Percentage requirements set forth in subsection 6.8A(c) or (b) the consummation of any transaction permitted by this Agreement as a result of which such Loan Party ceases to be a Subsidiary. In connection with any termination or release pursuant to this Section, the Administrative Agent, on behalf of the Secured Parties, shall execute and deliver (and is hereby authorized by each other Secured Party) to any Loan Party, at such Loan Party's expense, all documents that such Loan Party shall reasonably request to evidence such termination or release. In addition:

(i) FerroPem shall automatically be released from its obligations hereunder and under the French Guaranty and the French Collateral Documents, and any security interests over the Collateral granted by FerroPem shall be released automatically (to the fullest extent permitted by law) in connection with the French Hydro-electric Sale and for the avoidance of doubt, the Administrative Agent, on behalf of the Secured Parties, shall execute and deliver (and is hereby authorized by each other Secured Party) to FerroPem, at FerroPem's expense, all documents that FerroPem shall reasonably request to evidence such release; provided that, on or prior to the date falling 60 days after the completion of the French Hydro-electric Sale, either (i) FerroPem or (ii) an entity acquired or formed by the Company or one of its Subsidiaries for purposes of consummating the French Hydro-electric Sale (whichever of (i) and (ii) is the entity that will hold the assets held by FerroPem prior to the French Hydro-electric Sale other than the assets disposed of in the French Hydro-electric Sale) executes and delivers a Guaranty and the other Loan Documents to which FerroPem was a party prior to the French Hydro-electric Sale, and grants security interests over the Collateral equivalent or substantively comparable to those granted by FerroPem prior to the French Hydro-electric Sale (to the extent such Collateral has not been disposed of in connection with the French Hydro-electric Sale); and

(ii) if the Energy Sale is consummated after June 30, 2017, FerroAtlántica S.A. shall automatically be released from its obligations hereunder and under the Spanish Guaranty and the Spanish Collateral Documents, and any security interests over the Collateral granted by FerroAtlántica S.A. shall be released automatically in connection with the Energy Sale; provided that, on or prior to the date falling 60 days after the completion of the Energy Sale, the entity acquired or formed by the Company or one of its Subsidiaries for purposes of consummating the Energy Sale executes and delivers a Foreign Subsidiary Guaranty and pledges certain assets as Collateral pursuant to the guaranty and collateral requirements set forth in Section 6.8A (or enters

into such other arrangements acceptable to the Administrative Agent to provide credit and collateral support).

6.9 Deposit Accounts, Securities Accounts and Cash Management Systems.

Other than with respect to Excluded Accounts, (a) with respect to the Company and each other Domestic Obligor, the Company shall, and shall cause each Domestic Obligor to, use commercially reasonable efforts to enter into on or before the date that is 90 days following (i) the opening of such account or (ii) with respect to accounts existing on the Closing Date, the Closing Date (or, in each case, such longer time as agreed to by the Administrative Agent in its sole discretion) Control Agreements, in form and substance reasonably satisfactory to the Administrative Agent, with respect to each deposit account maintained by such Domestic Obligor (other than deposit accounts held with the Administrative Agent) and (b) with respect to each Foreign Obligor, Company shall, and shall cause each Foreign Obligor to, use commercially reasonable efforts to enter into on or before the date that is 90 days following (i) the opening of such account or (ii) with respect to accounts existing on the Third Amendment Effective Date, the Third Amendment Effective Date (or, in each case, such longer time as agreed to by the Administrative Agent in its sole discretion) Control Agreements, in form and substance reasonably satisfactory to the Administrative Agent, with respect to each deposit account maintained by such Foreign Obligor (other than deposit accounts held with the Administrative Agent) to the extent Control Agreements are customary under the laws of the applicable Relevant Jurisdiction. Unless an Event of Default has occurred and is continuing, such Loan Parties shall have access to the funds on deposit in such deposit accounts. After the occurrence and during the continuance of an Event of Default, the Administrative Agent shall be entitled to deliver a notice to any financial institution of its exercise of exclusive control over any such deposit account.

6.10 Approvals and Authorizations.

Company shall maintain all authorizations, consents, approvals and licenses from, exemptions of, and filings and registrations with, each Government Authority of any Relevant Jurisdiction, and all approvals and consents of each other Person in such jurisdiction, in each case that are material to its business except to the extent that failure to do so could not reasonably be expected to have a Material Adverse Effect.

6.11 Books and Records; Further Assurances; Post-Closing Deliveries.

A. Company shall:

(i) Keep proper books, records and accounts in which full, true and correct entries in conformity with IFRS and all Requirements of Law shall be made of all dealings and transactions in relation to its businesses and activities.

(ii) Upon the reasonable request of the Administrative Agent, promptly perform or cause to be performed any and all acts and execute or cause to be executed any and all documents for filing under the provisions of the UCC or any other Requirement of Law which are necessary or advisable to maintain in favor of the Administrative Agent, for the benefit of the Secured Parties, Liens on the Collateral that are duly perfected in accordance with the requirements of, or the obligations of the Loan Parties under, the Loan Documents and all applicable Requirements of Law.

(iii) Cause (i) any actions set forth on Schedule 6.11 annexed hereto to be taken and (ii) each document, certificate or other item set forth on such Schedule 6.11 to be delivered, in

each case within the time period specified on such Schedule 6.11 (as such time may be extended by Administrative Agent in its sole discretion) and in form and substance reasonably satisfactory to Administrative Agent.

B. Within 60 days following the Third Amendment Effective Date (or such longer period as agreed to by the Administrative Agent in its sole discretion), Administrative Agent shall have received from Company:

(i) Foreign Collateral Documents. (a) The French Guaranty and the French Collateral Documents, duly executed by the French Subsidiary or any other Subsidiary of Company which is a shareholder of the French Subsidiary, along with customary certified corporate deliverables and collateral filings required to be made at the French Subsidiary's expense in accordance with such French Collateral Documents, (b) the Spanish Guaranty and the Spanish Collateral Documents, duly executed by GFA SAU, along with customary certified corporate deliverables and collateral filings required in connection therewith, (c) evidence that the lien on the business concern (*fonds de commerce*) of FerroPem related to an agreement dated 1 August 2013 has been released, (d) in respect of the French Subsidiary, a legal opinion of counsel to the French Subsidiary as to capacity of the French Subsidiary, substantially in the form distributed to the Joint Lead Arrangers relating thereto and a legal opinion of counsel to the Joint Lead Arrangers as to enforceability and validity matters, in form and substance reasonably acceptable to the Joint Lead Arrangers relating thereto and (e) in respect of GFA SAU, a legal opinion of counsel to GFA SAU as to capacity of GFA SAU, substantially in the form distributed to the Joint Lead Arrangers relating thereto and a legal opinion of counsel to the Joint Lead Arrangers as to enforceability and validity matters, in form and substance reasonably acceptable to the Joint Lead Arrangers relating thereto.

C. Within 90 days following the Third Amendment Effective Date (or such longer period as agreed to by the Administrative Agent in its sole discretion), Administrative Agent shall have received from each applicable Domestic Obligor, in each case in form and substance reasonably satisfactory to the Joint Lead Arrangers:

(i) Closing Date Mortgages. Fully executed and notarized Mortgages, in proper form for recording in all appropriate places in all applicable jurisdictions, encumbering each Mortgaged Property;

(ii) Opinions of Local Counsel. An opinion of counsel (which counsel shall be reasonably satisfactory to Administrative Agent) in each state in which a Mortgaged Property is located with respect to the enforceability of the form(s) of Mortgages to be recorded in such state and such other matters as Administrative Agent may reasonably request;

(iii) Title Insurance. ALTA mortgagee title insurance policies (or, in respect of property located in Texas, non-ALTA policies) or unconditional commitments therefor (the **"Mortgage Policies"**) issued by the title company with respect to the Mortgaged Properties, in amounts not less than the respective amounts designated therein with respect to any particular Mortgaged Properties, insuring fee simple title to each such Mortgaged Property vested in such Loan Party and assuring Administrative Agent that the applicable Mortgages create valid and enforceable First Priority mortgage Liens on the respective Mortgaged Properties encumbered thereby, subject only to a standard survey exception, which Mortgage Policies (A) shall include an endorsement for mechanics' liens (subject to exceptions for mechanics liens appearing of record which would constitute Permitted Encumbrances and which are acceptable to Administrative Agent), for future advances under this Agreement and for any other matters

reasonably requested by Administrative Agent and (B) shall provide for affirmative insurance and such reinsurance as Administrative Agent may reasonably request;

(iv) Matters Relating to Flood Hazard Properties. (1) Evidence, which may be in the form of a letter from an insurance broker or a municipal engineer, as to whether (A) any Mortgaged Property is a Flood Hazard Property and (B) the community in which any such Flood Hazard Property is located is participating in the National Flood Insurance Program, (2) if there are any such Flood Hazard Properties, such Loan Party's written acknowledgement of receipt of written notification from Administrative Agent (A) as to the existence of each such Flood Hazard Property and (B) as to whether the community in which each such Flood Hazard Property is located is participating in the National Flood Insurance Program, and (3) in the event any such Flood Hazard Property is located in a community that participates in the National Flood Insurance Program, evidence that Company has obtained flood insurance in respect of such Flood Hazard Property to the extent required under the applicable regulations of the Board of Governors of the Federal Reserve System; and

(v) Other Real Estate Documents. With respect to each Mortgaged Property, surveys, appraisals and environmental reports as reasonably requested by and reasonably satisfactory in form and substance to Joint Lead Arrangers.

6.12 Pensions.

A. Company shall ensure that all English pension schemes operated by or maintained for the benefit of it or any of its Subsidiaries and/or any of their employees are fully funded based on the statutory funding objective under sections 221 and 222 of the Pensions Act 2004 and that no action or omission is taken by it or any of its Subsidiaries in relation to such a pension scheme which has or is reasonably likely to have a Material Adverse Effect (including, without limitation, the termination or commencement of winding-up proceedings of any such pension scheme or any Subsidiary whose Relevant Jurisdiction is England ceasing to employ any member of such a pension scheme).

B. Company shall ensure that neither it nor any of its Subsidiaries is or has been at any time an employer (for the purposes of sections 38 to 51 of the Pensions Act 2004) of an occupational pension scheme which is not a money purchase scheme (both terms as defined in the Pension Schemes Act 1993) or "connected" with or an "associate" of (as those terms are used in sections 38 or 43 of the Pensions Act 2004) such an employer.

C. Company shall deliver to the Administrative Agent at such times as those reports are prepared in order to comply with the then current statutory or auditing requirements (as applicable either to the trustees of any relevant schemes or to it or any Subsidiary), actuarial reports in relation to all pension schemes mentioned in paragraph A above.

6.13 Anti-Cash Hoarding.

If as of the last Business Day of any week following the Third Amendment Effective Date the aggregate amount of unrestricted Cash and Cash Equivalents of the Loan Parties and their Subsidiaries (excluding any Cash and Cash Equivalents held in the Energy Account on such date) exceeds $150,000,000, then the Company shall apply such amounts in excess of $150,000,000 on the following Business Day to prepay (without any premium, penalty, breakage fee or any other similar expense) the outstanding principal of the Revolving Loans (without a corresponding reduction of the Revolving Loan Commitment Amount), such that the aggregate amount of unrestricted Cash and Cash Equivalents of the Loan Parties and their Subsidiaries shall not exceed $150,000,000.

SECTION 7. COMPANY'S NEGATIVE COVENANTS

Company covenants and agrees that, so long as any of the Commitments hereunder shall remain in effect and until payment in full of all of the Loans and other Obligations (other than (x) Unasserted Obligations and (y) obligations and liabilities under Secured Cash Management Agreements and Secured Hedge Agreements) and the cancellation or expiration of all Letters of Credit (other than Letters of Credit as to which other arrangements with respect thereto satisfactory to Administrative Agent and Issuing Lender shall have been made), unless Requisite Lenders shall otherwise give prior written consent, Company shall perform, and shall cause each of its Subsidiaries to perform, all covenants in this Section 7.

7.1 Indebtedness.

Company shall not, and shall not permit any of its Subsidiaries to, directly or indirectly, create, incur, assume or guaranty, or otherwise become or remain directly or indirectly liable with respect to, any Indebtedness, except:

(i) the Obligations;

(ii) Company and its Subsidiaries may become and remain liable with respect to Contingent Obligations permitted by subsection 7.4 and, upon any matured obligations actually arising pursuant thereto, the Indebtedness corresponding to the Contingent Obligations;

(iii) Company and its Subsidiaries may become and remain liable with respect to Indebtedness in respect of Capital Leases and purchase money Indebtedness incurred in connection with the acquisition, construction, improvement or lease of equipment or fixed or capital assets in an aggregate amount not to exceed $15,000,000 at any time;

(iv) intercompany Indebtedness of (a) GFA SAU owing to the Company, and the French Subsidiary and the Spanish Subsidiary owing to GFA SAU; provided that (i) such intercompany Indebtedness shall not exceed the amounts indicated on Schedule 7.1 and (ii) any intercompany loan made to the French Subsidiary with any proceeds of Revolving Loans shall be made pursuant to the Revolver Intercompany Loan Agreement and (b) any Loan Party (other than as set forth in clause (a)) owing to any other Loan Party;

(v) Company may become and remain liable with respect to Indebtedness to any Subsidiary, and any Subsidiary of Company may become and remain liable with respect to Indebtedness to Company or any Subsidiary; provided that (a) a security interest in all such intercompany Indebtedness owing to any Loan Party shall have been granted to Administrative Agent for the benefit of Lenders and (b) if such intercompany Indebtedness described in clause (a) is evidenced by a promissory note or other instrument, such promissory note or instrument shall have been pledged to Administrative Agent in accordance with the Security Agreement; provided further , that (1) the aggregate amount of Indebtedness under this subsection 7.1(v) owing by Subsidiaries of Company that are not Loan Parties to Loan Parties shall not exceed at any one time $50,000,000 and (2) upon the occurrence and during the continuance of an Event of Default, Subsidiaries of Company that are not Loan Parties shall not be permitted to incur additional Indebtedness owing to any Loan Party pursuant to this clause (v);

(vi) Company and its Subsidiaries, as applicable, may remain liable with respect to Indebtedness outstanding on the Third Amendment Effective Date and described in Schedule 7.1 annexed hereto and any Permitted Refinancings thereof;

(vii) Indebtedness consisting of Funds Transfer and Deposit Account Liability in the ordinary course of business;

(viii) Company or a Subsidiary of Company may become and remain liable with respect to Indebtedness of any Person assumed in connection with a Permitted Acquisition and a Person that becomes a direct or indirect wholly-owned Subsidiary of Company as a result of a Permitted Acquisition may remain liable with respect to Indebtedness existing on the date of such acquisition (and, in each case, Permitted Refinancings of such Indebtedness (other than, in the case of Domestic Subsidiaries, any working capital facilities which shall be terminated within 6 months of such Permitted Acquisition)); provided that such Indebtedness is not created in anticipation of such acquisition;

(ix) Indebtedness consisting of Permitted Additional Indebtedness and any Permitted Refinancing thereof; provided that (A) no Potential Event of Default or Event of Default shall have occurred and be continuing at the time such acquisition occurs or immediately after giving effect thereto and (B) if any such Permitted Additional Indebtedness constitutes a Material Event or the Consolidated Net Leverage Ratio as of the end of the most recent Fiscal Quarter for which a Compliance Certificate has been delivered was greater than 2.75 to 1.00, Company shall have delivered to Administrative Agent an Officer's Certificate (which shall be in form and substance satisfactory to Administrative Agent and shall include detailed calculations) that demonstrates that (1) Company and its Subsidiaries shall be in Pro Forma Compliance and (2) the Consolidated Net Leverage Ratio does not exceed 2.75 to 1.00 on a Pro Forma Basis;

(x) Foreign Subsidiaries of Company may become and remain liable with respect to other Indebtedness in an aggregate principal amount not to exceed $15,000,000 at any time outstanding;

(xi) Company and its Subsidiaries may become and remain liable with respect to Indebtedness to the extent incurred pursuant to an Investment permitted by Section 7.3;

(xii) endorsements for collection, deposit or negotiation and warranties of products or services, in each case incurred in the ordinary course of business;

(xiii) Indebtedness of any Subsidiary owing to a Loan Party incurred to achieve cash repatriation strategies so long as the net cash Investment by Loan Party in connection therewith is permitted by subsection 7.3(xiii);

(xiv) Indebtedness owing to employees in connection with a non-qualified benefit plan;

(xv) Indebtedness incurred pursuant to any Cash Collateral arrangement;

(xvi) Indebtedness under performance bonds, surety bonds, release, appeal and similar bonds, statutory obligations or with respect to workers' compensation claims, in each case incurred in the ordinary course of business, and reimbursement obligations in respect of any of the foregoing (including in respect of letters of credit issued in support of any of the foregoing);

(xvii) Indebtedness consisting of the financing of insurance premiums;

(xviii) Indebtedness arising under the Senior Notes, and guarantees in respect thereof, in an aggregate principal amount not to exceed $350,000,000 at any time outstanding;

(xix) Indebtedness in an aggregate outstanding principal amount which, when taken together with any Permitted Refinancing in respect thereof and the principal amount of all other Indebtedness

Incurred pursuant to this clause (xix) and then outstanding, will not exceed $30,000,000; provided that all such Indebtedness Incurred pursuant to this clause (xix) is (a) incurred by a Joint Venture; (b) is not Guaranteed, in whole or in part, by the Company or any Subsidiary of the Company other than the Joint Venture; (c) is not recourse to, and does not obligate, the Company or any Subsidiary of the Company (other than the Joint Venture) in any way; and (d) does not subject any property or asset of the Company or any Subsidiary of the Company (other than the Joint Venture) to the satisfaction thereof, directly or indirectly, contingently or otherwise, except, with respect to the foregoing clauses (c) and (d), in connection with and for (i) Liens on the Capital Stock of the Joint Venture or (ii) the ability to be converted into or exchanged for Capital Stock of the Joint Venture; and

(xx) prior to the sale of the Finance Lease Energy Assets, to the extent constituting Indebtedness, the obligations in respect of the sale-leaseback arrangements with respect to the Finance Lease Energy Assets.

7.2 Liens and Related Matters.

A. Prohibition on Liens. Company shall not, and shall not permit any of its Subsidiaries to, directly or indirectly, create, incur, assume or permit to exist any Lien on or with respect to any property or asset of any kind (including any document or instrument in respect of goods or accounts receivable) of Company or any of its Subsidiaries, whether now owned or hereafter acquired, or any income or profits therefrom, except:

(i) Permitted Encumbrances;

(ii) Liens to secure Indebtedness permitted by subsection 7.1(iii); provided, however, that the Lien shall apply only to the asset so acquired or leased and proceeds thereof;

(iii) Liens assumed in connection with a Permitted Acquisition and Liens on assets of a Person that becomes a direct or indirect Subsidiary of Company after the date of this Agreement in a Permitted Acquisition and, in each case, any Permitted Refinancing thereof; provided, however, that such Liens exist at the time such Person becomes a Subsidiary and are not created in anticipation of such acquisition and, in any event, do not, for each Permitted Acquisition, extend to any other property or assets of such Person;

(iv) Liens in existence on the Third Amendment Effective Date described in Schedule 7.2 annexed hereto and any renewals or extensions thereof;

(v) Liens on accounts receivable sold pursuant to A/R Securitization Programs;

(vi) Liens on assets of (a) Foreign Subsidiaries securing Indebtedness of any Foreign Subsidiary permitted pursuant to subsection 7.1(x) and (b) Joint Ventures securing Indebtedness of any Joint Venture permitted pursuant to 7.1(xix);

(vii) Other Liens securing Indebtedness in an aggregate amount not to exceed $5,000,000 at any time outstanding;

(viii) Liens securing Contingent Obligations with respect to Hedge Agreements entered into with any Hedge Counterparty;

(ix) Liens securing Indebtedness or Contingent Obligations with respect to Hedge Agreements of any Subsidiary that is not a Loan Party which Indebtedness or Contingent Obligations, in the aggregate, do not exceed $10,000,000 at any time outstanding;

(x) Liens on any cash deposits (including, without limitation, earnest money) in connection with any letter of intent or other agreement in connection with a transaction otherwise permitted by this Agreement;

(xi) Liens on any Cash Collateral provided pursuant to subsection 2.11;

(xii) Liens on insurance policies and the proceeds thereof securing the financing of the premiums with respect thereto;

(xiii) Liens arising out of conditional sale, title retention, consignment or similar arrangements for the sale of goods entered into in the ordinary course of business; and

(xiv) Liens arising out of sales and lease-backs permitted by subsection 7.10.

Notwithstanding the foregoing, Company shall not, and shall not permit any Loan Parties (which for the avoidance of doubt shall include the French Subsidiary, the Spanish Subsidiary and GFA SAU prior to the date they execute a guaranty agreement) to, directly or indirectly, create, incur, assume or permit to exist any Lien on or with respect to any real property of the Loan Parties, the French Subsidiary, GFA SAU or the Spanish Subsidiary, whether now owned or hereafter acquired, or any income or profits therefrom, except Liens in favor of the Administrative Agent to secure the Obligations.

B. No Further Negative Pledges. Neither Company nor any of its Subsidiaries shall enter into any agreement prohibiting the creation or assumption of any Lien upon any of its properties or assets, whether now owned or hereafter acquired, to secure the Obligations, other than (i) an agreement prohibiting only the creation of Liens securing Permitted Additional Indebtedness, (ii) any agreement evidencing Indebtedness secured by Liens permitted by subsections 7.2A(ii), 7.2A(v), 7.2A(vi) and 7.2A(vii), as to the assets securing such Indebtedness, (iii) any agreement evidencing an asset sale, as to the assets being sold, (iv) customary anti-assignment provisions and restrictions contained in leases, licensing agreements, joint venture agreements and other agreements entered into by Company or such Subsidiary in the ordinary course of its business, (v) any agreement governing the Indebtedness of a Foreign Subsidiary, (vi) customary restrictions and conditions contained in agreements relating to the sale of a Subsidiary pending such sale, provided such restrictions and conditions apply only to the Subsidiary that is to be sold and such sale is permitted hereunder and (vii) the Senior Notes.

C. No Restrictions on Subsidiary Distributions to Company or Other Subsidiaries. Company will not, and will not permit any of its Subsidiaries to, create or otherwise cause or suffer to exist or become effective any consensual encumbrance or restriction of any kind on the ability of any such Subsidiary to (i) pay dividends or make any other distributions on any of such Subsidiary's Capital Stock owned by Company or any other Subsidiary of Company, (ii) repay or prepay any Indebtedness owed by such Subsidiary to Company or any other Subsidiary of Company, (iii) make loans or advances to Company or any other Subsidiary of Company, or (iv) transfer any of its property or assets to Company or any other Subsidiary of Company, except (a) as provided in this Agreement (including, without limitation, restrictions described in subsection 7.2B(ii) through (vii) above) and (b) any encumbrance or restriction on a Joint Venture contained in the applicable joint venture agreement.

7.3 Investments; Acquisitions.

Company shall not, and shall not permit any of its Subsidiaries to, directly or indirectly, make or own any Investment in any Person, including any Joint Venture, or acquire, by purchase or otherwise, all or substantially all the business, property or fixed assets of, or Capital Stock of any Person, or any division or line of business of any Person except:

(i) Company and its Subsidiaries may make and own Investments consisting of Cash and Cash Equivalents;

(ii) Company and its Subsidiaries may continue to own the Investments owned by them as of the Closing Date in Company and in any Subsidiaries of Company (and may convert any such Investments in the form of Indebtedness into Investments in the form of Capital Stock), and Company and its Subsidiaries may make and own additional Investments in any Loan Party (other than the French Subsidiary);

(iii) Company and its Subsidiaries may (a) become liable in respect of Contingent Obligations permitted by subsection 7.4 and (b) make and incur intercompany loans to the extent permitted under subsection 7.1(iv) and (v);

(iv) Company and its Subsidiaries may make Consolidated Capital Expenditures;

(v) Company and its Subsidiaries may continue to own Investments existing on, and may make Investments in respect of which a binding agreement has been entered into as of, the Third Amendment Effective Date to the extent described in Schedule 7.3A annexed hereto (and may make incremental Investments contemplated in connection therewith) and any extension or renewal thereof; provided that any additional Investments made with respect thereto shall be permitted only to the extent such Investments are described on Schedule 7.3A or made in accordance with the other provisions of this subsection 7.3;

(vi) Company and its Subsidiaries may acquire any business, division, line or assets (including Capital Stock and including Capital Stock of Subsidiaries formed in connection with any such acquisition), and continue to own such assets after the acquisition thereof; provided that (a) no Potential Event of Default or Event of Default shall have occurred and be continuing at the time such acquisition occurs or immediately after giving effect thereto, (b) Company shall, and shall cause its Subsidiaries to, comply with the requirements of subsections 6.8 (within the time period required thereunder or within such other time period as Administrative Agent may permit in its sole discretion) with respect to each such acquisition that results in a Person becoming a Material Subsidiary, (c) all representations and warranties contained herein and in the other Loan Documents shall be true and correct in all material respects with the same effect as though such representations and warranties had been made on and as of the date of such acquisition (both before and after giving effect thereto), unless stated to relate to a specific earlier date, in which case such representations and warranties shall be true and correct in all material respects as of such earlier date and (d) for any such acquisitions (I) Company shall have provided financial statements for any Person (or line of business) acquired in any such acquisition for the last Fiscal Year of such Person or line of business, audited or reviewed by independent certified public accountants reasonably satisfactory to Administrative Agent or such other financial statements, in each case, available to Company and (II) after giving effect to such acquisition, (1) Company and its Subsidiaries shall be in Pro Forma Compliance, (2) Liquidity shall not be less than $200,000,000 on a Pro Forma Basis and (3) the Consolidated Net Leverage Ratio does not exceed 2.75 to 1.00 on a Pro Forma Basis; provided that with respect to any Material Event or to the extent the Consolidated Net Leverage Ratio as of the end of the most recent Fiscal Quarter for which a Compliance Certificate has been delivered was greater than 2.00 to 1.00, Company shall have delivered to Administrative Agent a pro-

forma Compliance Certificate certified by a Financial Officer of Company and demonstrating compliance with clauses (1), (2) and (3) above;

(vii) investments in the form of Hedge Agreements entered into in the ordinary course of business and not for speculative purposes;

(viii) Company may acquire and hold obligations of one or more officers or other employees of Company or its Subsidiaries in connection with such officers' or employees' acquisition of shares of Company's Capital Stock, so long as no cash is actually advanced by Company or any of its Subsidiaries to such officers or employees in connection with the acquisition of any such obligations;

(ix) Company and its Subsidiaries may receive and hold promissory notes and other non-cash consideration received in connection with any Asset Sale permitted by subsection 7.7;

(x) Company and its Subsidiaries may acquire and hold Investments in Securities in connection with the full or partial satisfaction, settlement or enforcement of Indebtedness or claims or other obligations due or owing to Company or any of its Subsidiaries or as security for any such Indebtedness or claim;

(xi) any transaction permitted by subsection 7.5 or 7.7;

(xii) deposits, prepayments and extensions of trade credit in the ordinary course of business;

(xiii) Investments by any Loan Party in any of their respective Subsidiaries (1) consisting of Capital Stock and/or intercompany notes made to achieve cash repatriation strategies or (2) the consideration for which is the cancellation or other settlement of any corresponding intercompany Indebtedness incurred in connection with Investments permitted pursuant to the foregoing clause (1), in each case so long as the net cash Investment by such Loan Party in connection therewith does not exceed zero after the tenth day following the making of such cash Investment;

(xiv) Subsidiaries that are not Subsidiary Guarantors may make and own Investments in other Subsidiaries that are not Subsidiary Guarantors;

(xv) Investments existing at the time any Person is acquired in connection with a Permitted Acquisition and not created in contemplation of such Permitted Acquisition;

(xvi) loans or advances made by any Loan Party or any Subsidiary of a Loan Party to such Loan Party's or such Subsidiary's employees on an arms-length basis in the ordinary course of business consistent with past practices, up to a maximum of $50,000 to any employee and up to a maximum of $250,000 in the aggregate at any one time outstanding;

(xvii) the Company and its Subsidiaries may acquire all or any portion of the Finance Lease Energy Assets (x) upon termination of, and in accordance with the terms of, the Finance Lease or (ii) in connection with the consummation of an Energy Sale;

(xviii) any Investment (other than the acquisition of any business, division, line or assets by Company or any Subsidiary) not otherwise permitted by clauses (i) through (xvii) above; provided that (a) no Potential Event of Default or Event of Default shall have occurred and be continuing at the time such Investment is made or immediately after giving effect thereto, (b) after giving effect to such Investment, (1) Company and its Subsidiaries shall be in Pro Forma Compliance, (2) the Consolidated Net Leverage Ratio does not exceed 2.75 to 1.00 on a Pro Forma Basis and (3) Liquidity shall not be less than

$200,000,000 on a Pro Forma Basis; provided that with respect to any Material Event or to the extent the Consolidated Net Leverage Ratio is greater than 2.00 to 1.00 as of the end of the most recent Fiscal Quarter for which a Compliance Certificate has been delivered, Company shall have delivered to Administrative Agent a pro-forma Compliance Certificate certified by a Financial Officer of Company and demonstrating compliance with clauses (1), (2) and (3) above; and

(xix) Investments in Joint Ventures and/or the French Subsidiary in an aggregate amount not to exceed $10,000,000 at any time outstanding.

7.4 Contingent Obligations.

Company shall not, and shall not permit any of its Subsidiaries to, directly or indirectly, create or become or remain liable with respect to any Contingent Obligation, except:

(i) Company may become and remain liable with respect to Contingent Obligations in respect of Letters of Credit and Company and its Subsidiaries may become and remain liable with respect to Contingent Obligations in respect of other letters of credit, bankers' acceptances, bank guaranties, and similar instruments;

(ii) Company and its Subsidiaries may become and remain liable with respect to Contingent Obligations under Hedge Agreements not for speculative purposes;

(iii) Company and its Subsidiaries may become and remain liable with respect to Contingent Obligations in respect of customary indemnification and purchase price adjustment obligations incurred in connection with Asset Sales or other sales of assets and in respect of earn-out obligations, customary indemnification and purchase price adjustment obligations incurred in connection with Permitted Acquisitions;

(iv) Company and its Subsidiaries may become and remain liable with respect to Contingent Obligations under guarantees and other similar arrangements of the obligations of Company and its Subsidiaries which arise in the ordinary course of business;

(v) Company and its Subsidiaries may become and remain liable with respect to Contingent Obligations in respect of any Indebtedness of Company or any of its Subsidiaries permitted by subsection 7.1 ;

(vi) Company and its Subsidiaries, as applicable, may remain liable with respect to Contingent Obligations outstanding on the Third Amendment Effective Date and described in Schedule 7.4 annexed hereto and any extension or renewal thereof;

(vii) Company or a Subsidiary of Company may become and remain liable with respect to Contingent Obligations assumed in connection with a Permitted Acquisition; provided that such Contingent Obligations are not created in anticipation of such acquisition; and

(viii) Company and its Subsidiaries may become and remain liable with respect to other Contingent Obligations; provided that the maximum aggregate liability, contingent or otherwise, of Company and its Subsidiaries in respect of all such Contingent Obligations shall at no time exceed $30,000,000.

7.5 Restricted Junior Payments.

Company shall not, and shall not permit any of its Subsidiaries to, directly or indirectly, declare, order, pay, make or set apart any sum for any Restricted Junior Payment; provided that Company may:

(i) make regularly scheduled payments of interest in respect of the Senior Notes or any Permitted Additional Indebtedness in accordance with the terms of, and only to the extent required by, and subject to the subordination provisions, if any, contained in, the Senior Notes Indenture, in the case of the Senior Notes, or the indenture or other agreement pursuant to which such Permitted Additional Indebtedness was issued, as such indenture or other agreement may be amended from time to time to the extent permitted under subsection 7.12;

(ii) so long as no Event of Default has occurred and is continuing or would result therefrom, Company may purchase Company's common stock or common stock equity awards from present or former officers, directors or employees (or their respective spouses, successors, executors, estates, administrators or heirs) of Company or any Subsidiary of Company upon the death, disability, retirement or termination of employment of such officer, director or employee;

(iii) make Restricted Junior Payments with respect to (x) employee or director stock options, stock incentive plans or restricted stock plans of Company which are compensatory in nature and approved by the compensation committee of Company's board of directors and (y) the purchase from time to time by Company of its common stock (for not more than market price) with the proceeds of the exercise by grantees under any equity-based incentive plan;

(iv) make Restricted Junior Payments with respect to its Capital Stock in exchange for, or out of the net cash proceeds of, a substantially concurrent sale of, such Capital Stock;

(v) make any Restricted Junior Payment deemed to occur upon the exercise of any options or warrants to the extent that such Restricted Junior Payment represents all or a portion of the exercise price;

(vi) from and after the date on which the Energy Sale has been completed, and so long as no Potential Event of Default or Event of Default has occurred and is continuing at the time of such payment or immediately after giving effect thereto, make other Restricted Junior Payments (and/or make payments of dividends and distributions that constitute Restricted Junior Payments within 90 days after the date of declaration thereof, if at the date of declaration of such payment, such payment would have complied with the provisions of this Agreement); provided that (A) after giving effect to any such Restricted Junior Payment (or the declaration thereof, as applicable), (1) the Company and its Subsidiaries shall be in Pro Forma Compliance, (2) Liquidity shall not be less than $200,000,000 on a Pro Forma Basis and (3) the aggregate amount of payments made or declared during any Fiscal Quarter pursuant to this clause (vi) shall not exceed $15,000,000, and (B) if any such Restricted Junior Payment is a Material Event or to the extent the Consolidated Net Leverage Ratio as of the end of the most recent Fiscal Quarter for which a Compliance Certificate has been delivered was greater than 2.00 to 1.00, Company shall deliver to Administrative Agent an Officer's Certificate (in form and substance satisfactory to Administrative Agent and including detailed calculations) certifying compliance with clauses (1) and (2) above;

(vii) make Restricted Junior Payments to minority shareholders of any Person that is acquired pursuant to a Permitted Acquisition or similar Investment permitted by subsection 7.3 pursuant to appraisal or dissenters' rights or applicable law with respect to shares of such Person held by such shareholders; and

(viii) make Restricted Junior Payments with proceeds of the Senior Notes as contemplated by the Senior Notes Indenture.

7.6 Financial Covenants.

A. Minimum Interest Coverage Ratio. Company shall not, on the last day of any Fiscal Quarter ending during the periods set forth below, permit the ratio of (i) Consolidated EBITDA for the four Fiscal Quarter period ending on such day to (ii) Consolidated Interest Expense for such period to be less than the following:

Period	Ratio
Third Amendment Effective Date through and including June 30, 2017	1.25:1.00
July 1, 2017 through and including September 30, 2017	1.50:1.00
October 1, 2017 through and including December 31, 2017	2.00:1.00
January 1, 2018 and thereafter	2.50:1.00

B. Maximum Consolidated Secured Net Leverage Ratio. Company shall not, on the last day of any Fiscal Quarter ending during the periods set forth below, permit the Consolidated Secured Net Leverage Ratio determined as of such day to exceed the following:

Period	Ratio
Third Amendment Effective Date through and including December 31, 2017	3.00:1.00
January 1, 2018 and thereafter	2.50:1.00

C. Maximum Consolidated Net Leverage Ratio. To the extent the Energy Sale has not been completed, Company shall not, on the last day of any Fiscal Quarter ending during the periods set forth below, permit the Consolidated Net Leverage Ratio determined as of such day to exceed the following:

Period	Ratio
Third Amendment Effective Date through and including March 31, 2017	8.50:1.00
April 1, 2017 through and including June 30, 2017	7.50:1.00
July 1, 2017 through and including September 30, 2017	6.50:1.00
October 1, 2017 through and including December 31, 2017	6.00:1.00
January 1, 2018 through and including March 31, 2018	5.50:1.00
April 1, 2018 and thereafter	5.00:1.00

Following completion of the Energy Sale, Company shall not, on the last day of any Fiscal Quarter ending during the periods set forth below, permit the Consolidated Net Leverage Ratio determined as of such day to exceed the following:

Period	Ratio
Third Amendment Effective Date through and including December 31, 2017	4.00:1.00
January 1, 2018 and thereafter	3.50:1.00

7.7 Restriction on Fundamental Changes; Asset Sales.

Company shall not, and shall not permit any of its Subsidiaries to, enter into any transaction of merger or consolidation, or liquidate, wind-up or dissolve itself (or suffer any liquidation or dissolution), or convey, sell, lease or sub-lease (as lessor or sublessor), license, transfer or otherwise dispose of, in one transaction or a series of transactions, all or any part of its business, property or assets, whether now owned or hereafter acquired, except:

(i) any Subsidiary of Company may be merged with or into Company, Globe or any other Loan Party, or be liquidated, wound up or dissolved, or all or any part of its business, property or assets may be conveyed, sold, leased, transferred or otherwise disposed of, in one transaction or a series of transactions, to Company or any other Loan Party; provided that, in the case of such a merger, Company, Globe or such other Loan Party shall be the continuing or surviving Person;

(ii) any Subsidiary of Company (a) that is not a Loan Party may be merged with or into any Subsidiary of Company, or be liquidated, wound up or dissolved, or all or any part of its business, property or assets may be conveyed, sold, leased, transferred or otherwise disposed of, in one transaction or a series of transactions, to any Subsidiary of Company and (b) that is a Loan Party may be merged with or into any other Loan Party, or be liquidated, wound up or dissolved, or all or any part of its business, property or assets may be conveyed, sold, leased, transferred or otherwise disposed of, in one transaction or a series of transactions, to any other Loan Party;

(iii) the Loan Parties and their Subsidiaries may sell their accounts receivable in connection with A/R Securitization Programs; provided, that the aggregate outstanding amount (such amount based on the amount owed to the Loan Parties under such account receivable) of all such accounts receivable subject to the A/R Securitization Programs at any time shall not exceed $250,000,000;

(iv) assignments and licenses of Intellectual Property of Company or any Subsidiary between or among Company and its Subsidiaries, and licenses (a) to Joint Ventures or (b) in the ordinary course of business;

(v) leases of owned real property and subleases of leased real property, in each case, not interfering in any material respect with the operations of Company and its Subsidiaries;

(vi) Company and its Subsidiaries may sell or otherwise dispose of assets in transactions that do not constitute Asset Sales; provided that the consideration received for such assets (other than assets described in clause (iii)(c) or (d) of the definition of Asset Sale) shall be in an amount at least equal to the fair market value thereof (as determined in good faith by Company);

(vii) Company and its Subsidiaries may dispose of used, obsolete, worn out or surplus property in the ordinary course of business;

(viii) Company and its Subsidiaries may make Asset Sales of assets having a net book value on Company's books and records not in excess of the greater of (a) $35,000,000 in any Fiscal Year or (b) to the extent (y) the Company and its Subsidiaries shall be in Pro Forma Compliance and (z) the Consolidated Net Leverage Ratio does not exceed 2.75 to 1.00 on a Pro Forma Basis, $100,000,000 in any Fiscal Year (to the extent such Asset Sale is a Material Event or to the extent the Consolidated Net Leverage Ratio as of the end of the most recent Fiscal Quarter for which a Compliance Certificate has been delivered was greater than 2.00 to 1.00, Company shall deliver to Administrative Agent an Officer's Certificate (in form and substance satisfactory to Administrative Agent and including detailed

calculations) certifying compliance with clauses (y) and (z) above); provided that (i) the consideration received for such assets shall be in an amount at least equal to the fair market value thereof (as determined in good faith by Company); (ii) at least 75% of the consideration received shall be cash; (iii) no Potential Event of Default or Event of Default shall have occurred or be continuing after giving effect thereto and (iv) the proceeds of any Asset Sales in excess of $50,000,000 shall be used to immediately repay the Loans;

(ix) in order to resolve disputes that occur in the ordinary course of business, Company and its Subsidiaries may sell, transfer, dispose of or discount or otherwise compromise for less than the face value thereof, notes or accounts receivable;

(x) Company or a Subsidiary may sell or dispose of shares of Capital Stock of any of its Subsidiaries in order to qualify members of the Governing Body of the Subsidiary if required by applicable law;

(xi) Any transaction permitted pursuant to subsection 7.3 or 7.10;

(xii) Company and its Subsidiaries may sell or otherwise dispose of Cash Equivalents for fair value;

(xiii) Company and its Subsidiaries may sell or otherwise dispose of specific items of equipment so long as the purpose of such sale or disposition is to acquire replacement items of like-kind equipment or other equipment used or useful in the conduct of the business of Company or any of its Subsidiaries;

(xiv) leases, assignments and licenses of personal property in the ordinary course of business;

(xv) dispositions resulting from any casualty or other insured damage to, or any taking under power of eminent domain or by condemnation or similar proceeding of, any property or asset of Company and its Subsidiaries;

(xvi) dispositions of Investments in Joint Ventures to the extent required by, or made pursuant to, customary buy/sell arrangements between the Joint Venture parties set forth in Joint Venture arrangements and similar binding arrangements;

(xvii) the disposition or sale of any assets acquired in connection with any Permitted Acquisition in contemplation that such assets would be sold to a third party; provided, that, (i) such assets are sold for consideration not less than the value attributed to such assets in the calculation of the aggregate consideration for such Permitted Acquisition and (ii) such disposition or sale occurs within one (1) year of the consummation of such Permitted Acquisition;

(xviii) the winding up, liquidation or dissolution of a Subsidiary that is not a Material Subsidiary; and

(xix) (A) any disposition of the Energy Assets, including pursuant to the Energy Sale; provided, that (a) all Capital Lease obligations and other Indebtedness associated with the Spanish Energy Assets shall be paid in full or assumed by the purchaser thereof upon consummation of such disposition and (b) to the extent Liquidity (on a pro forma basis after giving effect to the receipt of the proceeds from such disposition and the payments required pursuant to clause (a)) is less than $250,000,000, an amount equal to the lesser of (1) the remaining net proceeds of such disposition after giving effect to the payments required pursuant to clause (a) and (2) $25,000,000 shall be deposited into a blocked account held with

the Administrative Agent and be subject to a control agreement in form and substance reasonably acceptable to the Administrative Agent (the "Energy Account") and (B) the French Hydro-electric Sale.

7.8 Foreign Assets Controls.

No proceeds from any borrowing under this Agreement have been or will be used, directly or (to the knowledge of the Company) indirectly, to lend, contribute, provide, or have otherwise been or will be made available to fund, any activity or business with or related to any Sanctioned Person or Sanctioned Country, or in any other manner that will result in any violation or breach by any Person of Sanctions Laws.

7.9 Transactions with Shareholders and Affiliates.

Company shall not, and shall not permit any of its Subsidiaries to, directly or indirectly, enter into or permit to exist any transaction (including the purchase, sale, lease or exchange of any property or the rendering of any service) with any holder of Securities of Company representing 10% or more of the total voting power for the election of directors of Company or with any Affiliate of Company or of any such holder, on terms that are less favorable to Company or that Subsidiary, as the case may be, than those that might be obtained at the time from Persons who are not such a holder or Affiliate; provided that the foregoing restriction shall not apply to (i) any transaction (1) between one of more of Company and any of its wholly-owned Subsidiaries or any other Loan Party, (2) between any of Company's wholly-owned Subsidiaries, (3) between any of the Loan Parties or (4) between any of Company's Subsidiaries that are not Loan Parties, (ii) reasonable and customary fees paid to members of the Governing Bodies of Company and its Subsidiaries, (iii) indemnification payments to employees, officers or directors of Company and its Subsidiaries to the extent required by the applicable Organizational Documents or applicable law, (iv) service agreements, reimbursement of expenses or compensation arrangements with employees, officers and directors of Company and its Subsidiaries entered into in the ordinary course of business, (v) transactions pursuant to the agreements set forth on Schedule 7.9 and (vi) transactions otherwise expressly permitted by this Agreement.

7.10 Sales and Lease-Backs.

Company shall not, and shall not permit any of its Subsidiaries to, directly or indirectly, become or remain liable as lessee or as a guarantor or other surety with respect to any lease of any property (whether real, personal or mixed), whether now owned or hereafter acquired, other than the Finance Lease Energy Assets, (i) that Company or any of its Subsidiaries has sold or transferred or is to sell or transfer to any other Person (other than Company or any of its Subsidiaries) or (ii) that Company or any of its Subsidiaries intends to use for substantially the same purpose as any other property that has been or is to be sold or transferred by Company or any such Subsidiary to any Person (other than Company or any of its Subsidiaries) in connection with such lease; provided that Company and its Subsidiaries may become and remain liable as lessee, guarantor or other surety with respect to any such lease if and to the extent that Company or any of its Subsidiaries would be permitted to enter into, and remain liable under, such lease to the extent that the transaction would be permitted under subsection 7.1, assuming the sale and lease back transaction constituted Indebtedness in a principal amount equal to the gross proceeds of the sale.

7.11 Conduct of Business; Amendments to Organizational Documents; Ownership of Subsidiaries.

From and after the Closing Date, Company shall not, and shall not permit any of its Subsidiaries to, (i) engage in any business other than (a) the businesses engaged in by Company and its Subsidiaries on

the Closing Date and similar, ancillary or related businesses and (b) such other lines of business as may be consented to by Requisite Lenders (such consent not to be unreasonably withheld), (ii) amend, modify or change its articles of incorporation, certificate of designation (or corporate charter or other similar organizational document) operating agreement or bylaws (or other similar document) in any respect materially adverse to the interests of the Lenders without the prior written consent of the Requisite Lenders (which consent shall not be unreasonably withheld, conditioned or delayed) or (iii) create, form or acquire any Subsidiaries except in accordance with the terms of this Agreement.

7.12 Amendments of Documents Relating to Indebtedness.

Except as expressly contemplated by this Agreement, Company shall not, and shall not permit any of its Subsidiaries to, amend or otherwise change the terms of the Senior Notes (or the Senior Note Indenture) or any Permitted Additional Indebtedness (except in connection with a Permitted Refinancing thereof), or make any payment consistent with an amendment thereof or change thereto, if the effect of such amendment or change is to increase the interest rate thereon, change (to earlier dates) any dates upon which payments of principal or interest are due thereon, change any event of default or condition to an event of default with respect thereto (other than to eliminate any such event of default or increase any grace period related thereto), change the redemption, prepayment or defeasance provisions, if any, thereof, change the payment or lien subordination provisions, if any, thereof (or of any guaranty thereof), or change any collateral therefor (other than to release such collateral), in each case if the effect of such amendment or change, together with all other amendments or changes made, is to increase materially the obligations of the obligor thereunder or to confer any additional rights on the holders thereon (or a trustee or other representative on their behalf) which, in each case, would be adverse in any material respect to Company or Lenders, as reasonably determined by a responsible officer of Company. The aggregate amount of Indebtedness owing from the French Subsidiary to GFA SAU under the Revolver Intercompany Loan Agreement shall not be less than EUR 29,539,915.72 at any time.

7.13 Fiscal Year.

Company shall not change its Fiscal Year-end from December 31.

SECTION 8. EVENTS OF DEFAULT

If any of the following conditions or events ("**Events of Default**") shall occur:

8.1 Failure to Make Payments When Due.

Failure by any Borrower to pay any installment of principal of any Loan when due, and in the currency required hereunder, whether at stated maturity, by acceleration, by mandatory prepayment or otherwise; failure by any Borrower to pay when due any amount payable to the Issuing Lender in reimbursement of any drawing under a Letter of Credit; or failure by any Borrower to pay any interest on any Loan or any fee or any other amount due under this Agreement within three (3) Business Days after the date due; or

8.2 Default in Other Agreements.

(i) Failure of any Loan Party or any Subsidiary to pay when due any principal of or interest on or any other amount payable in respect of one (1) or more items of Indebtedness (other than Indebtedness referred to in subsection 8.1) or Contingent Obligations in an individual principal amount of $10,000,000 or more or with an aggregate principal amount of $25,000,000 or more, in each case beyond the end of any grace period provided therefor; or

(ii) breach or default by any Loan Party or any Subsidiary with respect to any other material term of (a) one or more items of Indebtedness in the individual or aggregate principal amounts referred to in clause (i) above or (b) any loan agreement, mortgage, indenture or other agreement relating to such item(s) of Indebtedness, in each case beyond the grace period, if any, provided therefor if the effect of such breach or default is to cause, or to permit the holder or holders of that Indebtedness (or a trustee on behalf of such holder or holders) to cause, that Indebtedness to become or be declared due and payable prior to its stated maturity or the stated maturity of any underlying obligation, as the case may be (upon the giving or receiving of notice, lapse of time, both, or otherwise); or

(iii) any default (after the expiration of any applicable cure period) or event of default under the Senior Note Indenture or the Senior Notes shall have occurred and be continuing; or

8.3 Breach of Certain Covenants.

Failure of Company or any other Borrower to perform or comply with any term or condition contained in subsection 2.4B(iii)(f), 2.5B, 2.5C, 6.1(i), 6.2, 6.12, 6.13 or any of Sections 7.1, 7.2A, 7.3, 7.4, 7.5, 7.6, 7.7, 7.10, 7.11(b) or 7.12 (solely with respect to subordinated Indebtedness or the Senior Notes (or the Senior Note Indenture)) of this Agreement; or

8.4 Breach of Warranty.

Any representation, warranty, certification or other statement made by any Loan Party in any Loan Document or in any statement or certificate at any time given by any Loan Party in writing pursuant hereto or thereto or in connection herewith or therewith shall be false in any material respect on the date as of which made; or

8.5 Other Defaults Under Loan Documents.

Any Loan Party shall default in the performance of or compliance with any term contained in this Agreement or any of the other Loan Documents, other than any such term referred to in any other subsection of this Section 8, and such default shall not have been remedied or waived within 30 days after receipt by Company or such other Loan Party of notice from Administrative Agent or any Lender entitled to give notice of such default; or

8.6 Involuntary Bankruptcy; Appointment of Receiver, etc.

(i) A court having jurisdiction in the premises shall enter a decree or order for relief, suspension of payments, a moratorium of any indebtedness, winding-up, dissolution, administration, receivership or reorganization in respect of any Loan Party or any Significant Subsidiary in an involuntary case under the Bankruptcy Code or under any other applicable bankruptcy, insolvency or similar law now or hereafter in effect, which decree or order is not stayed; or any other similar relief shall be granted under any applicable federal or state law or the laws of any Relevant Jurisdiction; or

(ii) (a) an involuntary case shall be commenced against any Loan Party or any Significant Subsidiary under the Bankruptcy Code or under any other applicable bankruptcy, insolvency or similar law now or hereafter in effect; or a decree or order of a court having jurisdiction in the premises or any action taken by a creditor for the appointment of a receiver, administrator, liquidator, sequestrator, trustee, custodian, similar officer or other officer having similar powers over any Loan Party or any Significant Subsidiary, or over all or part of its property, shall have been entered; or (b) there shall have occurred the involuntary appointment of an interim or provisional liquidator, receiver, trustee or other custodian of any Loan Party or any Significant Subsidiary for all or part of its property; or (c) a warrant of attachment,

execution or similar process shall have been issued against any substantial part of the property of any Loan Party or any Significant Subsidiary, and any such event described in this clause (ii)(c) shall continue for 60 days unless dismissed, bonded or discharged; or

8.7 Voluntary Bankruptcy; Appointment of Receiver, etc.

(i) Any Loan Party or any Significant Subsidiary shall have an order for relief, suspension of payments, a moratorium of any indebtedness, winding-up, dissolution, administration or reorganization, entered with respect to it or its assets or commence a voluntary case, or take any corporate action to appoint an administrator, liquidator or receiver, under the Bankruptcy Code or under any other applicable bankruptcy, insolvency or similar law now or hereafter in effect, or shall consent to the entry of an order for relief in an involuntary case, or to the conversion of an involuntary case to a voluntary case, or to the appointment of an administrator, liquidator or receiver or similar officer under any such law, or shall consent to the appointment of or taking possession by a receiver, administrator, liquidator, receiver, trustee or other custodian for all or a substantial part of its property; or any Loan Party or any Significant Subsidiary shall make any assignment for the benefit of creditors; or

(ii) Any Loan Party or any Significant Subsidiary shall be unable, or shall fail generally, or shall admit in writing its inability, to pay its debts as such debts become due, or its being insolvent for the purpose of any applicable law; or the Governing Body of any Loan Party or any Significant Subsidiary (or any committee thereof) shall adopt any resolution or otherwise authorize any action to approve any of the actions referred to in clause (i) above or this clause (ii);

For the purpose of Section 8.6 and of this Section 8.7, in respect of a Loan Party incorporated in France, a reference to:

(i) a "suspension of payments" includes that Loan Party incorporated in France being in a state of *cessation des paiements* within the meaning of the French Commercial Code (*Code de commerce*);

(ii) a "moratorium" includes a moratorium under a *mandat ad hoc or conciliation* procedure in accordance with articles L. 611-3 to L. 611-16 of the French Commercial Code (*Code de commerce*);

(iii) a "similar officer" in Section 8.6 and 8.7 shall include a provisional administrator, *conciliateur, mandataire ad hoc, administrateur judiciaire, mandataire judiciaire, liquidateur judiciaire, commissaire à l'exécution du plan, mandataire à l'exécution de l'accord* or any person appointed as a result of any proceedings described in paragraph (v) below;

(iv) a "winding-up", "dissolution", "administration" or "reorganization" includes *liquidation judiciaire, redressement judiciaire, sauvegarde, sauvegarde accélérée, sauvegarde financière accélérée, mandat ad hoc or conciliation* proceedings under *Livre Six* of the French Commercial Code (*Code de commerce*); and

(v) "any corporate action to appoint an administrator, liquidator or receiver" shall include:

(A) any Loan Party incorporated in France applying for *mandat ad hoc* or *conciliation* in accordance with articles L. 611-3 to L. 611-16 of the French Commercial Code (*Code de commerce*); and

(B) the entry of a judgment opening against a Loan Party incorporated in France *sauvegarde*, *sauvegarde accélérée*, *sauvegarde financière accélérée*, *redressement judiciaire or liquidation judiciaire* proceedings or ordering a *cession totale ou partielle de l'entreprise* under articles L. 620-1 to L. 670-8 of the French Commercial Code (*Code de commerce*); or

8.8 Judgments and Attachments.

(i) Any final, non-appealable money judgment, writ or warrant of attachment or similar process involving (a) in any individual case an amount in excess of $10,000,000 or (b) in the aggregate at any time an amount in excess of $25,000,000, in either case to the extent not adequately covered by insurance as to which a solvent and unaffiliated insurance company has acknowledged coverage in writing, shall be entered or filed against Company or any other Loan Party or any Subsidiary or any of their respective assets and shall remain undischarged, unvacated, unbonded or unstayed for a period of 60 days (or in any event later than five days prior to the date of any proposed sale thereunder); or

(ii) Any expropriation, attachment, sequestration, distress or execution or any analogous process in any relevant jurisdiction affects any asset or assets of a Borrower or a Material Subsidiary having in an individual value in excess of $10,000,000 or an aggregate value in excess of $25,000,000 and is not discharged within 14 days; or

8.9 Dissolution.

Any order, judgment or decree shall be entered against Company or any other Loan Party or any Subsidiary decreeing the dissolution, liquidation or split up of Company or such Loan Party or any such Subsidiary and such order shall remain undischarged or unstayed for a period in excess of 30 days; or

8.10 Employee Benefit Plans.

There shall occur one or more ERISA Events that individually or in the aggregate would reasonably be expected to result in a Material Adverse Effect during the term of this Agreement; or there shall exist an amount of unfunded benefit liabilities (as defined in Section 4001(a)(18) of ERISA) individually or in the aggregate for all Pension Plans (excluding for purposes of such computation any Pension Plans with respect to which assets exceed benefit liabilities), which would reasonably be expected to result in a Material Adverse Effect; or

8.11 Change in Control.

A Change in Control shall have occurred; or

8.12 Uninsured Loss.

Any uninsured damage to or loss, theft or destruction of any assets of the Loan Parties or any of their Subsidiaries shall occur that is in excess of $10,000,000 (excluding customary deductible thresholds established in accordance with historical past practices).

8.13 Invalidity of Loan Documents; Failure of Security; Repudiation of Obligations.

At any time after the execution and delivery thereof, (i) this Agreement or any Note or any provision thereof, for any reason than the satisfaction in full or all Obligations, shall cease to be in full force and effect (other than in accordance with its terms) or shall be declared to be null and void, (ii) any

of the Guaranties, for any reason other than the satisfaction in full of all Obligations or upon the release of any Subsidiary Guarantor in connection with an asset sale permitted hereby, shall cease to be in full force and effect (other than in accordance with its terms) or shall be declared to be null and void, (iii) any Collateral Document, for any reason other than the satisfaction in full of the Obligations or upon a release of Collateral in accordance with the terms hereof or thereof, shall cease to be in full force and effect (other than in accordance with its terms) or shall be declared to be null and void, or Administrative Agent shall not have or shall cease to have a valid and perfected First Priority Lien in any material Collateral purported to be covered by the Collateral Documents for any reason other than the failure of Administrative Agent or any Lender to take any action within its control, or (iv) any Loan Party shall contest the validity or enforceability of any Loan Document or any provision thereof or the validity or first priority of any First Priority Lien in any Collateral purported to be covered by the Collateral Documents in writing or deny in writing that it has any further liability, including with respect to future advances by Lenders, under any Loan Document to which it is a party;

THEN (i) upon the occurrence of any Event of Default described in subsection 8.6 or 8.7, each of (a) an amount equal to the maximum amount that may at any time be drawn under all Letters of Credit then outstanding (whether or not any beneficiary under any such Letter of Credit shall have presented, or shall be entitled at such time to present, the drafts or other documents or certificates required to draw under such Letter of Credit), and shall be required to be deposited with the Administrative Agent as Cash Collateral, and (b) the unpaid principal amount of and accrued interest on the Loans and all other Obligations (other than Secured Hedge Obligations) shall automatically become immediately due and payable, without presentment, demand, protest or other requirements of any kind, all of which are hereby expressly waived by Company, and the obligation of each Lender to make any Loan, the obligation of Administrative Agent to issue any Letter of Credit and the right of any Lender to issue any Letter of Credit hereunder shall thereupon terminate, and (ii) upon the occurrence and during the continuation of any other Event of Default, Administrative Agent shall, upon the written request of Requisite Lenders, by written notice to Company, (x) declare all or any portion of the amounts described in clause (b) above to be, and the same shall forthwith become, immediately due and payable, without presentment, demand, protest or other requirements of any kind, all of which are hereby expressly waived by Borrowers, (y) declare the obligation of each Lender to make any Loan and the obligation of the Issuing Lender to issue any Letter of Credit hereunder to be terminated, whereupon such obligations shall be terminated, and (c) require that Company Cash Collateralize the Letters of Credit (in an amount equal to the outstanding amount of all such Letters of Credit); provided that the foregoing shall not affect in any way the obligations of Revolving Lenders under subsection 3.3C(i) or the obligations of Revolving Lenders to purchase participations of any unpaid Swing Line Loans as provided in subsection 2.1A(iii).

SECTION 9. ADMINISTRATIVE AGENT

9.1 Appointment.

A. Appointment of Administrative Agent. Citizens Bank of Pennsylvania is hereby appointed Administrative Agent hereunder and under the other Loan Documents. Each Lender (including any Lender in its capacity as a counterparty to a Hedge Agreement or a Cash Management Agreement with Company or one of its Subsidiaries) hereby authorizes Administrative Agent to act as its agent in accordance with the terms of this Agreement and the other Loan Documents. Citizens Bank of Pennsylvania agrees to act upon the express conditions contained in this Agreement and the other Loan Documents, as applicable. The provisions of this Section 9 are solely for the benefit of Agents and Lenders and no Loan Party shall have rights as a third party beneficiary of any of the provisions thereof. In performing its functions and duties under this Agreement, Administrative Agent (other than as provided in subsection 2.1D) shall act solely as an agent of Lenders and does not assume and shall not be

deemed to have assumed any obligation towards or relationship of agency or trust with or for Company or any other Loan Party.

Administrative Agent may execute any of its duties under this Agreement or any other Loan Document by or through agents, employees or attorneys-in-fact appointed by Administrative Agent in its sole discretion. Administrative Agent and any such sub-agent may perform any and all of the duties of Administrative Agent and exercise the rights and powers of Administrative Agent by or through their respective Affiliates and the partners, directors, officers, employees, agents, trustees and advisors of such Person and of such Person's Affiliates (**"Related Parties"**). The exculpatory provisions of this Article shall apply to any such sub-agent and to the Related Parties of Administrative Agent and any such sub-agent.

B. Appointment of Supplemental Collateral Agents. It is the purpose of this Agreement and the other Loan Documents that there shall be no violation of any law of any jurisdiction denying or restricting the right of banking corporations or associations to transact business as agent or trustee in such jurisdiction. It is recognized that in case of litigation under this Agreement or any of the other Loan Documents, and in particular in case of the enforcement of any of the Loan Documents, or in case Administrative Agent reasonably deems that by reason of any present or future law of any jurisdiction it may not exercise any of the rights, powers or remedies granted herein or in any of the other Loan Documents or take any other action which may be necessary in connection therewith, it may be necessary that Administrative Agent appoint an additional individual or institution as a separate trustee, co-trustee, collateral agent or collateral co-agent (any such additional individual or institution being referred to herein individually as a **"Supplemental Collateral Agent"** and collectively **as "Supplemental Collateral Agents")**.

In the event that Administrative Agent appoints a Supplemental Collateral Agent, with the written consent of Company, which consent shall not be unreasonably withheld, with respect to any Collateral, (i) each and every right, power, privilege or duty expressed or intended by this Agreement or any of the other Loan Documents to be exercised by or vested in or conveyed to Administrative Agent with respect to such Collateral shall be exercisable by and vest in such Supplemental Collateral Agent to the extent, and only to the extent, necessary to enable such Supplemental Collateral Agent to exercise such rights, powers and privileges with respect to such Collateral and to perform such duties with respect to such Collateral, and every covenant and obligation contained in the Loan Documents and necessary to the exercise or performance thereof by such Supplemental Collateral Agent shall run to and be enforceable by either Administrative Agent or such Supplemental Collateral Agent, and (ii) the provisions of this Section 9 and of subsections 10.2 and 10.3 that refer to Administrative Agent shall inure to the benefit of such Supplemental Collateral Agent and all references therein to Administrative Agent shall be deemed to be references to Administrative Agent and/or such Supplemental Collateral Agent, as the context may require.

Should any instrument in writing from Company or any other Loan Party be required by any Supplemental Collateral Agent so appointed by Administrative Agent for more fully and certainly vesting in and confirming to him or it such rights, powers, privileges and duties, Company shall, or shall cause such Loan Party to, execute, acknowledge and deliver any and all such instruments promptly upon request by Administrative Agent. In case any Supplemental Collateral Agent, or a successor thereto, shall die, become incapable of acting, resign or be removed, all the rights, powers, privileges and duties of such Supplemental Collateral Agent, to the extent permitted by law, shall vest in and be exercised by Administrative Agent until the appointment of a new Supplemental Collateral Agent.

C. Control. Each Lender and Administrative Agent hereby appoint each other Lender as agent for the purpose of perfecting Administrative Agent's security interest in assets that, in accordance with the UCC, can be perfected by possession or control.

9.2 Powers and Duties; General Immunity.

A. Powers; Duties Specified. Each Lender irrevocably authorizes Administrative Agent to take such action on such Lender's behalf and to exercise such powers, rights and remedies hereunder and under the other Loan Documents as are specifically delegated or granted to Administrative Agent by the terms hereof and thereof, together with such powers, rights and remedies as are reasonably incidental thereto. Administrative Agent shall have only those duties and responsibilities that are expressly specified in this Agreement and the other Loan Documents. Administrative Agent may exercise such powers, rights and remedies and perform such duties by or through its agents or employees. Administrative Agent shall not have, by reason of this Agreement or any of the other Loan Documents, a fiduciary relationship in respect of any Lender or Company; and nothing in this Agreement or any of the other Loan Documents, expressed or implied, is intended to or shall be so construed as to impose upon Administrative Agent any obligations in respect of this Agreement or any of the other Loan Documents except as expressly set forth herein or therein.

B. No Responsibility for Certain Matters. No Agent shall be responsible to any Lender for the execution, effectiveness, genuineness, validity, enforceability, collectability or sufficiency of this Agreement or any other Loan Document or for any representations, warranties, recitals or statements made herein or therein or made in any written or oral statements or in any financial or other statements, instruments, reports or certificates or any other documents furnished or made by such Agent to Lenders or by or on behalf of a Borrower to such Agent or any Lender in connection with the Loan Documents and the transactions contemplated thereby or for the financial condition or business affairs of Company or any other Person liable for the payment of any Obligations, nor shall such Agent be required to ascertain or inquire as to the performance or observance of any of the terms, conditions, provisions, covenants or agreements contained in any of the Loan Documents or as to the use of the proceeds of the Loans or the use of the Letters of Credit or as to the existence or possible existence of any Event of Default or Potential Event of Default. Anything contained in this Agreement to the contrary notwithstanding, Administrative Agent shall not have any liability arising from confirmations of the amount of outstanding Loans or the Letter of Credit Usage or the component amounts thereof.

C. Exculpatory Provisions. No Agent or any of its officers, directors, employees or agents shall be liable to Lenders for any action taken or omitted by such Agent under or in connection with any of the Loan Documents except to the extent caused by such Agent's gross negligence, bad faith or willful misconduct. An Agent shall be entitled to refrain from any act or the taking of any action (including the failure to take an action) in connection with this Agreement or any of the other Loan Documents or from the exercise of any power, discretion or authority vested in it hereunder or thereunder unless and until such Agent shall have received instructions in respect thereof from Requisite Lenders (or such other Lenders as may be required to give such instructions under subsection 10.6) and, upon receipt of such instructions from Requisite Lenders (or such other Lenders, as the case may be), such Agent shall be entitled to act or (where so instructed) refrain from acting, or to exercise such power, discretion or authority, in accordance with such instructions; provided that no Agent shall be required to take any action that, in its opinion or the opinion of its counsel, may expose such Agent to liability or that is contrary to any Loan Document or applicable law. Without prejudice to the generality of the foregoing, (i) each Agent shall be entitled to rely, and shall be fully protected in relying, upon any communication (including any electronic message, Internet or intranet web site posting or other distribution), instrument or document believed by it to be genuine and correct and to have been signed or sent by the proper person or persons, and shall be entitled to rely and shall be protected in relying on opinions and judgments of

attorneys (who may be attorneys for Company and its Subsidiaries), accountants, experts and other professional advisors selected by it; and (ii) no Lender shall have any right of action whatsoever against an Agent as a result of such Agent acting or (where so instructed) refraining from acting under this Agreement or any of the other Loan Documents in accordance with the instructions of Requisite Lenders (or such other Lenders as may be required to give such instructions under subsection 10.6).

D. Agents Entitled to Act as Lender. The agency hereby created shall in no way impair or affect any of the rights and powers of, or impose any duties or obligations upon, an Agent in its individual capacity as a Lender hereunder. With respect to its participation in the Loans and the Letters of Credit, an Agent shall have the same rights and powers hereunder as any other Lender and may exercise the same as though it were not performing the duties and functions delegated to it hereunder, and the term "Lender" or "Lenders" or any similar term shall, unless the context clearly otherwise indicates, include each Agent in its individual capacity. An Agent and its Affiliates may accept deposits from, lend money to, acquire equity interests in and generally engage in any kind of commercial banking, investment banking, trust, financial advisory or other business with the Borrowers or any of their Affiliates as if it were not performing the duties specified herein, and may accept fees and other consideration from Company for services in connection with this Agreement and otherwise without having to account for the same to Lenders.

9.3 Independent Investigation by Lenders; No Responsibility For Appraisal of Creditworthiness.

Each Lender agrees that it has made its own independent investigation of the financial condition and affairs of Company and its Subsidiaries in connection with the making of the Loans and the issuance of Letters of Credit hereunder and that it has made and shall continue to make its own appraisal of the creditworthiness of Company and its Subsidiaries. No Agent shall have any duty or responsibility, either initially or on a continuing basis, to make any such investigation or any such appraisal on behalf of Lenders or to provide any Lender with any credit or other information with respect thereto, whether coming into its possession before the making of the Loans or at any time or times thereafter, and no Agent shall have any responsibility with respect to the accuracy of or the completeness of any information provided to Lenders.

9.4 Right to Indemnity.

The Lenders, in proportion to their respective Pro Rata Shares (calculated as determined under the definition of "Pro Rata Share" with the Revolving Loan Exposure of any Defaulting Lender excluded from the denominator), severally and not jointly agree to indemnify each Agent (including any sub-agent of Administrative Agent) and the Issuing Lender and their respective Affiliates and their and their respective Affiliates' respective officers, directors, employees, agents, trustees, attorneys and professional advisors to the extent that any such Person shall not have been reimbursed by the Borrowers, for and against any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses (including reasonable counsel fees and disbursements and fees and disbursements of any financial advisor engaged by Agents or the Issuing Lender) or disbursements of any kind or nature whatsoever which may be imposed on, incurred by or asserted against an Agent, the Issuing Lender or such other Person in exercising the powers, rights and remedies of an Agent or Issuing Lender, as the case may be, or performing duties of an Agent or Issuing Lender, as the case may be, hereunder or under the other Loan Documents or otherwise in its capacity as Agent or Issuing Lender, as applicable, in any way relating to or arising out of this Agreement or the other Loan Documents; provided that no Lender shall be liable for any portion of such liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements of an Agent resulting solely from such Agent's gross negligence, bad faith or willful misconduct as determined by a final and nonappealable judgment of a court of

competent jurisdiction. If any indemnity furnished to an Agent, the Issuing Lender, or any other such Person for any purpose shall, in the opinion of such Agent or the Issuing Lender, as the case may be, be insufficient or become impaired, such Agent or the Issuing Lender may call for additional indemnity and cease, or not commence, to do the acts indemnified against until such additional indemnity is furnished. All amounts due under this subsection 9.4 shall be payable not later than ten (10) Business Days after demand therefore.

9.5 Resignation of Agents; Successor Administrative Agent, Issuing Lender and Swing Line Lender.

A. Resignation; Successor Administrative Agent. Administrative Agent may resign at any time by giving 30 days' prior written notice thereof to Lenders and Company. Upon any such notice of resignation by Administrative Agent, Requisite Lenders shall have the right, upon five (5) Business Days' notice to Company, to appoint a successor Administrative Agent, with the written consent of Company provided that no Event of Default has occurred and is continuing, which consent shall not be unreasonably withheld, and which successor shall be a bank with an office in the United States, or an Affiliate of any such bank with an office in the United States with net assets of not less than $1,000,000,000. If no such successor shall have been so appointed by Requisite Lenders and shall have accepted such appointment within 30 days after the retiring Administrative Agent gives notice of its resignation, the retiring Administrative Agent may, on behalf of Lenders, appoint a successor Administrative Agent; provided that if Administrative Agent shall notify Company and Lenders that no qualifying Person has accepted such appointment, then such resignation shall nonetheless become effective in accordance with such notice and (1) the retiring Administrative Agent shall be discharged from its duties and obligations hereunder and under the other Loan Documents (except that in the case of Securities and other items of Collateral held by Administrative Agent on behalf of the Lenders under any of the Collateral Documents, the retiring Administrative Agent shall continue to hold such collateral security until such time as a successor Administrative Agent is appointed) and (2) all payments, communications and determinations provided to be made by, to or through Administrative Agent shall instead be made by or to each Lender directly, until such time as the Requisite Lenders appoint a successor Administrative Agent as provided for in this subsection 9.5A. Upon the acceptance of any appointment as Administrative Agent hereunder by a successor Administrative Agent, that successor Administrative Agent shall thereupon succeed to and become vested with all the rights, powers, privileges and duties of the retiring (or retired) Administrative Agent and the retiring Administrative Agent shall promptly (i) transfer to such successor Administrative Agent all sums, Securities and other items of Collateral held under the Collateral Documents, together with all records and other documents necessary or appropriate in connection with the performance of the duties of the successor Administrative Agent under the Loan Documents, and (ii) execute and deliver to such successor Administrative Agent such amendments to financing statements, and take such other actions, as may be necessary or appropriate in connection with the assignment to such successor Administrative Agent of the security interests created under the Collateral Documents whereupon such retiring Administrative Agent shall be discharged from its duties and obligations hereunder. After any retiring Administrative Agent's resignation hereunder, the provisions of this Section 9 shall inure to the benefit of such retiring Administrative Agent, its sub-agents and their respective Related Parties as to any actions taken or omitted to be taken by any of them while the retiring Administrative Agent was an Administrative Agent under this Agreement.

B. Successor Issuing Lender and Swing Line Lender. Any resignation of Citizens Bank of Pennsylvania in its capacity as Administrative Agent pursuant to subsection 9.5A shall also constitute the resignation of Citizens Bank of Pennsylvania or its successor as Issuing Lender and Swing Line Lender, and any successor Administrative Agent appointed pursuant to subsection 9.5A shall, upon its acceptance of such appointment, become the successor Issuing Lender and Swing Line Lender for all purposes hereunder. In such event (i) Company shall prepay any outstanding Swing Line Loans made by

the retiring Administrative Agent in its capacity as Swing Line Lender, (ii) upon such prepayment, the retiring Administrative Agent and Swing Line Lender shall surrender any Swing Line Note held by it to Company for cancellation, (iii) if so requested by the successor Administrative Agent and Swing Line Lender in accordance with subsection 2.1E, Company shall issue a Swing Line Note to the successor Administrative Agent and Swing Line Lender substantially in the form of Exhibit IV annexed hereto, in the amount of the Swing Line Loan Commitment then in effect and with other appropriate insertions, and (iv) the successor Issuing Lender shall issue letters of credit in substitution for the Letters of Credit, if any, outstanding at the time of such succession or make other arrangements satisfactory to the retiring Issuing Lender to effectively assume the obligations of the retiring Issuing Lender with respect to such Letters of Credit.

C. Replacement of Administrative Agent.

(i) If the Person serving as Administrative Agent is a Defaulting Lender pursuant to clause (e) of the definition thereof, the Requisite Lenders may, to the extent permitted by applicable law, by notice in writing to the Company and such Person remove such Person as Administrative Agent and, in consultation with the Borrower, appoint a successor. If no such successor shall have been so appointed by the Requisite Lenders and shall have accepted such appointment within thirty (30) days (or such earlier day as shall be agreed by the Requisite Lenders) (the "Removal Effective Date"), then such removal shall nonetheless become effective in accordance with such notice on the Removal Effective Date.

(ii) With effect from the Removal Effective Date (A) the removed Administrative Agent shall be discharged from its duties and obligations hereunder and under the other Loan Documents (except that in the case of any Collateral held by the Administrative Agent on behalf of the Lenders or the Issuing Lender under any of the Loan Documents, the retiring Administrative Agent shall continue to hold such Collateral until such time as a successor Administrative Agent is appointed) and (B) except for any indemnity payments owed to the removed Administrative Agent, all payments, communications and determinations provided to be made by, to or through the Administrative Agent shall instead be made by or to each Lender and the Issuing Lender directly, until such time, if any, as the Requisite Lenders appoint a successor Administrative Agent as provided for above. Upon the acceptance of a successor's appointment as Administrative Agent hereunder, such successor shall succeed to and become vested with all of the rights, powers, privileges and duties of the removed Administrative Agent (other than any rights to indemnity payments owed to the retiring or removed Administrative Agent), and the removed Administrative Agent shall be discharged from all of its duties and obligations hereunder or under the other Loan Documents (if not already discharged therefrom as provided above in this paragraph). The fees payable by the Borrower to a successor Administrative Agent shall be the same as those payable to its predecessor unless otherwise agreed between the Borrower and such successor. After the removed Administrative Agent's removal hereunder and under the other Loan Documents, the provisions of this Article and Section 10.3 shall continue in effect for the benefit of such removed Administrative Agent, its sub-agents and their respective Related Parties in respect of any actions taken or omitted to be taken by any of them while the retiring or removed Administrative Agent was acting as Administrative Agent.

9.6 Collateral Documents and Guaranties.

Each Lender (which term shall include, for purposes of this subsection 9.6, any Cash Management Bank and Hedge Counterparty) hereby further authorizes Administrative Agent, on behalf of and for the benefit of Lenders, to enter into, and to be the agent for and representative of Lenders under, each Collateral Document and each Guaranty, and each Lender agrees to be bound by the terms of

each Collateral Document and each Guaranty; provided that Administrative Agent shall not (i) enter into or consent to any material amendment, modification, termination or waiver of any provision contained in any Collateral Document or any Guaranty or (ii) release any Collateral (except as otherwise expressly permitted or required pursuant to the terms of this Agreement or the applicable Collateral Document), in each case without the prior consent of Requisite Lenders (or, if required pursuant to subsection 10.6, all Lenders (other than Defaulting Lenders)); provided further, however, that, without further written consent or authorization from Lenders, Administrative Agent may execute any documents or instruments necessary to (a) release any Lien (1) upon termination of the aggregate Commitments and payment in full of all Obligations (other than contingent indemnification obligations) and the expiration or termination of all Letters of Credit (other than Letters of Credit as to which other arrangements satisfactory to Administrative Agent and the Issuing Lender and, to the extent a Lender is obligated under such Letter of Credit, such Lender shall have been made), (2) encumbering any item of Collateral that is the subject of a sale or other disposition of assets permitted by this Agreement, (3) to which Requisite Lenders have otherwise consented or ratified in writing (or such greater number of Lenders as may be required pursuant to subsection 10.6), or (4) in accordance with Section 6.8D, (b) release any Subsidiary Guarantor or Foreign Subsidiary Guarantor its Guaranty (1) upon termination of the aggregate Commitments and payment in full of all Obligations (other than contingent indemnification obligations) and the expiration or termination of all Letters of Credit (other than Letters of Credit as to which other arrangements satisfactory to Administrative Agent and the Issuing Lender and, to the extent a Lender is obligated under such Letter of Credit, such Lender shall have been made), (2) if all of the Capital Stock of such Subsidiary Guarantor or Foreign Subsidiary Guarantor is sold to any Person (other than an Affiliate of Company) pursuant to a sale or other disposition permitted hereunder or to which Requisite Lenders have otherwise consented (or such greater number of Lenders as may be required pursuant to subsection 10.6) or (3) in accordance with Section 6.8D, or (c) subordinate the Liens of Administrative Agent, on behalf of Lenders, to any Liens permitted by subsection 7.2A(ii), (iii), (iv) or (v) or to other Liens permitted by subsection 7.2A as to which the Requisite Lenders have consented. Upon the request of Administrative Agent at any time, the Requisite Lenders will confirm in writing Administrative Agent's authority to release or subordinate its interest in particular types or items of property, or to release any Subsidiary Guarantor or Foreign Subsidiary Guarantor from its obligations under its Guaranty pursuant to this subsection 9.6. Anything contained in any of the Loan Documents to the contrary notwithstanding, Borrowers, Administrative Agent and each Lender hereby agree that (1) no Lender shall have any right individually to realize upon any of the Collateral under any Collateral Document or to enforce the Guaranties, it being understood and agreed that all powers, rights and remedies under the Collateral Documents and the Guaranties may be exercised solely by Administrative Agent for the benefit of Lenders in accordance with the terms thereof, and (2) in the event of a foreclosure by Administrative Agent on any of the Collateral pursuant to a public or private sale, Administrative Agent or any Lender may be the purchaser of any or all of such Collateral at any such sale and Administrative Agent, as agent for and representative of Lenders (but not any Lender or Lenders in its or their respective individual capacities unless Requisite Lenders shall otherwise agree in writing) shall be entitled, for the purpose of bidding and making settlement or payment of the purchase price for all or any portion of the Collateral sold at any such public sale, to use and apply any of the Obligations as a credit on account of the purchase price for any Collateral payable by Administrative Agent at such sale.

Without derogating from any other authority granted to Administrative Agent herein or in the Collateral Documents or any other document relating thereto, each Lender hereby specifically (i) authorizes Administrative Agent to enter into pledge agreements pursuant to this subsection 9.6 with respect to the Capital Stock of all existing and future Foreign Subsidiaries to the extent contemplated herein, which pledge agreements may be governed by the laws of each of the jurisdictions of formation of such Foreign Subsidiaries, as agent on behalf of each of Lenders, with the effect that Lenders each become a secured party thereunder or, where relevant in a jurisdiction, as agent and trustee, with the effect that Lenders each become a beneficiary of a trust and Administrative Agent has all the rights,

powers, discretions, protections and exemptions from liability set out in the pledge agreements and (ii) except in connection with any such pledge agreement for a jurisdiction in which Administrative Agent holds the Capital Stock as agent and trustee for Lenders, appoints Administrative Agent as its attorney-in-fact granting it the powers to execute each such pledge agreement and any registrations of the security interest thereby created, in each case in its name and on its behalf, with the effect that each Lender becomes a secured party thereunder. With respect to each such pledge agreement, Administrative Agent has the power to sub-delegate to third parties its powers as attorney-in-fact of each Lender.

9.7 Duties of Other Agents.

To the extent that any Lender is identified in this Agreement as a co-agent, documentation agent or syndication agent, such Lender shall not have any right, power, obligation, liability, responsibility or duty under this Agreement other than those applicable to all Lenders as such. Without limiting the foregoing, none of such Lenders shall have or be deemed to have a fiduciary relationship with any Lender.

9.8 Administrative Agent May File Proofs of Claim.

In case of the pendency of any receivership, insolvency, liquidation, bankruptcy, reorganization, arrangement, adjustment, composition or other judicial proceeding relative to Company or any of the Subsidiaries of Company, Administrative Agent (irrespective of whether the principal of any Loan shall then be due and payable as herein expressed or by declaration or otherwise and irrespective of whether Administrative Agent shall have made any demand on Company) shall be entitled and empowered, by intervention in such proceeding or otherwise

(i) to file and prove a claim for the whole amount of principal and interest owing and unpaid in respect of the Loans and any other Obligations that are owing and unpaid and to file such other papers or documents as may be necessary or advisable in order to have the claims of Lenders and Agents (including any claim for the reasonable compensation, expenses, disbursements and advances of Lenders and Agents and their agents and counsel and all other amounts due Lenders and Agents under subsections 2.3 and 10.2) allowed in such judicial proceeding, and

(ii) to collect and receive any moneys or other property payable or deliverable on any such claims and to distribute the same;

and any custodian, receiver, assignee, trustee, liquidator, sequestrator or other similar official in any such judicial proceeding is hereby authorized by each Lender to make such payments to Administrative Agent and, in the event that Administrative Agent shall consent to the making of such payments directly to any Lenders, to pay to Administrative Agent any amount due for the reasonable compensation, expenses, disbursements and advances of Agents and their agents and counsel, and any other amounts due Agents under subsections 2.3 and 10.2.

Nothing herein contained shall be deemed to authorize Administrative Agent to authorize or consent to or accept or adopt on behalf of any Lender any plan of reorganization, arrangement, adjustment or composition affecting the Obligations or the rights of any Lenders or to authorize Administrative Agent to vote in respect of the claim of any Lender in any such proceeding.

Each Lender will execute, acknowledge and deliver upon demand any other instruments, in form and substance reasonably acceptable to the Administrative Agent, that the Administrative Agent reasonably requires in order to carry out the provisions of this Section 9.8.

9.9 Secured Cash Management Agreements and Secured Hedge Agreements.

No Cash Management Bank or Hedge Counterparty that obtains the benefit of the provisions of Section 9, any Guaranty or any Collateral by virtue of the provisions hereof or of any Guaranty or any Collateral Document shall have any right to notice of any action or to consent to, direct or object to any action hereunder or under any other Loan Document or otherwise in respect of the Collateral (including the release or impairment of any Collateral) other than in its capacity as a Lender and, in such case, only to the extent expressly provided in the Loan Documents. Notwithstanding any other provision of this Section 9 to the contrary, Administrative Agent shall only be required to verify the payment of, or that other satisfactory arrangements have been made with respect to, Obligations arising under Secured Cash Management Agreements and Secured Hedge Agreements to the extent Administrative Agent has received written notice of such Obligations, together with such supporting documentation as Administrative Agent may request, from the applicable Cash Management Bank or Hedge Counterparty, as the case may be.

9.10 Exculpatory Provisions.

Administrative Agent shall not have any duties or obligations except those expressly set forth herein and in the other Loan Documents. Without limiting the generality of the foregoing, Administrative Agent:

(i) shall not be subject to any fiduciary or other implied duties, regardless of whether a Default has occurred and is continuing;

(ii) shall not have any duty to take any discretionary action or exercise any discretionary powers, except discretionary rights and powers expressly contemplated hereby or by the other Loan Documents that Administrative Agent is required to exercise as directed in writing by the Requisite Lenders (or such other number or percentage of the Lenders as shall be expressly provided for herein or in the other Loan Documents), provided that Administrative Agent shall not be required to take any action that, in its opinion or the opinion of its counsel, may expose Administrative Agent to liability or that is contrary to any Loan Document or applicable law; and

(iii) shall not, except as expressly set forth herein and in the other Loan Documents, have any duty to disclose, and shall not be liable for the failure to disclose, any information relating to Company or any of its Affiliates that is communicated to or obtained by the Person serving as Administrative Agent or any of its Affiliates in any capacity.

Administrative Agent shall not be liable for any action taken or not taken by it (A) with the consent or at the request of the Requisite Lenders (or such other number or percentage of the Lenders as shall be necessary, or as Administrative Agent shall believe in good faith shall be necessary, under the circumstances as provided in subsection 10.6 and Section 8) or (B) in the absence of its own gross negligence, willful misconduct or breach in bad faith. Administrative Agent shall be deemed not to have knowledge of any Potential Event of Default unless and until notice describing such Potential Event of Default is given to Administrative Agent by a Borrower, a Lender or the Issuing Lender.

Administrative Agent shall not be responsible for or have any duty to ascertain or inquire into (A) any statement, warranty or representation made in or in connection with this Agreement or any other Loan Document, (B) the contents of any certificate, report or other document delivered hereunder or thereunder or in connection herewith or therewith, (C) the performance or observance of any of the covenants, agreements or other terms or conditions set forth herein or therein or the occurrence of any Potential Event of Default, (D) the validity, enforceability, effectiveness or genuineness of this

Agreement, any other Loan Document or any other agreement, instrument or document or (E) the satisfaction of any condition set forth in Section 4 or elsewhere herein, other than to confirm receipt of items expressly required to be delivered to Administrative Agent.

9.11 Reliance by Administrative Agent.

Administrative Agent shall be entitled to rely upon, and shall not incur any liability for relying upon, any notice, request, certificate, consent, statement, instrument, document or other writing (including any electronic message, Internet or intranet website posting or other distribution) reasonably believed by it to be genuine and to have been signed, sent or otherwise authenticated by the proper Person. Administrative Agent also may rely upon any statement made to it orally or by telephone and reasonably believed by it to have been made by the proper Person, and shall not incur any liability for relying thereon. In determining compliance with any condition hereunder to the making of a Loan, or the issuance of a Letter of Credit, that by its terms must be fulfilled to the satisfaction of a Lender or the Issuing Lender, Administrative Agent may presume that such condition is satisfactory to such Lender or the Issuing Lender unless Administrative Agent shall have received notice to the contrary from such Lender or the Issuing Lender prior to the making of such Loan or the issuance of such Letter of Credit. Administrative Agent may consult with legal counsel (who may be counsel for Company), independent accountants and other experts selected by it, and shall not be liable for any action taken or not taken by it in accordance with the advice of any such counsel, accountants or experts.

SECTION 10. MISCELLANEOUS

10.1 Successors and Assigns; Assignments and Participations in Loans and Letters of Credit.

A. General. This Agreement shall be binding upon the parties hereto and their respective successors and assigns and shall inure to the benefit of the parties hereto and the successors and assigns of Lenders (it being understood that Lenders' rights of assignment are subject to the further provisions of this subsection 10.1). No Borrower's rights or obligations hereunder nor any interest therein may be assigned or delegated by such Borrower without the prior written consent of all Lenders (other than Defaulting Lenders) (and any attempted assignment or transfer by a Borrower without such consent shall be null and void). No sale, assignment or transfer or participation of any Letter of Credit or any participation therein may be made separately from a sale, assignment, transfer or participation of a corresponding interest in the Revolving Loan Commitment and the Revolving Loans of the Revolving Lender effecting such sale, assignment, transfer or participation. Anything contained herein to the contrary notwithstanding, except as provided in subsection 2.1A(iii) and subsection 10.5, the Swing Line Loan Commitment and the Swing Line Loans of Swing Line Lender may not be sold, assigned or transferred as described below to any Person other than a successor Administrative Agent and Swing Line Lender to the extent contemplated by subsection 9.5. Nothing in this Agreement, expressed or implied, shall be construed to confer upon any Person (other than the parties hereto, their respective successors and assigns permitted hereby and, to the extent expressly contemplated hereby, the Indemnitees) any legal or equitable right, remedy or claim under or by reason of this Agreement.

B. Assignments.

(i) Amounts and Terms of Assignments. Any Lender may assign to one or more Eligible Assignees all or any portion of its rights and obligations under this Agreement; provided that (a), except (1) in the case of an assignment of the entire remaining amount of the assigning Lender's rights and obligations under this Agreement or (2) in the case of an assignment to a Lender or an Affiliate of a Lender or an Approved Fund of a Lender, the aggregate amount of the Revolving Loan Exposure of the assigning Lender and the assignee subject to each such

assignment shall not be less than $5,000,000, unless each of Administrative Agent and, so long as no Event of Default has occurred and is continuing, Company otherwise consents (each such consent not to be unreasonably withheld or delayed), (b) each partial assignment shall be made as an assignment of a proportionate part of all the assigning Lender's rights and obligations under this Agreement with respect to the Loan or the Commitment assigned, and any assignment of all or any portion of a Revolving Loan Commitment, Revolving Loan or Letter of Credit participation shall be made only as an assignment of the same proportionate part of the assigning Lender's Revolving Loan Commitment, Revolving Loans and Letter of Credit participations, (c) the parties to each assignment shall (I) electronically execute and deliver to Administrative Agent an Assignment Agreement via an electronic settlement system acceptable to Administrative Agent or (II) manually execute and deliver to Administrative Agent an Assignment Agreement, together with a processing and recordation fee of $3,500, copies of all of which shall be provided promptly to the Company; provided, however , that Administrative Agent may, in its sole discretion, elect to waive such processing and recordation fee in the case of any assignment (unless the assignee is an Affiliate or an Approved Fund of the assignor, in which case no fee shall be required, and provided that only one such processing and recordation fee shall be required in connection with concurrent assignments to two or more Affiliated Funds), and the Eligible Assignee, if it shall not be a Lender, shall deliver to Administrative Agent information reasonably requested by Administrative Agent, including such forms, certificates or other evidence, if any, with respect to United States federal income tax withholding matters as the assignee under such Assignment Agreement may be required to deliver to Administrative Agent pursuant to subsection 2.7B(viii) and with respect to information requested under the Patriot Act, (d), except in the case of an assignment to another Lender or an Affiliate of a Lender or an Approved Fund of a Lender, each of (I) Administrative Agent and (II) if no Event of Default has occurred and is continuing, Company, shall have consented thereto (in each case, which consents shall not be unreasonably withheld or delayed), (e) solely in the case of assignments of all or any portion of a Revolving Loan Commitment, Revolving Loans and Letter of Credit participations, Swing Line Lender and Issuing Lender shall have consented thereto (which consents shall not be unreasonably withheld or delayed) and (f) in the case of an assignment to an Approved Fund of a Lender, if no Event of Default has occurred and is continuing, promptly following such assignment, Company shall have received notice thereof from Administrative Agent, which such notice shall be delivered promptly upon the execution of an Assignment Agreement clearly identifying the assignment to an Approved Fund. No assignments shall be made to hedge funds without the consent of the Company (unless an Event of Default has occurred and is continuing).

No such assignment shall be made (A) to a Borrower or any of such Borrower's Affiliates or Subsidiaries, (B) to any Defaulting Lender or any of its Affiliates or Subsidiaries, or any Person who, upon becoming a Lender hereunder, would constitute any of the foregoing Persons described in this clause (B), (C) to a natural person, or (D) to any Person that, through its applicable lending office, is not capable of lending the applicable Alternative Currencies to the relevant Borrower without the imposition of any additional Indemnified Taxes or (E) to any Competitor. No such assignment shall be made to any Person that, through its Funding and Payment Offices, is not capable of lending the applicable Alternative Currencies to the relevant Borrowers without the imposition of additional Indemnified Taxes.

Upon acceptance and recording by Administrative Agent pursuant to clause (ii) below, from and after the effective date specified in such Assignment Agreement, (y) the assignee thereunder shall be a party hereto and, to the extent that rights and obligations hereunder have been assigned to it pursuant to such Assignment Agreement, shall have the rights and obligations of, and shall become, a Lender hereunder and shall be deemed to have made all of the agreements of a Lender contained in the Loan Documents arising out of or otherwise related to such rights and

obligations and (z) the assigning Lender thereunder shall, to the extent that rights and obligations hereunder have been assigned by it pursuant to such Assignment Agreement, relinquish its rights (other than any rights which survive the termination of this Agreement under subsection 10.9B) and be released from its obligations under this Agreement (and, in the case of an Assignment Agreement covering all or the remaining portion of an assigning Lender's rights and obligations under this Agreement, such Lender shall cease to be a party hereto; provided that, anything contained in any of the Loan Documents to the contrary notwithstanding, if such Lender is an Issuing Lender such Lender shall continue to have all rights and obligations of an Issuing Lender until the cancellation or expiration of any Letters of Credit issued by it and the reimbursement of any amounts drawn thereunder). The assigning Lender shall, upon the effectiveness of such assignment or as promptly thereafter as practicable, surrender its Notes, if any, to Administrative Agent for cancellation, and thereupon new Notes shall, if so requested by the assignee and/or the assigning Lender in accordance with subsection 2.1E, be issued to the assignee and/or to the assigning Lender, substantially in the form of Exhibit III annexed hereto, as the case may be, with appropriate insertions, to reflect the amounts of the new Commitments and/or outstanding Revolving Loans, as the case may be, of the assignee and/or the assigning Lender. Other than as provided in subsection 2.1A(iii) and subsection 10.5, any assignment or transfer by a Lender of rights or obligations under this Agreement that does not comply with this subsection 10.1B shall be treated for purposes of this Agreement as a sale by such Lender of a participation in such rights and obligations in accordance with subsection 10.1C.

In connection with any assignment of rights and obligations of any Defaulting Lender hereunder, no such assignment shall be effective unless and until, in addition to the other conditions thereto set forth herein, the parties to the assignment shall make such additional payments to Administrative Agent in an aggregate amount sufficient, upon distribution thereof as appropriate (which may be outright payment, purchases by the assignee of participations or subparticipations, or other compensating actions, including funding, with the consent of Company and Administrative Agent, the applicable pro rata share of Revolving Loans previously requested but not funded by the Defaulting Lender, to each of which the applicable assignee and assignor hereby irrevocably consent), to (x) pay and satisfy in full all payment liabilities then owed by such Defaulting Lender to Administrative Agent or any Lender hereunder (and interest accrued thereon) and (y) acquire (and fund as appropriate) its full pro rata share of all Revolving Loans and participations in Letters of Credit and Swing Line Loans in accordance with its Pro Rata Share. Notwithstanding the foregoing, in the event that any assignment of rights and obligations of any Defaulting Lender hereunder shall become effective under applicable law without compliance with the provisions of this paragraph, then the assignee of such interest shall be deemed to be a Defaulting Lender for all purposes of this Agreement until such compliance occurs.

(ii) Acceptance by Administrative Agent; Recordation in Register. Upon its receipt of an Assignment Agreement executed by an assigning Lender and an assignee representing that it is an Eligible Assignee, together with the processing and recordation fee referred to in subsection 10.1B(i) and any forms, certificates or other evidence with respect to United States federal income tax withholding matters that such assignee may be required to deliver to Administrative Agent pursuant to subsection 2.7B(viii), Administrative Agent shall, if Administrative Agent and Company have consented to the assignment evidenced thereby (in each case to the extent such consent is required pursuant to subsection 10.1B(i)), (a) accept such Assignment Agreement by executing a counterpart thereof as provided therein (which acceptance shall evidence any required consent of Administrative Agent to such assignment), (b) record the information contained therein in the Register, and (c) give prompt notice thereof to Company.

Administrative Agent shall maintain a copy of each Assignment Agreement delivered to and accepted by it as provided in this subsection 10.1B(ii)

(iii) Deemed Consent by Company. If the consent of Company to an assignment or to an Eligible Assignee is required hereunder (including a consent to an assignment which does not meet the minimum assignment thresholds specified in subsection 10.1B(i)), Company shall be deemed to have given its consent ten (10) Business Days after the date notice thereof has been delivered to Company unless such consent is expressly refused by Company prior to such tenth Business Day.

(iv) Special Purpose Funding Vehicles. Notwithstanding anything to the contrary contained herein, any Lender (a **"Granting Lender"**) may grant to a special purpose funding vehicle (a **"SPC"**), identified as such in writing from time to time by the Granting Lender to Administrative Agent and Company, the option to provide to Company all or any part of any Loan that such Granting Lender would otherwise be obligated to make to Company pursuant to this Agreement; provided that (i) nothing herein shall constitute a commitment by any SPC to make any Loan, and (ii) if an SPC elects not to exercise such option or otherwise fails to provide all or any part of such Loan, the Granting Lender shall be obligated to make such Loan pursuant to the terms hereof. The making of a Loan by an SPC hereunder shall utilize the Commitment of the Granting Lender to the same extent, and as if, such Loan were made by such Granting Lender. Each party hereto hereby agrees that (i) no SPC shall be liable for any indemnity or similar payment obligation under this Agreement (all liability for which shall remain with the Granting Lender) and (ii) Granting Lender's rights and obligations, and the rights and obligations of the Loan Parties and the other Lenders towards such Granting Lender, under any Loan Document shall remain unchanged and each other party hereto shall continue to deal solely with such Granting Lender, which shall remain the holder of the Obligations in the Register. In furtherance of the foregoing, each party hereto hereby agrees (which agreement shall survive the termination of this Agreement) that, prior to the date that is one year and one day after the payment in full of all outstanding commercial paper or other senior indebtedness of any SPC, it will not institute against, or join any other person in instituting against, such SPC any bankruptcy, reorganization, arrangement, insolvency or liquidation proceedings under the laws of the United States or any state thereof. In addition, notwithstanding anything to the contrary contained in this subsection 10.1B(iv), any SPC may (i) with notice to, but without the prior written consent of, Company and Administrative Agent and without paying any processing fee therefor, assign all or a portion of its interests in any Loans to the Granting Lender or to any financial institutions (consented to by Company and Administrative Agent) providing liquidity and/or credit support to or for the account of such SPC to support the funding or maintenance of Loans and (ii) disclose on a confidential basis any non-public information relating to its Loans to any rating agency, commercial paper dealer or provider of any surety, guarantee or credit or liquidity enhancement to such SPC to the extent permitted by the terms of this Agreement. This subsection 10.1B(iv) may not be amended without the written consent of any SPC existing at the time of such amendment. Each Granting Lender shall, acting for this purpose as an agent of Company, maintain at one of its offices a register substantially similar to the Register for the recordation of the names and addresses of its assignees and the amount and terms of its assignments pursuant to this subsection 10.1(B)(iv) and no such assignment shall be effective until and unless it is recorded in such register.

C. Participations. Any Lender may, without the consent of, or notice to, Company or Administrative Agent, sell participations to one or more Persons (other than a natural Person, a Defaulting Lender, Company or any of its Affiliates) in all or a portion of such Lender's rights and/or obligations under this Agreement; provided that (i) such Lender's obligations under this Agreement shall remain

unchanged, (ii) such Lender shall remain solely responsible to the other parties hereto for the performance of such obligations and (iii) Company, Administrative Agent and Lenders shall continue to deal solely and directly with such Lender in connection with such Lender's rights and obligations under this Agreement. Any agreement or instrument pursuant to which a Lender sells such a participation shall provide that such Lender shall retain the sole right to enforce this Agreement and to approve any amendment, modification or waiver of any provision of this Agreement; provided that such agreement or instrument may provide that such Lender will not, without the consent of the Participant, agree to any amendment, modification or waiver directly affecting (i) an extension of the scheduled final maturity date of any Loan allocated to such participation, (ii) a reduction of the principal amount of or the rate of interest payable on any Loan allocated to such participation or (iii) an increase in the Commitment allocated to such participation. Subject to the further provisions of this subsection 10.1C, Company agrees that each Participant shall be entitled to the benefits of subsections 2.6D and 2.7 to the same extent as if it were a Lender and had acquired its interest by assignment pursuant to subsection 10.1B. To the extent permitted by law, each Participant also shall be entitled to the benefits of subsection 10.4 as though it were a Lender, provided such Participant agrees to be subject to subsection 10.5 as though it were a Lender. A Participant shall not be entitled to receive any greater payment under subsections 2.6D and 2.7 than the applicable Lender would have been entitled to receive with respect to the participation sold to such Participant unless the sale of the participation to such Participant is made with Company's prior written consent. No Participant shall be entitled to the benefits of subsection 2.7 unless (i) Company is notified of the participation sold to such Participant, (ii) such Participant agrees, for the benefit of Company, to comply with subsection 2.7B(viii) as though it were a Lender and (iii) such Participant and its respective participation are recorded in the Register in accordance with subsection 2.1D as though such Participant were a Lender.

D. Pledges and Assignments. Any Lender may without the consent of Administrative Agent or Company at any time pledge or assign a security interest in all or any portion of its Loans, and the other Obligations owed to such Lender, to secure obligations of such Lender, including without limitation any pledge or assignment to secure obligations to any Federal Reserve Bank; provided that (i) no Lender shall be relieved of any of its obligations hereunder as a result of any such assignment or pledge and (ii) in no event shall any assignee or pledgee be considered to be a "Lender" or be entitled to require the assigning Lender to take or omit to take any action hereunder.

E. Information. Each Lender may furnish any information concerning Company and its Subsidiaries in the possession of that Lender from time to time to assignees and participants (including prospective assignees and participants), to the extent permitted under subsection 10.18.

F. Agreements of Lenders. Each Lender listed on the signature pages hereof hereby agrees, and each Lender that becomes a party hereto pursuant to an Assignment Agreement shall be deemed to agree, (i) that it is an Eligible Assignee; (ii) that it has experience and expertise in the making of or purchasing loans such as the Loans; and (iii) that it will make or purchase Loans for its own account in the ordinary course of its business and without a view to distribution of such Loans within the meaning of the Securities Act or the Exchange Act or other federal securities laws (it being understood that, subject to the provisions of this subsection 10.1, the disposition of such Loans or any interests therein shall at all times remain within its exclusive control). Each Lender that becomes a party hereto pursuant to an Assignment Agreement shall be deemed to represent that such Assignment Agreement constitutes a legal, valid and binding obligation of such Lender, enforceable against such Lender in accordance with its terms, except as enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting creditors' rights generally and by general principles of equity.

G. Resignation as Issuing Lender or Swing Line Lender after Assignment. Notwithstanding anything to the contrary contained herein, if at any time Citizens Bank of

Pennsylvania assigns all of its Revolving Loan Commitment and Revolving Loans pursuant to subsections 10.1A and 10.1B above, Citizens Bank of Pennsylvania may, (i) upon 30 days' notice to Company and the Lenders, resign as Issuing Lender and/or (ii) upon 30 days' notice to Company, resign as Swing Line Lender. In the event of any such resignation as Issuing Lender or Swing Line Lender, Company shall be entitled to appoint from among the Lenders a successor Issuing Lender or Swing Line Lender hereunder; provided, however, that no failure by Company to appoint any such successor shall affect the resignation of Citizens Bank of Pennsylvania as Issuing Lender or Swing Line Lender, as the case may be. If Citizens Bank of Pennsylvania resigns as Issuing Lender, it shall retain all the rights, powers, privileges and duties of Issuing Lender hereunder with respect to all Letters of Credit outstanding as of the effective date of its resignation as Issuing Lender and all Letter of Credit Usage with respect thereto (including the right to require the Lenders to make Revolving Loans that are Base Rate Loans or fund risk participations pursuant to subsection 3.3). If Citizens Bank of Pennsylvania resigns as Swing Line Lender, it shall retain all the rights of the Swing Line Lender provided for hereunder with respect to Swing Line Loans made by it and outstanding as of the effective date of such resignation, including the right to require the Lenders to make Revolving Loans that are Base Rate Loans or fund risk participations in outstanding Swing Line Loans pursuant to subsection 2.1A(iii). Upon the appointment of a successor Issuing Lender and/or Swing Line Lender, (a) such successor shall succeed to and become vested with all of the rights, powers, privileges and duties of the retiring Issuing Lender or Swing Line Lender, as the case may be, and (b) the successor Issuing Lender shall issue letters of credit in substitution for the Letters of Credit, if any, outstanding at the time of such succession or make other arrangements satisfactory to Citizens Bank of Pennsylvania to effectively assume the obligations of Citizens Bank of Pennsylvania with respect to such Letters of Credit.

H. Withholding Taxes. If a Lender assigns or transfers any of its rights or obligations under this Agreement or changes its Facility Office, and as a result of circumstances existing at the date the assignment, transfer or change occurs, a UK Borrower would be obliged to make a payment to an assignee or transferee Lender or Lender acting through its new Facility Office under subsection 2.7A or subsection 2.7B, then such Lender shall only be entitled to receive payment under those subsections to the same extent as the assignor or transferor Lender or Lender acting through its previous Facility Office would have been if the assignment, transfer or change had not occurred; provided, this subsection 10.1H shall not apply: (a) in respect of an assignment or transfer made in the ordinary course of the primary syndication of the Loans; or (b) in relation to subsection 2.7B, to a UK Treaty Lender that has provided the relevant UK Borrower in writing a confirmation of its scheme reference number and jurisdiction of tax residence in accordance with subsection 2.7B(v) if that Borrower has not made a UK Borrower DTTP Filing in respect of that Lender.

10.2 Expenses.

Whether or not the transactions contemplated hereby shall be consummated, the Borrowers agree, subject to the Fee Letter, to pay promptly (i) all reasonable and documented out-of-pocket costs and expenses of the Administrative Agent with respect to the negotiation, preparation, execution, delivery and administration of the Loan Documents and any consents, amendments, waivers or other modifications thereto; (ii) all reasonable and documented out-of-pocket fees, expenses and disbursements of a single counsel and a single local or foreign counsel in each applicable jurisdiction (if reasonably required by the Administrative Agent) to Administrative Agent (excluding allocated costs of internal counsel) in connection with the negotiation, preparation, execution and administration of the Loan Documents and any consents, amendments, waivers or other modifications thereto and any other documents or matters requested by the Borrowers; (iii) all reasonable and documented out-of-pocket costs and expenses of creating and perfecting Liens in favor of Administrative Agent on behalf of the Secured Parties pursuant to any Collateral Document, including filing and recording fees, expenses and taxes, stamp or documentary taxes, search fees, and reasonable fees, expenses and disbursements of counsel to

Administrative Agent (such fees and expense of counsel to be limited to a single counsel and a single local or foreign counsel to the Administrative Agent in each applicable jurisdiction, if reasonably required by the Administrative Agent, and shall exclude allocated costs of internal counsel); (iv) all other reasonable and documented out-of-pocket costs and expenses incurred by Administrative Agent and its Affiliates in connection with the syndication of the Commitments; (v) all reasonable and documented out-of-pocket costs and expenses, including reasonable and documented attorneys' fees and expenses (such fees and expense of counsel to be limited to a single counsel and a single local or foreign counsel to the Administrative Agent in each applicable jurisdiction, if reasonably required by the Administrative Agent, and shall exclude allocated costs of internal counsel) and fees, costs and expenses of accountants, advisors and consultants, incurred by Administrative Agent relating to efforts to (a) evaluate or assess any Loan Party, its business or financial condition and (b) protect, evaluate or assess any of the Collateral; (vi) all reasonable and documented out-of-pocket costs and expenses, including reasonable attorneys' fees, fees, costs and expenses of accountants, advisors and consultants and costs of settlement, incurred by Administrative Agent and any Lenders (provided that the expenses of the Lenders shall be limited to one counsel for the Lenders as a group) in enforcing any Obligations of or in collecting any payments due from any Loan Party hereunder or under the other Loan Documents (including in connection with the sale of, collection from, or other realization upon any of the Collateral or the enforcement of the Loan Documents) or in connection with any refinancing or restructuring of the credit arrangements provided under this Agreement in the nature of a "work-out" or pursuant to any insolvency or bankruptcy proceedings; and (vii) all reasonable and documented ordinary course out-of-pocket costs and expenses incurred by the Issuing Lender in connection with the issuance, amendment, renewal or extension of any Letter of Credit or any demand for payment thereunder. Upon the written request of any Borrower, the party requesting reimbursement pursuant to this subsection 10.2 shall provide the applicable Borrower with documentation which in good faith supports such reimbursement request.

10.3 Indemnity.

In addition to the payment of expenses pursuant to subsection 10.2, whether or not the transactions contemplated hereby shall be consummated, each Borrower agrees to defend (subject to Indemnitees' selection of counsel), indemnify, pay and hold harmless Agents (and any sub-agents of Administrative Agent) and Lenders (including Issuing Lenders), and partners, officers, directors, employees, agents, trustees and advisors of Agents, Lenders and Affiliates of Agents and Lenders (and the partners, officers, directors, employees, agents, trustees and advisors of such Affiliates) (each, an **"Indemnitee"** and collectively called the **"Indemnitees"**), from and against any and all Indemnified Liabilities (as hereinafter defined); provided that no Borrower shall have any obligation to any Indemnitee hereunder with respect to any Indemnified Liabilities to the extent such Indemnified Liabilities arise from (a) the gross negligence, bad faith or willful misconduct of such Indemnitee, (b) a material breach by such Indemnitee of its obligations under the Loan Documents or (c) any dispute solely among Indemnitees (provided that, if such dispute involves a claim or proceeding against any Indemnitee, in its capacity as Joint Lead Arranger, Joint Lead Manager or Administrative Agent by other Indemnitees, such Indemnitee shall be entitled, subject to the other limitations and exceptions set forth herein, to the benefits of the indemnification provided for in this Section), in each case as determined by a final and nonappealable judgment of a court of competent jurisdiction.

As used herein, **"Indemnified Liabilities"** means, collectively, any and all liabilities, obligations, losses, damages (including natural resource damages), penalties, actions, judgments, suits, claims (including Environmental Claims), costs (including the costs of any investigation, study, sampling, testing, abatement, cleanup, removal, remediation or other response action necessary to remove, remediate, clean up or abate any Hazardous Materials Activity), reasonable and documented expenses and disbursements of any kind or nature whatsoever (including the reasonable fees and disbursements of counsel for Indemnitees (provided that such counsel shall be limited to (x) one counsel for all

Indemnitees, (y) one firm of local counsel for all Indemnitees in each applicable jurisdiction in which Administrative Agent reasonably determines such local counsel to be necessary, and (z) to the extent such Indemnitee determines, after consultation with legal counsel, that an actual or potential conflict of interest may require use of separate counsel by such Indemnitee, another firm of counsel for such affected Indemnitee) in connection with any investigative, administrative or judicial proceeding commenced or threatened by any Person, whether or not any such Indemnitee shall be designated as a party or a potential party thereto, and any fees or expenses incurred by Indemnitees in enforcing this indemnity), whether direct, indirect or consequential and whether based on any federal, state or foreign laws, statutes, rules or regulations (including securities and commercial laws, statutes, rules or regulations and Environmental Laws), on common law or equitable cause or on contract or otherwise, that may be imposed on, incurred by, or asserted against any such Indemnitee, in any manner relating to or arising out of (i) this Agreement or the other Loan Documents or the transactions contemplated hereby or thereby (including Lenders' agreement to make the Loans hereunder or the use or intended use of the proceeds thereof or the issuance of Letters of Credit hereunder or the use or intended use of any thereof, the failure of Issuing Lender to honor a drawing under a Letter of Credit as a result of any act or omission, whether rightful or wrongful, of any present or future de jure or de facto Government Authority or if the documents presented in connection with such drawing do not strictly comply with the terms of such Letter of Credit, or any enforcement of any of the Loan Documents (including any sale of, collection from, or other realization upon any of the Collateral or the enforcement of any Guaranty)), or (ii) any Environmental Claim or any Hazardous Materials Activity relating to or arising from, directly or indirectly, any past or present activity, operation, land ownership, or practice of Company or any of its Subsidiaries. All amounts due under this subsection 10.3 shall be payable not later than ten (10) Business Days after a written request demand therefor (together with reasonably detailed documentation supporting such request).

To the extent that the undertakings to defend, indemnify, pay and hold harmless set forth in this subsection 10.3 may be unenforceable in whole or in part because they are violative of any law or public policy, Company shall contribute the maximum portion that it is permitted to pay and satisfy under applicable law to the payment and satisfaction of all Indemnified Liabilities incurred by Indemnitees or any of them.

10.4 Set-Off.

In addition to any rights now or hereafter granted under applicable law and not by way of limitation of any such rights, regardless of the adequacy of any Collateral, upon the occurrence and during the continuation of any Event of Default each of the Lenders and their Affiliates is hereby authorized by Company at any time or from time to time, without notice to Company or to any other Person (other than Administrative Agent), any such notice being hereby expressly waived, to set off and to appropriate and to apply any and all deposits (general or special, time or demand, provisional or final, including Indebtedness evidenced by certificates of deposit, whether matured or unmatured, but not including trust accounts) and any other Indebtedness at any time held or owing by that Lender or any Affiliate of that Lender to or for the credit or the account of Company and each other Loan Party against and on account of the Obligations of Company or any other Loan Party to that Lender (or any Affiliate of that Lender) under this Agreement, the Letters of Credit and participations therein and the other Loan Documents, including all claims of any nature or description arising out of or connected with this Agreement, the Letters of Credit and participations therein or any other Loan Document, irrespective of whether or not (i) that Lender shall have made any demand hereunder or (ii) the principal of or the interest on the Loans or any amounts in respect of the Letters of Credit or any other amounts due hereunder shall have become due and payable pursuant to Section 8 and although said obligations and liabilities, or any of them, may be contingent or unmatured; provided that in the event that any Defaulting Lender shall exercise any such right of setoff, (x) all amounts so set off shall be paid over immediately to Administrative Agent for further application in accordance with the provisions of subsection 2.12 and, pending such payment, shall

be segregated by such Defaulting Lender from its other funds and deemed held in trust for the benefit of Administrative Agent and the Lenders, and (y) the Defaulting Lender shall provide promptly to Administrative Agent a statement describing in reasonable detail the Obligations owing to such Defaulting Lender as to which it exercised such right of setoff. Each Lender and the Issuing Lender agrees to notify the Company and the Administrative Agent promptly after any such set-off and application, provided that the failure to give any such notice shall not affect the validity of such set-off and application.

10.5 Ratable Sharing.

Lenders hereby agree among themselves that if any of them shall, whether by voluntary or mandatory payment (other than a payment or prepayment of Loans made and applied in accordance with the terms of this Agreement), by realization upon security, through the exercise of any right of set-off or banker's lien, by counterclaim or cross action or by the enforcement of any right under the Loan Documents or otherwise, or as adequate protection of a deposit treated as cash collateral under the Bankruptcy Code, receive payment or reduction of a proportion of the aggregate amount of principal, interest, amounts payable in respect of Letters of Credit, fees and other amounts then due and owing to that Lender hereunder or under the other Loan Documents (collectively, the **"Aggregate Amounts Due"** to such Lender) that is greater than the proportion received by any other Lender in respect of the Aggregate Amounts Due to such other Lender, then the Lender receiving such proportionately greater payment shall, unless such proportionately greater payment is required by the terms of this Agreement, (i) notify Administrative Agent and each other Lender of the receipt of such payment and (ii) apply a portion of such payment to purchase assignments (which it shall be deemed to have purchased from each seller of an assignment simultaneously upon the receipt by such seller of its portion of such payment) of the Aggregate Amounts Due to the other Lenders so that all such recoveries of Aggregate Amounts Due shall be shared by all Lenders in proportion to the Aggregate Amounts Due to them; provided that (A) if all or part of such proportionately greater payment received by such purchasing Lender is thereafter recovered from such Lender upon the bankruptcy or reorganization of Company or otherwise, those purchases shall be rescinded and the purchase prices paid for such assignments shall be returned to such purchasing Lender ratably to the extent of such recovery, but without interest and (B) the foregoing provisions shall not apply to (1) any payment made by Company pursuant to and in accordance with the express terms of this Agreement (including the application of funds arising from the existence of a Defaulting Lender) (2) the application of Cash Collateral (and proceeds thereof) in respect of obligations relating to Letters of Credit and Swing Loan Loans (including Lender participation obligations) provided for in subsection 2.11, or (3) any payment obtained by a Lender as consideration for the assignment (other than an assignment pursuant to this subsection 10.5) of or the sale of a participation in any of its Obligations to any Eligible Assignee or Participant pursuant to subsections 10.1B and 10.1C. Company expressly consents to the foregoing arrangement and agrees that any purchaser of an assignment so purchased may exercise any and all rights of a Lender as to such assignment as fully as if that Lender had complied with the provisions of subsection 10.1B with respect to such assignment. In order to further evidence such assignment (and without prejudice to the effectiveness of the assignment provisions set forth above), each purchasing Lender and each selling Lender agree to enter into an Assignment Agreement at the request of a selling Lender or a purchasing Lender, as the case may be, in form and substance reasonably satisfactory to each such Lender.

10.6 Amendments and Waivers.

Unless otherwise provided for in this Agreement, no amendment, modification, termination or waiver of any provision of this Agreement, of the Notes or of any other Loan Document, and no consent to any departure by Company therefrom, shall in any event be effective without the written concurrence of Requisite Lenders and each such waiver or consent shall be effective only in the specific instance and

for the specific purpose for which given; provided that no such amendment, modification, termination, waiver or consent shall, without the consent of:

(a) each Lender (other than any Defaulting Lender) with Obligations directly affected (whose consent shall be required for any such amendment, modification, termination or waiver in addition to that of Requisite Lenders) (1) reduce or forgive the principal amount of any Loan, (2) postpone the scheduled final maturity date of any Loan, (3) postpone the date on which any principal, interest or any fees are payable, (4) decrease the interest rate borne by any Loan (other than any waiver of any increase in the interest rate applicable to any of the Loans pursuant to subsection 2.2E or amendment of subsection 2.2E) or the amount of any fees payable hereunder (other than any waiver of any increase in the fees applicable to Letters of Credit pursuant to subsection 3.2 following an Event of Default) (excluding any change in the manner in which any financial ratio used in determining any interest rate or fee is calculated that would result in a reduction of any such rate or fee and excluding any fees specified in the Fee Letter, which may be amended, or rights or privileges thereunder waived, in a writing executed only by the parties thereto), (5) reduce the amount or postpone the due date of any amount payable in respect of any Letter of Credit, (6) extend the expiration date of any Letter of Credit beyond the Revolving Loan Commitment Termination Date (except as provided in subsection 3.1A), (7) extend the Revolving Loan Commitment Termination Date or (8) change in any manner the obligations of Revolving Lenders relating to the purchase of participations in Letters of Credit; and

(b) each Lender (other than any Defaulting Lender), (1) change in any manner the definition of "Pro Rata Share" or the definition of "Requisite Lenders" (except for any changes resulting solely from an increase in the aggregate amount of the Commitments pursuant to subsection 2.10 or approved by Requisite Lenders), (2) change in any manner any provision of this Agreement that, by its terms, expressly requires the approval or concurrence of all Lenders (other than Defaulting Lenders) or otherwise specifies the number or percentage of Lenders required to amend, waive or otherwise modify any rights hereunder or make any determination or grant any consent hereunder, (3) increase the maximum duration of Interest Periods permitted hereunder, (4) (A) release any Lien granted in favor of Administrative Agent (for the benefit of the Secured Parties) with respect to 25% or more in aggregate fair market value of the Collateral or (B) release Company or Globe from its obligations under the Company Guaranty or any Subsidiary Guarantor from its obligations under the Subsidiary Guaranty, in each case other than in accordance with the terms of the Loan Documents including Section 9.6 hereof (in which case such release may be made by Administrative Agent acting alone), or (5) change in any manner or waive the provisions contained in subsection 2.4C(iii), subsection 2.4D, subsection 8.1, subsection 10.5 or this subsection 10.6.

In addition, no amendment, modification, termination or waiver of any provision (i) of any Note shall be effective without the written concurrence of the Lender which is the holder of that Note, (ii) of subsection 2.1A(iii) or of any other provision of this Agreement relating to the Swing Line Loan Commitment or the Swing Line Loans shall be effective without the written concurrence of Swing Line Lender, (iii) of Section 3 or of any other provision of this Agreement relating to rights or duties of the Issuing Lender shall be effective without the written concurrence of the Issuing Lender, (iv) of Section 9 or of any other provision of this Agreement which, by its terms, expressly requires the approval or concurrence of Administrative Agent shall be effective without the written concurrence of Administrative Agent, (v) that increases the amount of a Commitment of a Lender (or reinstates any Commitment terminated pursuant to Section 8) shall be effective without the consent of such Lender, (vi) that increases the maximum amount of Letters of Credit shall be effective without the consent of Revolving Lenders (other than Defaulting Lenders) having or holding more than 50% of the Revolving Loan Exposure of all Lenders (other than Defaulting Lenders) and (vii) of subsection 10.1B(iv) shall be effective without the consent of each Granting Lender all or any part of whose Loans are being funded by an SPC at the time of such amendment, modification, termination or waiver. Notwithstanding anything to the contrary herein,

no Defaulting Lender other than a Voting Defaulting Lender shall have any right to approve or disapprove any amendment, waiver or consent hereunder (and any amendment, waiver or consent which by its terms requires the consent of all Lenders or each affected Lender, or all Lenders or each affected Lender under a Facility, may be effected with the consent of (A) the applicable Lenders other than Defaulting Lenders and (B) any applicable Voting Defaulting Lenders), except that (x) the Commitment of any Defaulting Lender may not be increased or extended without the consent of such Lender and (y) any waiver, amendment or modification requiring the consent of all Lenders or each affected Lender that by its terms affects any Defaulting Lender more adversely than other affected Lenders shall require the consent of such Defaulting Lender.

Administrative Agent may, but shall have no obligation to, with the concurrence of any Lender, execute amendments, modifications, waivers or consents on behalf of that Lender. Any waiver or consent shall be effective only in the specific instance and for the specific purpose for which it was given. No notice to or demand on Company in any case shall entitle Company to any other or further notice or demand in similar or other circumstances. Any amendment, modification, termination, waiver or consent effected in accordance with this subsection 10.6 shall be binding upon each Lender at the time outstanding, each future Lender and, if signed by a Borrower, on such Borrower.

Notwithstanding the foregoing, technical and conforming modifications to the Loan Documents may be made with the consent of Company and Administrative Agent to the extent necessary to integrate (a) any Incremental Term Loan Commitments or Incremental Revolving Loan Commitments (which may include the addition of mandatory prepayments) and (b) the addition of any Domestic Co-Borrower or Foreign Co-Borrower (which may include additional provisions required as a result of the jurisdiction of any such Co-Borrower).

10.7 Independence of Covenants.

All covenants hereunder shall be given independent effect so that if a particular action or condition is not permitted by any of such covenants, the fact that it would be permitted by an exception to, or would otherwise be within the limitations of, another covenant shall not avoid the occurrence of an Event of Default or Potential Event of Default if such action is taken or condition exists.

10.8 Notices; Effectiveness of Signatures.

Unless otherwise specifically provided herein, any notice or other communication herein required or permitted to be given shall be in writing and may be personally served, or sent by telefacsimile or United States mail or courier service and shall be deemed to have been given when delivered in person, delivered by courier service and signed for against receipt thereof, upon receipt of telefacsimile in complete and legible form, or three Business Days after depositing it in the United States mail with postage prepaid and properly addressed; provided that notices to Administrative Agent, Swing Line Lender and the Issuing Lender shall not be effective until received. For the purposes hereof, (i) the contact information of Company, Administrative Agent and the Issuing Lender shall be as set forth on Schedule 10.8 or such other address as shall be designated by such Person in a written notice delivered to Administrative Agent and (ii) the contact information of each other party shall be as set forth in an administrative questionnaire delivered to Administrative Agent, or such other address as shall be designated by such party in a written notice delivered to Administrative Agent. Electronic mail and Internet and intranet websites may be used to distribute routine communications, such as financial statements and other information as provided in subsection 6.1. Administrative Agent or Company may, in its discretion, agree to accept notices and other communications to it hereunder by electronic communications pursuant to procedures approved by it, provided that approval of such procedures may be limited to particular notices or communications.

Loan Documents and notices under the Loan Documents may be transmitted and/or signed by telefacsimile and by signatures delivered in 'PDF' format by electronic mail. The effectiveness of any such documents and signatures shall, subject to applicable law, have the same force and effect as an original copy with manual signatures and shall be binding on all Loan Parties, Agents and Lenders. Administrative Agent may also require that any such documents and signature be confirmed by a manually-signed original thereof; provided, however, that the failure to request or deliver any such manually-signed original shall not affect the effectiveness of any facsimile document or signature.

Notwithstanding the foregoing, Company agrees that Administrative Agent may make any material delivered by Company to Administrative Agent, as well as any amendments, waivers, consents and other written information, documents, instruments and other materials relating to Company, any of their respective Subsidiaries, or any other materials or matters relating to the Loan Documents or any of the transactions contemplated hereby that Administrative Agent is required or authorized pursuant to the terms hereof or of any Loan Document to provide to Lenders (collectively, the **"Communications"**) available to Lenders by posting such notices on a Platform; provided, however, that any Communications that are identified in writing to Administrative Agent by Company as unauthorized for posting on a Platform and Administrative Agent will not so post such Communications. Company acknowledges that (a) the distribution of material through an electronic medium is not necessarily secure and that there are confidentiality and other risks associated with such distribution, (b) a Platform is provided "as is" and "as available" and (c) neither Administrative Agent nor any of its Affiliates warrants the accuracy, completeness, timeliness, sufficiency, or sequencing of the Communications posted on a Platform. Administrative Agent and its Affiliates expressly disclaim with respect to a Platform any liability for errors in transmission, incorrect or incomplete downloading, delays in posting or delivery, or problems accessing the Communications posted on such Platform and any liability for any losses, costs, expenses or liabilities that may be suffered or incurred in connection with such Platform other than damages resulting from gross negligence, bad faith or willful misconduct. No warranty of any kind, express, implied or statutory, including any warranty of merchantability, fitness for a particular purpose, non-infringement of third party rights or freedom from viruses or other code defects, is made by Administrative Agent or any of its Affiliates in connection with any Platform.

Each Lender agrees that notice to it (as provided in the next sentence) specifying that any Communication has been posted to a Platform shall for purposes of this Agreement constitute effective delivery to such Lender of such information, documents or other materials comprising such Communication. Each Lender agrees (1) to notify, on or before the date such Lender becomes a party to this Agreement, Administrative Agent in writing of such Lender's email address to which a notice may be sent (and from time to time thereafter to ensure that Administrative Agent has on record an effective e-mail address for such Lender) and (2) that any notice may be sent to such e-mail address.

10.9 Survival of Representations, Warranties and Agreements.

A. All representations, warranties and agreements made herein and in any other Loan Document or other document delivered pursuant hereto or thereto or in connection herewith or therewith shall survive the execution and delivery of this Agreement and the making of the Loans and the issuance of the Letters of Credit hereunder. Such representations and warranties have been or will be relied upon by Administrative Agent and each Lender, regardless of any investigation made by Administrative Agent or any Lender or on their behalf and notwithstanding that Administrative Agent or any Lender may have had notice or knowledge of any Default at the time of the making of any Loans or the issuance of any Letters of Credit, and shall continue in full force and effect as long as any Loan or any other Obligation hereunder shall remain unpaid or unsatisfied or any Letter of Credit shall remain outstanding.

B. Notwithstanding anything in this Agreement or implied by law to the contrary, the agreements of the Borrowers set forth in subsections 2.6D, 2.7, 10.2, 10.3, 10.4, 10.16 and 10.17 and the agreements of Lenders set forth in subsections 9.2C, 9.4, 10.5, 10.11(b), 10.16, 10.17 and 10.18 shall survive the payment of the Loans, the cancellation or expiration of the Letters of Credit and the reimbursement of any amounts drawn thereunder, and the termination of this Agreement.

10.10 Failure or Indulgence Not Waiver; Remedies Cumulative; Enforcement.

No failure or delay on the part of an Agent or any Lender in the exercise of any power, right or privilege hereunder or under any other Loan Document shall impair such power, right or privilege or be construed to be a waiver of any default or acquiescence therein, nor shall any single or partial exercise of any such power, right or privilege preclude other or further exercise thereof or of any other power, right or privilege. All rights and remedies existing under this Agreement and the other Loan Documents are cumulative to, and not exclusive of, any rights or remedies otherwise available.

Notwithstanding anything to the contrary contained herein or in any other Loan Document, the authority to enforce rights and remedies hereunder and under the other Loan Documents against the Loan Parties or any of them shall be vested exclusively in, and all actions and proceedings at law in connection with such enforcement shall be instituted and maintained exclusively by, Administrative Agent in accordance with Section 8 for the benefit of all the Lenders; provided, however, that the foregoing shall not prohibit (a) Administrative Agent from exercising on its own behalf the rights and remedies that inure to its benefit (solely in its capacity as Administrative Agent) hereunder and under the other Loan Documents, (b) the Issuing Lender or the Swing Line Lender from exercising the rights and remedies that inure to its benefit (solely in its capacity as Issuing Lender or Swing Line Lender, as the case may be) hereunder and under the other Loan Documents, (c) any Lender from exercising setoff rights in accordance with subsection 10.4 (subject to the terms of subsection 10.5), or (d) any Lender from filing proofs of claim or appearing and filing pleadings on its own behalf during the pendency of a proceeding relative to any Loan Party under the Bankruptcy Code or under any other applicable bankruptcy, insolvency or similar law now or hereafter in effect; and provided, further, that if at any time there is no Person acting as Administrative Agent hereunder and under the other Loan Documents, then (i) the Requisite Lenders shall have the rights otherwise ascribed to Administrative Agent pursuant to Section 8

and (ii) in addition to the matters set forth in clauses (b), (c) and (d) of the preceding proviso and subject to subsection 10.5, any Lender may, with the consent of the Requisite Lenders, enforce any rights and remedies available to it and as authorized by the Requisite Lenders.

10.11 Marshalling; Payments Set Aside.

Neither any Agent nor any Lender shall be under any obligation to marshal any assets in favor of any Borrower or any other party or against or in payment of any or all of the Obligations. To the extent that a Borrower makes a payment or payments to Administrative Agent or Lenders (or to Administrative Agent for the benefit of Lenders), or Agents or Lenders enforce any security interests or exercise their rights of setoff, and such payment or payments or the proceeds of such enforcement or setoff or any part thereof are subsequently invalidated, declared to be fraudulent or preferential, set aside and/or required to be repaid to a trustee, receiver or any other party under any bankruptcy law, any other state or federal law, common law or any equitable cause, then (a) to the extent of such recovery, the obligation or part thereof originally intended to be satisfied, and all Liens, rights and remedies therefor or related thereto, shall be revived and continued in full force and effect as if such payment or payments had not been made or such enforcement or setoff had not occurred and (b) each Lender and the Issuing Lender severally agrees to pay to Administrative Agent upon demand its applicable share (without duplication) of any amount so recovered from or repaid by Administrative Agent, plus interest thereon from the date of such demand to the date such payment is made at a rate per annum equal to the applicable Overnight Rate from time to time in effect, in the applicable currency of such recovery or payment.

10.12 Severability.

In case any provision in or obligation under this Agreement or the Notes shall be invalid, illegal or unenforceable in any jurisdiction, the validity, legality and enforceability of the remaining provisions or obligations, or of such provision or obligation in any other jurisdiction, shall not in any way be affected or impaired thereby.

10.13 Obligations Several; Independent Nature of Lenders' Rights; Damage Waiver.

The obligations of Lenders hereunder are several and no Lender shall be responsible for the obligations or Commitments of any other Lender hereunder. Nothing contained herein or in any other Loan Document, and no action taken by Lenders pursuant hereto or thereto, shall be deemed to constitute Lenders, or Lenders and the Borrowers, as a partnership, an association, a Joint Venture or any other kind of entity. The amounts payable at any time hereunder to each Lender shall be a separate and independent debt, and, subject to subsection 9.6, each Lender shall be entitled to protect and enforce its rights arising out of this Agreement and it shall not be necessary for any other Lender to be joined as an additional party in any proceeding for such purpose.

To the extent permitted by law, each party hereto shall not assert, and hereby waives, any claim against any Indemnitee, on any theory of liability, for special, indirect, consequential or punitive damages (as opposed to direct or actual damages) arising out of, in connection with or as a result of this Agreement (including, without limitation, subsection 2.1C hereof), any other Loan Document, any transaction contemplated by the Loan Documents, any Loan or Letter of Credit or the use of proceeds thereof. No Indemnitee shall be liable for any damages arising from the use by unintended recipients of any information or other materials obtained through the Internet, Intralinks or similar information transmission systems in connection with the Loan Documents or the transactions contemplated thereby; provided, however, that the foregoing shall not apply to any direct or actual damages to the extent that it is determined in a final and nonappealable judgment by a court of competent jurisdiction that such damages result from the gross negligence, bad faith or willful misconduct of such Indemnitee.

10.14 Applicable Law.

THIS AGREEMENT AND THE OTHER LOAN DOCUMENTS (EXCEPT AS OTHERWISE EXPRESSLY SET FORTH IN ANY SUCH LOAN DOCUMENT), AND THE RIGHTS AND OBLIGATIONS OF THE PARTIES HEREUNDER AND THEREUNDER SHALL BE GOVERNED BY, AND SHALL BE CONSTRUED AND ENFORCED IN ACCORDANCE WITH, THE INTERNAL LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO CHOICE OF LAW RULES (OTHER THAN SECTION 5-1401 OF THE GENERAL OBLIGATIONS LAW OF THE STATE OF NEW YORK).

10.15 Construction of Agreement; Nature of Relationship.

In connection with all aspects of each transaction contemplated hereby (including in connection with any amendment, waiver or other modification hereof or of any other Loan Document), each of the parties hereto acknowledges that (i) it has been represented by counsel in the negotiation and documentation of the terms of this Agreement, (ii) it has had full and fair opportunity to review and revise the terms of this Agreement, (iii) this Agreement has been drafted jointly by all of the parties hereto, and (iv) neither Administrative Agent nor any Lender or other Agent has any fiduciary relationship with or duty to any Borrower or any of its Affiliates arising out of or in connection with this Agreement or any of the other Loan Documents, and the relationship between Administrative Agent, the other Agents and Lenders, on one hand, and the Borrowers, on the other hand, in connection herewith or therewith is solely that of debtor and creditor.

Accordingly, each of the parties hereto acknowledges and agrees that the terms of this Agreement shall not be construed against or in favor of another party. To the fullest extent permitted by law, each Borrower hereby waives and releases any claims that it may have against Administrative Agent or any other Agent with respect to any breach or alleged breach of agency or fiduciary duty in connection with any aspect of any transaction contemplated hereby.

10.16 Consent to Jurisdiction and Service of Process.

ALL JUDICIAL PROCEEDINGS BROUGHT AGAINST ANY LOAN PARTY, ANY AGENT OR ANY LENDER ARISING OUT OF OR RELATING TO THIS AGREEMENT OR ANY OTHER LOAN DOCUMENT, OR ANY OBLIGATIONS HEREUNDER AND THEREUNDER, MAY BE BROUGHT IN ANY STATE OR FEDERAL COURT OF COMPETENT JURISDICTION IN THE STATE, COUNTY AND CITY OF NEW YORK. BY EXECUTING AND DELIVERING THIS AGREEMENT, EACH LOAN PARTY, EACH AGENT AND EACH LENDER, EACH FOR ITSELF AND IN CONNECTION WITH ITS PROPERTIES, IRREVOCABLY;

(I) ACCEPTS GENERALLY AND UNCONDITIONALLY THE NONEXCLUSIVE JURISDICTION AND VENUE OF SUCH COURTS;

(II) WAIVES ANY DEFENSE OF FORUM NON CONVENIENS;

(III) AGREES THAT SERVICE OF ALL PROCESS IN ANY SUCH PROCEEDING IN ANY SUCH COURT MAY BE MADE BY REGISTERED OR CERTIFIED MAIL, RETURN RECEIPT REQUESTED, TO IT AT ITS ADDRESS PROVIDED IN ACCORDANCE WITH SUBSECTION 10.8;

(IV) AGREES THAT SERVICE AS PROVIDED IN CLAUSE (III) ABOVE IS SUFFICIENT TO CONFER PERSONAL JURISDICTION OVER IT IN ANY SUCH PROCEEDING IN ANY SUCH COURT, AND OTHERWISE CONSTITUTES EFFECTIVE AND BINDING SERVICE IN EVERY RESPECT;

(V) AGREES THAT EACH LOAN PARTY, EACH AGENT AND LENDERS RETAIN THE RIGHT TO SERVE PROCESS IN ANY OTHER MANNER PERMITTED BY LAW OR TO BRING PROCEEDINGS AGAINST EACH LOAN PARTY, EACH AGENT AND EACH LENDER IN THE COURTS OF ANY OTHER JURISDICTION; AND

(VI) AGREES THAT THE PROVISIONS OF THIS SUBSECTION 10.16 RELATING TO JURISDICTION AND VENUE SHALL BE BINDING AND ENFORCEABLE TO THE FULLEST EXTENT PERMISSIBLE UNDER NEW YORK GENERAL OBLIGATIONS LAW SECTION 5-1402 OR OTHERWISE.

10.17 Waiver of Jury Trial.

EACH OF THE PARTIES TO THIS AGREEMENT HEREBY AGREES TO WAIVE ITS RESPECTIVE RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF THIS AGREEMENT OR ANY OF THE OTHER LOAN DOCUMENTS OR ANY DEALINGS BETWEEN THEM RELATING TO THE SUBJECT MATTER OF THIS LOAN TRANSACTION OR THE LENDER/BORROWER RELATIONSHIP THAT IS BEING ESTABLISHED. The scope of this waiver is intended to be all-encompassing of any and all disputes that may be filed in any court and that relate to the subject matter of this transaction, including contract claims, tort claims, breach of duty claims and all other common law and statutory claims. Each party hereto acknowledges that this waiver is a material inducement to enter into a business relationship, that each has already relied on this waiver in entering into this Agreement, and that each will continue to rely on this waiver in their related future dealings. Each party hereto further warrants and represents that it has reviewed this waiver with its legal counsel and that it knowingly and voluntarily waives its jury trial rights following consultation with legal counsel. Each party hereto certifies that no representative, agent or attorney of any other Person has represented, expressly or otherwise, that such other Person would not, in the event of litigation, seek to enforce the foregoing waiver. **THIS WAIVER IS IRREVOCABLE, MEANING THAT IT MAY NOT BE MODIFIED EITHER ORALLY OR IN WRITING (OTHER THAN BY A MUTUAL WRITTEN WAIVER SPECIFICALLY REFERRING TO THIS SUBSECTION 10.17 AND EXECUTED BY EACH OF THE PARTIES HERETO), AND THIS WAIVER SHALL APPLY TO ANY SUBSEQUENT AMENDMENTS, RENEWALS, SUPPLEMENTS OR MODIFICATIONS TO THIS AGREEMENT OR ANY OF THE OTHER LOAN DOCUMENTS OR TO ANY OTHER DOCUMENTS OR AGREEMENTS RELATING TO THE LOANS MADE HEREUNDER.** In the event of litigation, this Agreement may be filed as a written consent to a trial by the court.

10.18 Confidentiality.

Each Agent and Lender shall hold all non-public information obtained pursuant to the requirements of this Agreement in accordance with such Agent's or Lender's customary procedures for handling confidential information of this nature and in any event will treat such information with the same degree of care as it treats its own confidential information, it being understood and agreed by each Borrower that in any event an Agent or Lender may make disclosures (a) to its Affiliates and its (and its Affiliates') directors, officers, employees, trustees and agents, including accountants, legal counsel and other advisors and representatives on a need-to-know basis (it being understood that the Persons to whom such disclosure is made will be informed of the confidential nature of such information and instructed to

keep such information confidential), (b) to the extent requested by any Government Authority, (c) to the extent required by applicable laws or regulations or by any subpoena or similar legal process, (d) to any other party to this Agreement, (e) in connection with the exercise of any remedies hereunder or under any other Loan Document or any suit, action or proceeding relating to this Agreement or any other Loan Document or the enforcement of rights hereunder or thereunder, (f) subject to an agreement containing provisions substantially the same as those of this subsection 10.18, to (i) any Eligible Assignee of or Participant in, or any prospective Eligible Assignee of or Participant in, any of its rights or obligations under this Agreement or (ii) any direct or indirect contractual counterparty or prospective counterparty (or such contractual counterparty's or prospective counterparty's professional advisor) to any credit derivative transaction relating to obligations of Borrowers, (g) with the consent of Company, (h) to the extent such information (i) becomes publicly available other than as a result of a breach of this subsection 10.18 or (ii) becomes available to Administrative Agent, any Lender or any of their respective Affiliates on a non-confidential basis from a source other than Company which source is not known by Administrative Agent, such Lender or such Affiliate to be subject to a confidentiality agreement in respect thereof or (i) to the National Association of Insurance Commissioners or any other similar organization or any nationally recognized rating agency that requires access to information about a Lender's or its Affiliates' investment portfolio in connection with ratings issued with respect to such Lender or its Affiliates and that no written or oral communications from counsel to an Agent and no information that is or is designated as privileged or as attorney work product may be disclosed to any Person unless such Person is a Lender or a Participant hereunder; provided that, unless specifically prohibited by applicable law or court order, each Lender shall notify Company of any request by any Government Authority or representative thereof (other than any such request in connection with any examination of the financial condition of such Lender by such Government Authority) or otherwise made pursuant to law or regulation or any subpoena or other legal process, for disclosure of any such non-public information prior to disclosure of such information; and provided, further that in no event shall any Lender be obligated or required to return any materials furnished by Company or any of its Subsidiaries. Notwithstanding the foregoing, in no event shall any such information be disclosed to a Competitor. With the written consent of Company, which consent shall not be unreasonably withheld, Administrative Agent and Lenders may disclose the existence of this Agreement and information about this Agreement to market data collectors, similar service providers to the lending industry, and service providers to Administrative Agent and Lenders, and Administrative Agent or any of its Affiliates may place customary "tombstone" advertisements relating hereto in publications (including publications circulated or otherwise made available in electronic form) of its choice at its own expense.

Each of Administrative Agent and the Lenders acknowledges that (a) information provided by or on behalf of the Company and its Subsidiaries may include material non-public information concerning Company or a Subsidiary, as the case may be, (b) it has developed compliance procedures regarding the use of material non-public information and (c) it will handle such material non-public information in accordance with applicable Law, including United States Federal and state securities Laws.

10.19 Counterparts; Effectiveness.

This Agreement and any amendments, waivers, consents or supplements hereto or in connection herewith may be executed in any number of counterparts and by different parties hereto in separate counterparts, each of which when so executed and delivered, including by facsimile, shall be deemed an original, but all such counterparts together shall constitute but one and the same instrument; signature pages may be detached from multiple separate counterparts and attached to a single counterpart so that all signature pages are physically attached to the same document. This Agreement shall become effective upon the execution of a counterpart hereof by each of the parties hereto and receipt by Company and Administrative Agent of written or telephonic notification of such execution and authorization of delivery thereof.

10.20 Electronic Execution of Assignments and Certain Other Documents.

The words "execution," "signed," "signature," and words of like import in any Assignment Agreement or in any amendment or other modification hereof (including waivers and consents) shall be deemed to include electronic signatures or the keeping of records in electronic form, each of which shall be of the same legal effect, validity or enforceability as a manually executed signature or the use of a paper-based recordkeeping system, as the case may be, to the extent and as provided for in any applicable law, including the Federal Electronic Signatures in Global and National Commerce Act, the New York State Electronic Signatures and Records Act, or any other similar state laws based on the Uniform Electronic Transactions Act.

10.21 Judgment Currency.

If, for the purposes of obtaining judgment in any court, it is necessary to convert a sum due hereunder or any other Loan Document in one currency into another currency, the rate of exchange used shall be that at which in accordance with normal banking procedures Administrative Agent could purchase the first currency with such other currency on the Business Day preceding that on which final judgment is given. The obligation of each Borrower in respect of any such sum due from it to Administrative Agent or any Lender hereunder or under the other Loan Documents shall, notwithstanding any judgment in a currency (the **"Judgment Currency"**) other than that in which such sum is denominated in accordance with the applicable provisions of this Agreement (the **"Agreement Currency"**), be discharged only to the extent that on the Business Day following receipt by Administrative Agent or such Lender, as the case may be, of any sum adjudged to be so due in the Judgment Currency, Administrative Agent or such Lender, as the case may be, may in accordance with normal banking procedures purchase the Agreement Currency with the Judgment Currency. If the amount of the Agreement Currency so purchased is less than the sum originally due to Administrative Agent or any Lender from any Borrower in the Agreement Currency, such Borrower agrees, as a separate obligation and notwithstanding any such judgment, to indemnify Administrative Agent or such Lender, as the case may be, against such loss. If the amount of the Agreement Currency so purchased is greater than the sum originally due to Administrative Agent or any Lender in such currency, Administrative Agent or such Lender, as the case may be, agrees to return the amount of any excess to such Borrower (or to any other Person who may be entitled thereto under applicable law).

10.22 USA Patriot Act.

Each Lender hereby notifies Company and the other Borrowers that pursuant to the requirements of the Patriot Act, it is required to obtain, verify and record information that identifies Loan Parties, which information includes the name and address of each Loan Party and other information that will allow such Lender to identify such Loan Party in accordance with the Patriot Act. Each Borrower shall, promptly following a request by Administrative Agent or any Lender, provide all documentation and other information that Administrative Agent or such Lender requests in order to comply with its ongoing obligations under applicable "know your customer" and anti-money laundering rules and regulations, including the Patriot Act.

10.23 Acknowledgement and Consent to Bail-In of EEA Financial Institutions.

Notwithstanding anything to the contrary in any Loan Document or in any other agreement, arrangement or understanding among any such parties, each party hereto acknowledges that any liability of any EEA Financial Institution arising under any Loan Document, to the extent such liability is unsecured, may be subject to the write-down and conversion powers of an EEA Resolution Authority and agrees and consents to, and acknowledges and agrees to be bound by:

(i) the application of any Write-Down and Conversion Powers by an EEA Resolution Authority to any such liabilities arising hereunder which may be payable to it by any party hereto that is an EEA Financial Institution; and

(ii) the effects of any Bail-in Action on any such liability, including, if applicable:

(iii) a reduction in full or in part or cancellation of any such liability;

(iv) a conversion of all, or a portion of, such liability into shares or other instruments of ownership in such EEA Financial Institution, its parent undertaking, or a bridge institution that may be issued to it or otherwise conferred on it, and that such shares or other instruments of ownership will be accepted by it in lieu of any rights with respect to any such liability under this Agreement or any other Loan Document; or

(v) the variation of the terms of such liability in connection with the exercise of the write-down and conversion powers of any EEA Resolution Authority.

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed and delivered by their respective officers thereunto duly authorized as of the date first written above.

BORROWERS:

GLOBE SPECIALTY METALS, INC.

By: _____
Name:
Title:

[_____]

By: _____
Name:
Title:

ADMINISTRATIVE AGENT AND LENDER:

CITIZENS BANK OF PENNSYLVANIA

By: _____
Name:
Title:

SYNDICATION AGENT AND LENDER:

[_____]

By: _____
Name:
Title:

LENDERS:

[_____]

By: _____
Name:
Title:

Exhibit B

Schedules to Credit Agreement

[See attached].

SCHEDULES

SCHEDULE 1.1A

MORTGAGED PROPERTY

1595 Sparling Rd.
Waterford, OH 45786

2401 Old Montgomery Hwy
Selma, AL 36703

3807 Highland Ave
Niagara Falls, NY 14305

101 Garner Rd.
Bridgeport, AL 35740

SCHEDULE 1.1D

ENERGY ASSETS

Plant	Location	Ownership
Castrelo	A Coruña (Castrelo), Spain	FerroAtlántica, S.A.
Puente Olveira	A Coruña (Castrelo), Spain	FerroAtlántica, S.A.
Carantoña	A Coruña (Pasarela), Spain	FerroAtlántica, S.A.
Santa Eugenia I	A Coruña (Ezaro), Spain	FerroAtlántica, S.A.
Santa Eugenia II	A Coruña (Ezaro), Spain	FerroAtlántica, S.A.
Fervenza	A Coruña (A Reboira), Spain	FerroAtlántica, S.A.
Novo Pindo	A Coruña (Ezaro), Spain	FerroAtlántica, S.A.
Barasona	Huesca (Graus), Spain	Hidro Nitro Española, S.A.
El Ciego	Huesca (Estada), Spain	Hidro Nitro Española, S.A.
Arias I	Huesca (Somontano de Barbastro), Spain	Hidro Nitro Española, S.A.
Arias II	Huesca (Somontano de Barbastro), Spain	Hidro Nitro Española, S.A.
Ariéstolas	Huesca (Somontano de Barbastro), Spain	Hidro Nitro Española, S.A.
St. Béron	St. Béron, France	FerroPem, S.A.S.
Villalongue	Pierrefite, France	FerroPem, S.A.S.

SCHEDULE 2.1A

COMMITMENTS AND PRO RATA SHARES

Lender	Commitment	Pro Rata Share
Citizens Bank of Pennsylvania	$36,666,666.67	18.3%
HSBC Bank USA, National Association	$13,333,333.33	6.7%
Fifth Third Bank	$16,666,666.67	8.3%
PNC Bank, National Association	$31,666,666.67	15.8%
Wells Fargo Bank, National Association	$31,666,666.67	15.8%
Citibank N.A.	$16,666,666.67	8.3%
Capital One, National Association	$13,333,333.33	6.7%
Compass Bank	$23,333,333.33	11.7%
Branch Banking and Trust Company	$16,666,666.67	8.3%
Total	**$200,000,000.00**	---

SCHEDULE 5.1

SUBSIDIARIES, JOINT VENTURES AND PARTNERSHIPS OF THE COMPANY AND ITS SUBSIDIARIES

Subsidiaries	Jurisdiction of Organization	Ownership interests of the Company and Subsidiaries (unless otherwise indicated, all are 100% owners)
Grupo FerroAtlántica, S.A.U.	Spain	Ferroglobe PLC
FerroAtlántica, S.A.U.	Spain	Grupo FerroAtlántica, S.A.U.
Hidro Nitro Española, S.A.	Spain	FerroAtlántica, S.A.U. – 99.875%
FerroAtlántica de Venezuela (FerroVen), S.A.	Venezuela	FerroAtlántica, S.A.U. – 80%
FerroAtlántica I+D, S.L.U.	Spain	FerroAtlántica, S.A.U.
FerroAtlántica y Cía., F. de Ferroaleac. y Metales, S.C.	Spain	FerroAtlántica, S.A.U. – 99.99% FerroAtlántica I+D, S.L. – 0.01%
Cuarzos Industriales, S.A.U.	Spain	FerroAtlántica, S.A.U.
Rocas, Arcillas y Minerales, S.A.	Spain	FerroAtlántica, S.A.U. – 50% Cuarzos Industriales, S.A.U. – 16.67%
FerroAtlántica Deutschland, GmbH	Germany	FerroAtlántica, S.A.U.
Cuarzos Industriales de Venezuela (Cuarzoven), S.A.	Venezuela	FerroAtlántica, S.A.U.
FerroAtlántica de México, S.A. de C.V.	México	FerroAtlántica, S.A.U. – 99.99%
FerroPem, S.A.S.	France	Grupo FerroAtlántica, S.A.U.
Silicon Smelters (Pty.), Ltd.	South Africa	Grupo FerroAtlántica, S.A.U. – 86%
FerroAtlántica Brasil Mineraçao Ltda.	Brazil	FerroAtlántica, S.A.U. – 70%
Ganzi FerroAtlántica Silicon Industry Company, Ltd.	China	FerroAtlántica, S.A.U. – 75%
Silicio FerroSolar	Spain	Grupo FerroAtlántica, S.A.U.
Mangshi Sinice Silicon Industry Company Limited	China	Grupo FerroAtlántica, S.A.U.
Photosil Industries, S.A.S.	France	FerroPem, S.A.S.
Emix, S.A.S.	France	Silicio FerroSolar, S.L.
Thaba Chueu Mining (Pty.), Ltd.	South Africa	Silicon Smelters (Pty.), Ltd. – 74%
Rebone Mining (Pty.), Ltd.	South Africa	Thaba Chueu Mining (Pty.), Ltd.
FerroQuébec, Inc.	Canada	FerroAtlántica Canada Co. Ltd
FerroAtlántica Canada Co. Ltd	Canada	FerroAtlántica International, Ltd
FerroAtlantica International, Ltd	United Kingdom	Grupo FerroAtlántica, S.A.U.
Ultra Core Polska UCP	Poland	Globe Argentina Holdco, LLC
Inversora Nihuiles S.A.	Argentina	Ultracore Energy S.A. – 9.75%
Inversora Diamante S.A.	Argentina	Ultracore Energy S.A. – 8.4%
Hidroelectrica Los Nihuiles S.A.	Argentina	Inversora Nihuiles S.A. – 51%
Hidroelectrica Los Diamante S.A.	Argentina	Inversora Diamante S.A. – 59%
MST Financial Holdings, LLC	Delaware	Globe Specialty Metals, Inc.
MST Financial LLC	Delaware	MST Financial Holdings, LLC
MST Resources, LLC	Delaware	MST Financial Holdings, LLC
Ferroglobe, Inc.	Delaware	MST Financial Holdings, LLC
GSM Netherlands Overseas I, B.V.	Netherlands	GSM Netherlands, B.V.

GSM Netherlands Overseas II, B.V.	Netherlands	GSM Netherlands, B.V.
Islenska Kisilfelagio Ehf.	Iceland	GSM Netherlands Overseas II, B.V.
Quebec Silicon GP	Canada	QSIP Canada ULC – 51%
Laurel Ford Resources, Inc.	Kentucky	Globe Metallurgical Inc.
Globe LSE Inc.	Delaware	Globe Metallurgical Inc.
Globe Metallurgical Carbons LLC	Delaware	Globe Metallurgical Inc.
Coal Mining Services I LLC	Delaware	Globe Metallurgical Inc.
Coal Mining Services II LLC	Delaware	Globe Metallurgical Inc.
GBG Financial, LLC	Delaware	GSM Enterprises Holdings, LLC
ECPI, Inc.	Delaware	GSM Enterprises Holdings, LLC
Globe BG, LLC	Delaware	GSM Enterprises Holdings, LLC
16 Front Street, LLC	Delaware	GSM Enterprises Holdings, LLC
ARL Resources, LLC	Delaware	Alden Resources, LLC
ARL Services, LLC	Delaware	Alden Resources, LLC
QSI Partners Ltd.	Cayman Islands	GSM Enterprises, LLC
Metallurgical Process Materials, LLC	Delaware	Core Metals Group, LLC
Globe Realty LLC	New York	Globe Specialty Metals, Inc.
GSM Financial, Inc.	Delaware	Globe Specialty Metals, Inc.
Globe Realty Florida LLC	Delaware	Globe Specialty Metals, Inc.
Ferroquartz Holdings Ltd.	Hong Kong	Grupo FerroAtlántica, S.A.U.
FerroTambao S.A.R.L.	Burkina Faso	Grupo FerroAtlántica, S.A.U. – 90%
Ferroquarz Mauritania S.A.R.L.	Mauritania	Grupo FerroAtlántica, S.A.U. – 90%
Ferromanganese Mauritania, S.A.R.L.	Mauritania	Grupo FerroAtlántica, S.A.U. – 90%
Mangshi FerroAtlántica Mining Industry Service Co. Ltd	China	Ferroquartz Holdings Ltd.
Actifs Solaires Becancour, Inc.	Canada	Silicio FerroSolar, S.L.
El Hajera S.A.R.L.	Mauritania	Ferroquarz Mauritania S.A.R.L. – 10% Ferromanganese Mauritania, S.A.R.L. – 10%
FerroAtlántica India Private Limited	India	FerroAtlántica, S.A.U. – 99.99% FerroPem, S.A.S. – 0.01%
Société FerroQuartz Inc.	Canada	FerroAtlántica Canada Co. Ltd
Globe Specialty Metals, Inc.	Delaware	Ferroglobe PLC
Alabama Sand and Gravel, Inc.	Delaware	Globe Metallurgical Inc.
Globe Metales, S.A.	Argentina	Globe Specialty Metals Inc. – 90% Globe Argentina Holdco LLC – 10%
Globe Metallurgical Inc.	Delaware	Globe Specialty Metals, Inc.
LF Resources, Inc.	Delaware	Globe Specialty Metals, Inc.
Ningxia Yongvey Coal Industrial Co., Ltd.	China	LF Resources, Inc. – 98%
Solsil, Inc.	Delaware	Globe Specialty Metals, Inc. – 97.25%
Ultracore Energy S.A.	Argentina	Globe Metales, S.A.
West Virginia Alloys, Inc.	Delaware	Globe Metallurgical Inc.
GSM Alloys I, Inc.	Delaware	Globe Specialty Metals, Inc.
GSM Alloys II, Inc.	Delaware	Globe Specialty Metals, Inc.
WVA Manufacturing, LLC	Delaware	GSM Alloys I and II – 51%
Globe Metals Enterprises, Inc.	Delaware	Globe Specialty Metals, Inc.
Core Metals Group Holdings, LLC	Delaware	Globe Metals Enterprises, Inc.
Core Metals Group, LLC	Delaware	Core Metals Group Holdings LLC
Tennessee Alloys Company, LLC	Delaware	Core Metals Group LLC
GSM Enterprises Holdings, LLC	Delaware	GSM Enterprises, LLC
GBG Holdings, LLC	Delaware	GSM Enterprises Holdings, LLC
Alden Resources, LLC	Delaware	GBG Holdings, LLC
Gatliff Services, LLC	Delaware	GSM Enterprises Holdings, LLC

Alden Sales Corporation, LLC	Delaware	GSM Enterprises Holdings, LLC
Norchem, Inc.	Florida	Globe Metallurgical Inc. – 50% GSM Enterprises Holdings, LLC – 50%
QSIP Sales ULC	Canada	QSIP Canada ULC
QSIP Canada ULC	Canada	GSM Netherlands Overseas IV, B.V.
Quebec Silicon LP	Canada	QSIP Canada ULC – 51%
GSM Netherlands, B.V.	Netherlands	Globe Specialty Metals, Inc.
Silicon Technology (Proprietary) Limited	South Africa	GSM Netherlands Overseas III, B.V.
GSM Sales, Inc.	Delaware	Globe Specialty Metals, Inc.
GSM Enterprises, LLC	Delaware	Globe Specialty Metals, Inc.
GSM Netherlands Overseas III, B.V.	Netherlands	GSM Netherlands, B.V.
GSM Netherlands Overseas IV, B.V.	Netherlands	GSM Netherlands, B.V.
Globe Argentina Holdco, LLC	Delaware	Globe Specialty Metals, Inc.
Ferroglobe Services (UK) Ltd	England and Wales	Ferroglobe PLC

SCHEDULE 5.11

CERTAIN EMPLOYEE BENEFIT PLANS

(i) Employee Benefit Plans of the Company and its Subsidiaries that provide health or welfare benefits (through the purchase of insurance or otherwise) for any retired or former employee of Company or any of its Domestic Subsidiaries, other than Employee Benefit Plans that have been taken into account in developing the FAS 106 cost figures disclosed to Lenders. Employee Benefit Plans include employee welfare benefit plans and employee pension benefit plans. These plans cover health insurance plans, general employee benefit plans, 401(k) plans and retirement plans.

1. Globe Metallurgical, Inc. hourly employees' Retirement Savings Plan (covering Niagara Falls and Selma hourly Employees
2. Globe Metallurgical, Inc. Retirement Savings Plan
3. Globe Metallurgical, Inc. Hourly Employees' Retirement Savings Plan
4. Globe Metallurgical Inc. Pension Plan
5. Globe Metallurgical Inc. Niagara Falls Hourly Employees Pension Plan
6. Globe Metallurgical Inc. Retiree Medical Insurance Savings Plan
7. Pension Plan for hourly employees of the Alamet Division of Globe Metallurgical Inc.
8. Core Metals Group Retirement Plan
9. Tennessee Alloys Company Pension Plan
10. Alden Resources LLC 401(K) Transamerica plan documents
11. Informed Medical and Prescription Plan – Self Insured
12. Informed Dental Plan – Self Insured
13. Informed FSA Medical and Dependent Care
14. Highmark BC/BS Medical and Prescription Plan for Core Metals Employees
15. Guardian Dental – Dental and Vision Plan for Core Metals Employees
16. VSP Vision Services – Vision Plan for Core Metals Employees
17. Lincoln Financial Group Life/AD&D for Core Metals Employees
18. Lincoln Financial Group Short Term Disability for Core Metals Employees
19. Lincoln Financial Group Long Term Disability for Core Metals Employees
20. Lincoln Financial Group Dependent Life (Spouse/Child) for Core Metals Group Employees
21. BC/BS of Alabama Medical, Prescription and Dental Plan for Selma and Alabama Sand and Gravel, Inc. Employees– Self Insured
22. United Healthcare - Oxford Medical and Prescription Plan for Globe Specialty Metals, Inc., Alden Employees and Norchem – Fully Insured
23. BMS LLC Health Reimbursement Arrangement Bridge Plan for Globe Specialty Metals, Inc. and Alden Resources LLC Employees – Self Insured
24. Medex Worldwide Travel Medical Assistance – Fully Insured
25. Medical Expense Reimbursement Plan
26. Standard Insurance Company - Basic Life/ADD&D - $10,000
27. Short term disability up to 26 weeks – self administered
28. Standard insurance company - long term disability (after 26 weeks) for salaried employees

29. Fort Dearborn Life short term disability for Niagara Employees (hourly employees up to 52 weeks and salaried employees up to 26 weeks)
30. CRX Optional Prescription Savings Plan – GMI Group
31. Delta Dental PPO for Globe Specialty Metals
32. OSDE Medical Plan for Salaried Employees
33. Pharmacy Expense Reimbursement Plan for Hourly and Salaried Employees

SCHEDULE 7.1

CERTAIN EXISTING INDEBTEDNESS

1. A Capital Lease Agreement dated April 5, 2012 by and between Fifth Third Equipment Finance Company, an Ohio corporation and Alden Resources in an amount not to exceed $11,054,177.27, of which $815,523 was outstanding as of December 31, 2016, as may be amended from time to time.

2. A Continuing Guaranty by Globe Specialty Metals, Inc., in favor of FIFTH THIRD BANK, an Ohio banking corporation located at 38 Fountain Square Plaza, Cincinnati, Hamilton County, Ohio 45263, for itself and as agent for any affiliate or subsidiary of Fifth Third Bancorp, and their respective successors and assigns, relating to the Capital Lease Agreement in item 4 below.

3. A Capital Lease Agreement dated May 24, 2012 by and between Newco Mining KY, LLC, a Minnesota limited liability company and ARL Resources, LLC, as may be amended from time to time, in an amount of $2,692,232.86, of which $2,054,652 was outstanding as of December 31, 2016.

4. Capital Lease Between Globe Metallurgical Inc. and CAT Financial dated April 4, 2014, as may be amended from time to time, in the amount of $360,574.80 with an outstanding balance of $162,258.66 as at December 31, 2016.

5. Capital Lease Between Globe Metallurgical Inc. and CAT Financial dated April 4, 2014, as may be amended from time to time, in the amount of $360,574.80 with an outstanding balance of $162,258.66 as at December 31, 2016.

6. Working Capital financing by and between Globe Metales and Banco Macro SA with a line of $3,500,000 of which $502,000 was outstanding as at December 31, 2016.

7. Working Capital financing by and between Globe Metales and Banco Supervielle with a line of $1,161,000 of which $0 was outstanding as at December 31, 2016.

8. Working Capital financing by and between Globe Metales and Banco CitiBank with a line of $2,000,000 of which $0 was outstanding as at December 31, 2016.

9. Working Capital financing by and between Globe Metales and Santander Rio Bank with a line of $1,858,000 of which $547,000 was outstanding as at December 31, 2016.

10. The several performance and surety bonds issued by RLI Insurance Company on behalf of Alden Resources LLC; ARL Resources, LLC; Alabama Sand and Gravel, Inc.; Core Metals Group LLC; WVA Manufacturing, LLC and Globe Metallurgical Inc. of which $9,777,400 was outstanding as of February 3, 2017.

11. Definitive Resolution Providing Financial Support, dated September 8, 2016, between FerroAtlántica, S.A., as borrower and the Spanish Ministry of Industry, Tourism and

Commerce, as lender, for aggregate principal amount €26,908,959.00, as may be amended from time to time.

12. Definitive Resolution Providing Financial Support, dated September 8, 2016, between FerroAtlántica, S.A., as borrower and the Spanish Ministry of Industry, Tourism and Commerce, as Lender, for aggregate principal amount €44,999,114.00, as may be amended from time to time.

13. Loan Agreement, dated June 6, 2011, between FerroAtlántica, S.A., as borrower, and the Spanish Ministry of Industry, Tourism and Commerce, as lender, for aggregate principal amount €3,462,500.00, as may be amended from time to time.

14. Loan Agreement, dated June 6, 2011, between Hidro Nitro Española, S.A., as borrower, and the Spanish Ministry of Industry, Tourism and Commerce, as lender, for aggregate principal amount €1,348,459.61.00, as may be amended from time to time.

15. Loan Agreement, dated December 22, 2010, between FerroAtlántica, S.A., as borrower and the Center for Technological-Industrial Development, as lender, for aggregate principal amount €2,406,091.15, as may be amended from time to time. Loan Agreement, dated May 13, 2014, between Silico Ferrosolar, S.L.U., as borrower and the Center for Technological-Industrial Development, as lender, for aggregate principal amount €2,087,260.00, as may be amended from time to time.

16. Financing Agreement between Photosil Industries, S.A.S., as borrower, FerroPem, S.A.S., as guarantor, and the French Agency for the Environment and Management of Energy, as lender, for aggregate principal amount €5,503,371.92, as may be amended from time to time.

17. Working Capital financing by and between FerroAtlántica, S.A. and Banesto, S.A. of which €251,000 was outstanding as at December 31, 2016.

18. Working Capital financing by and between FerroAtlántica, S.A. and Bankia, S.A. of which €3,757,000 was outstanding as at December 31, 2016.

19. Working Capital financing by and between Hidro Nitro Española, S.A. and Banesto, S.A. of which €431,000 was outstanding as at December 31, 2016.

20. Working Capital financing by and between Hidro Nitro Española, S.A. and Bankia, S.A. of which €2,500,000 was outstanding as at December 31, 2016.

21. Interest rate swap by and between FerroAtlántica, S.A. and NCG Banco, S.A., dated May 25, 2012.

22. The following intercompany loans:

    A. Facility Agreement, dated as of March 31, 2016, between Ferroglobe PLC and Grupo FerroAtlántica, S.A.U., (aggregate principal amount €25 million) as may be amended or modified from time to time; *provided* that the aggregate principal

amount thereof may not be increased and the maturity thereof may not be amended to be prior to August 21, 2018.

B. Treasury Agreement, dated January 2, 2014, between Grupo FerroAtlántica, S.A.U. and FerroPem, S.A.S., (maximum amount €100 million) as may be amended, modified or supplemented from time to time; *provided* that the maximum amount available thereunder may not be increased and the maturity thereof may not be amended to be prior to August 21, 2018.

C. Contract in respect of Credit Account, dated May 28, 2012, between GFA SAU and FerroAtlántica, S.A. (maximum amount $75 million), as may be amended, modified or supplemented from time to time; *provided* that the maximum amount available thereunder may not be increased and the maturity thereof may not be amended to be prior to August 21, 2018.

D. Shareholder's Loan, dated as of July 1, 2013 between GFA SAU and Mangshi Sinice Silicon Industry Co., Ltd. (aggregate principal amount € 3.5 million), as may be amended, modified, supplemented, or recharacterized as an equity contribution, from time to time; *provided* that the aggregate principal amount thereof may not be increased and the maturity thereof may not be amended to be prior to August 21, 2018.

E. Shareholder's Loan, dated as of March 6, 2015, between GFA SAU and Mangshi Sinice Silicon Industry Co., Ltd. (aggregate principal amount €14.5 million), as may be amended, modified, supplemented or recharacterized as an equity contribution, from time to time; *provided* that the aggregate principal amount thereof may not be increased and the maturity thereof may not be amended to be prior to August 21, 2018.

F. Facility Agreement (Bond Proceeds), dated as of the Third Amendment Effective Date, between Mangshi Sinice Silicon Industry Co., Ltd. and GFA SAU (aggregate principal amount €10,589,401.66), as the same may be amended, modified, supplemented or recharacterized as an equity contribution, from time to time; *provided* that the aggregate principal amount thereof may not be increased and the maturity thereof may not be amended to be prior to August 21, 2018.

G. Facility Agreement (RCF Proceeds), dated as of the Third Amendment Effective Date, between Mangshi Sinice Silicon Industry Co., Ltd. and GFA SAU (maximum amount $200 million), as the same may be amended, modified, supplemented or recharacterized as an equity contribution agreement, from time to time; *provided* that the maximum amount available thereunder may not be increased and the maturity thereof may not be amended to be prior to August 21, 2018.

H. Facility Agreement, dated as of the Third Amendment Effective Date, between GFA SAU, as lender, and Silicon Smelters Pty., Ltd., as borrower (maximum

amount ZAR 350 million), as may be amended, modified, supplemented, assigned or recharacterized as an equity contribution from time to time; *provided* that the maximum amount available thereunder may not be increased and the maturity thereof may not be amended to be prior to August 21, 2018.

I. Facility Agreement (Bond Proceeds), dated as of the Third Amendment Effective Date, between Silicon Smelters Pty., Ltd. and GFA SAU (aggregate principal amount ZAR 443,317,030.79), as the same may be amended, modified, supplemented, assigned or recharacterized as an equity contribution, from time to time; *provided* that the aggregate principal amount thereof may not be increased and the maturity thereof may not be amended to be prior to August 21, 2018.

J. Facility Agreement (RCF Proceeds), dated as of the Third Amendment Effective Date, between Silicon Smelters Pty., Ltd. and GFA SAU (maximum amount $200 million), as the same may be amended, modified, supplemented, assigned or recharacterized as an equity contribution agreement, from time to time; *provided* that the maximum amount available thereunder may not be increased and the maturity thereof may not be amended to be prior to August 21, 2018.

K. Facility Agreement, dated as of the Third Amendment Effective Date, between Silicon Smelters Pty., Ltd., as borrower, and Thabacheu Mining Pty. Ltd., as Lender (maximum amount ZAR 90 million), as may be amended, modified, supplemented, assigned or recharacterized as an equity contribution from time to time; *provided* that the maximum amount available thereunder may not be increased and the maturity thereof may not be amended to be prior to August 21, 2018.

L. Facility Agreement (Bond Proceeds), dated as of the Third Amendment Effective Date, between Silicon Smelters Pty., Ltd. and Thabacheu Mining Pty. Ltd. (aggregate principal amount ZAR 81,137,810.61), as the same may be amended, modified, supplemented, assigned or recharacterized as an equity contribution, from time to time; *provided* that the aggregate principal amount thereof may not be increased and the maturity thereof may not be amended to be prior to August 21, 2018.

M. Facility Agreement (RCF Proceeds), dated as of the Third Amendment Effective Date, between Silicon Smelters Pty., Ltd. and Thabacheu Mining Pty. Ltd. (maximum amount $200 million), as the same may be amended, modified, supplemented, assigned or recharacterized as an equity contribution agreement, from time to time; *provided* that the maximum amount available thereunder may not be increased and the maturity thereof may not be amended to be prior to August 21, 2018.

SCHEDULE 7.2

CERTAIN EXISTING LIENS

1. Liens on specified equipment of Alabama Sand and Gravel, Inc. pursuant to various existing agreements, by and between Alabama Sand and Gravel, Inc. and Thompson Tractor Co., Inc.

2. Liens on specified equipment of Alden Resources LLC pursuant to various existing agreements, by and between Alden Resources LLC and Caterpillar Financial Services Corporation and Fifth Third Equipment Finance Company.

3. Liens on specified purchased receivables pursuant to an existing Receivables Purchase Agreement dated December 29, 2014 by and between Alden Sales Corp, LLC and HSBC Bank, USA, N.A.

4. Liens on specified purchased receivables pursuant to an existing Receivables Purchase Agreement dated December 29, 2014 by and between Core Metals Group LLC and HSBC Bank, USA, N.A.

5. The Lien in favor of Citibank, N.A., as evidenced by UCC-1 Financing Statement File No. 2009 2197298, Filed on July 8, 2009 with the Delaware Secretary of State naming Globe Metallurgical Inc. ("GMI") as Debtor and Citibank N.A. ("Citi") as Secured Party on accounts receivable owed to GMI by Alcoa, Inc. that are factored by Citi on an advance payment basis relating to the Supplier Agreement dated May 11, 2009 between GMI and Citi.

6. Liens on specified equipment of GMI pursuant to various existing agreements, by and between GMI and Caterpillar Financial Services Corporation and BNP Paribas.

7. Liens on specified purchased receivables pursuant to an existing Receivables Purchase Agreement dated December 29, 2014 by and between GMI and HSBC Bank, USA, N.A.

8. Liens on specified purchased receivables pursuant to an existing Receivables Purchase Agreement dated December 29, 2014 by and between GSM Sales, Inc. and HSBC Bank, USA, N.A.

9. Liens on specified purchased receivables pursuant to an existing Receivables Purchase Agreement dated December 29, 2014 by and between Norchem, Inc. and HSBC Bank, USA, N.A.

10. Liens pursuant to existing working capital financing for Globe Metales Listed in Items 6 through 9 in Schedule 7.1.

11. Common Law and/or Statutory Rights of offset and liens that may arise in connection with the performance/surety bonds listed in Item 10 of Schedule 7.1.

12. Bank guarantee amounting up to EUR 8,519,685.41 between Bankia, S.A. and Ferroatlántica, S.A.U. dated as of April 14, 2015.
13. Bank guarantee amounting to EUR 4,500,000 between CaixaBank S.A. and Ferroatlántica, S.A. dated as of May 26, 2016.
14. Bank guarantee amounting to EUR 3,375,000 between CaixaBank S.A. and Ferroatlántica, S.A. dated as of May 26, 2016.
15. Bank guarantee amounting to EUR 1,926,000 between Bankinter, S.A. and Hidro Nitro Española, S.A. dated as of January 28, 2011.
16. Bank guarantee amounting to EUR 425,416.07 between Bankia, S.A. and Ferroatlántica, S.A. dated as of August 20, 2014.
17. Bank guarantee amounting to EUR 408,026.04 between Bankia, S.A. and Ferroatlántica, S.A. dated as of August 20, 2014.
18. Bank guarantee amounting to EUR 390,170.52, between Bankia, S.A. and Ferroatlántica, S.A. dated as of August 20, 2014.
19. Bank guarantee amounting to EUR 372,944.16, between Bankia, S.A. and Ferroatlántica, S.A. dated as of August 20, 2014.
20. Bank guarantee amounting to EUR 356,419.97 between Bankia, S.A. and Ferroatlántica, S.A. dated as of August 20, 2014.
21. Bank guarantee amounting to EUR 217,337.72 between Banco Bilbao Vizcaya Argentaria, S.A. and Ferroatlántica, S.A. dated as of April 24, 2013.
22. Bank guarantee amounting to EUR 1,593.28 between Banco Bilbao Vizcaya Argentaria, S.A. and Ferroatlántica, S.A. dated as of April 25, 2013.
23. Bank guarantee amounting to EUR 3,347.23 between Banco Bilbao Vizcaya Argentaria, S.A. and Ferroatlántica, S.A. dated as of April 25, 2013.
24. Bank guarantee amounting to EUR 1,817.52 between Banco Bilbao Vizcaya Argentaria, S.A. and Ferroatlántica, S.A. dated as of April 25, 2013.
25. Bank guarantee amounting to EUR 297,138.06 between Banco Bilbao Vizcaya Argentaria, S.A. and Ferroatlántica, S.A. dated as of April 24, 2013.
26. Bank guarantee amounting to EUR 449,792.98 between Banco Bilbao Vizcaya Argentaria, S.A. and Ferroatlántica, S.A. dated as of April 24, 2013.
27. Bank guarantee amounting to EUR 4,500,00.00 between CaixaBank, S.A. and Ferroatlántica, S.A. dated as of January 23, 2015, as amended.

28. Bank guarantee amounting to EUR 3,375,00.00 between CaixaBank, S.A. and Ferroatlántica, S.A. dated as of January 23, 2015, as amended.

29. Liens pursuant to the Finance Lease and the related Assignment Agreement between NGC Banco, S.A., Bankinter, S.A., Caixabank, S.A., Banco Bilbao Vizcaya Argentaria, S.A. and FerroAtlántica, S.A. (securing obligations under the Finance Lease and related Assignment Agreement, pursuant to which the equivalent of approximately $89 million was outstanding as at September 30, 2016).

SCHEDULE 7.3A

CERTAIN EXISTING INVESTMENTS

	Description of Investment	Amount invested as of 12/31/2016 (US$ in dollars)	Execution Date of Agreement	Ferroglobe Entity
1	Two loan agreements ($3 million and $2 million, plus interest) with Ningxia Yonvey Coal Industrial Co., Ltd.	$8,584,108	9/30/2010 12/31/2010	LF Resources, Inc.
2	Receivables Due from Ningxia Yonvey Coal Industrial Co., Ltd. for financing production of electrodes and capital expenditures related to expansions of productive capacity	$12,174,555	N/A	Globe Specialty Metals, Inc.
3	Loan to GSM Netherlands, B.V., a wholly-owned subsidiary from Globe Metales, S.A.	$6,020,000	6/1/2012	Globe Metales, S.A.
4	Loan to Silicon Technology (Proprietary) Limited, a wholly-owner subsidiary from GSM Netherlands Overseas III, B.V.	$27,357,000	5/12/2014 8/29/2014 (1st Addendum)	GSM Netherlands Overseas III, B.V.

5. Investments relating to Item 22 (including any sub-item thereof) of Schedule 7.1.

6. Any Invesments (up to a maximum of $130 million) pursuant to or in connection with the Joint Venture Agreement, dated as of December 20, 2016, between GFA SAU, Silicio Ferrosolar, S.L.U., FerroAtlántica, S.A., Blue Power Corporation, S.L. and Aurinka Photovalic Group, S.L., and any investments in any entity formed pursuant thereto.

7. Loan Facility Agreement, dated June 13, 2016, between Blue Power Corporation, S.L. and Silicio Ferrosolar, S.L. (aggregate principal amount €9 million), entered into in connection with the subject of item 6 of this Schedule 7.3A.

8. The following loans or advances to employees:
A.

Code	Amount Outstanding as at February 1, 2016 (€)
8003	17,600.00
8048	6,250.00
8010	40,500.00
8005	6,340.00
8071	7,666.65
8102	6,800.03
8103	5,333.36
8024	17,550.00
TOTAL	**108,040.04**

B.

Code	Amount Outstanding as at February 1, 2016 (€)
334	666.56 €
347	1,333.24 €
544	1,166.74 €
735	666.60 €
741	3,499.95 €
768	999.90 €
780	999.90 €
801	4,833.31 €
812	5,166.65 €
815	3,999.96 €
816	722.20 €
853	2,833.27 €
859	4,333.30 €
883	5,833.33 €
885	2,555.57 €
918	5,499.99 €
963	4,166.63 €
977	1,666.58 €
988	3,166.61 €
TOTAL	**56,276.88 €**

SCHEDULE 7.4

CERTAIN EXISTING CONTINGENT OBLIGATIONS

	Contract	Date	Parties	Nature of Contingent Obligation
1.	Expansion Power and Replacement Power Commodity Sales Agreement, as amended	July 1, 2013	New York Power Authority And Niagara Mohawk Power Corporation And Globe Metallurgical, Inc.	Take/Pay
2.	Firm power and FPI Power contract	December 21, 2006	Oxbow Carbon And Minerals LLC (predecessor to Core Metals) and Tennessee Valley Authority	Take/Pay
3	Firm Power contract	April 1, 2011	Globe Metales and Empresa Distribuidora de Electricidad de Mendoza	Take / Pay
4.	Interruptible Power Contract	December 16, 2014	Alabama Power Company and Globe Metallurgical, Inc.	Take / Pay
5.	Interruptible and Firm Power	October 1, 2016	American Electric Power – Ohio Power and Globe Metallurgical, Inc.	Take / Pay
6.	Energy Sale SPA	December 12, 2016	Grupo FerroAtlántica, S.A.U., Brookfield Renewable Power Limited and Ferroglobe PLC	Company guarantee of GFA SAU, Spanish Subsidiary and Hidro Nitro Española's obligations under the Energy Sale SPA

	Contract	Date	Parties	Nature of Contingent Obligation
7.	Interest Rate Swap	May 25, 2012	FerroAtlántica, S.A. and NCG Banco, S.A	Derivative
8.	Financing Agreement	March 5, 2013	Photosil Industries, S.A.S., FerroPem, S.A.S., and the French Agency for the Environment and Management of Energy	Guarantee (aggregate principal amount €5,503,371.92). See Item 16 of Schedule 7.1.
13.	Letter of Credit	February 1, 2017	Caixa Bank, S.A. FerroAtlántica, S.A. and Comilog International S.A.	Letter of Credit ($11,395,524.00)
14.	Letter of Credit	February 1, 2017	Caixa Bank, S.A., FerroAtlántica, S.A. and Comilog International S.A.	Letter of Credit ($9,817,512.10)

SCHEDULE 7.9

CERTAIN TRANSACTIONS WITH AFFILIATES

1. Shareholder Agreement, dated as of December 23, 2015, between Grupo Villar Mir, S.A.U. and Ferroglobe PLC.

   Shareholder Agreement entered into in connection with the business combination, setting forth board representation rights, standstill, voting agreements and transfer restrictions with Grupo Villar Mir, which holds approximately 55% of the Company's outstanding ordinary shares as of February 1, 2017.

2. Registration Rights Agreement, dated as of December 23, 2015, among Ferroglobe PLC, Grupo Villar Mir, S.A.U. and Alan Kestenbaum.

   Agreement entered into in connection with the business combination, providing for registration rights to Grupo Villar Mir and Alan Kestenbaum, former Executive Chairman of the Company and, as at May 2, 2016, holder of over 5% of the Company's outstanding ordinary shares.

3. Energy Contracts with Villar Mir Energía, S.L. and subsidiaries

   VM Energía, a Spanish company wholly owned by Grupo Villar Mir, advises in the day- to-day operations of FerroAtlántica's hydro-electric business (which is to be disposed pursuant to the Energy Sale SPA) under the following two contracts that provide for strategic advisory services in relation to economic, technical and administrative aspects of the energy operations, the preparation of periodic reports assessing the main risks associated with the energy market and analyzing the performance of each hydro-electric power plant, advisory services in connection with changes in the applicable energy regulatory framework and related assistance in dealing with the competent energy authorities. The contracts have five-year terms and are due to expire in 2018. The Company's subsidiaries party to these contracts pay Villar Mir Energía a monthly remuneration calculated as a percentage of the revenues made each month by the hydro- electric plants. For fiscal years ended December 31, 2015, 2014 and 2013, the Spanish Subsidiary and Hidro Nitro Española, S.A. made payments under these contracts to Villar Mir Energía of $4,022,346, $7,055,663 and $11, 851,964, respectively.

   a. Strategic Advisory Contract of Energy Exploitation, dated as of April 15, 2013, between Villar Mir Energía, S.L. and FerroAtlántica, S.A.U.

   b. Strategic Advisory Contract of Energy Exploitation, dated as of April 15, 2013, between Villar Mir Energía, S.L. and Hidro Nitro Española, S.A.

   Under the following contracts, Villar Mir Energía supplies the energy needs of the Boo, Sabon and Monzon electrometallurgy facilities, as a broker for FerroAtlántica, S.A. and Hidro Nitro Española, S.A. in the wholesale power market. These contracts allow FerroAtlántica, S.A. and Hidro Nitro Española, S.A. to buy energy from the grid at market conditions without incurring costs normally associated with operating in the

complex wholesale power market, as well as to apply for fixed energy price arrangements in advance from VM Energía, based on the energy markets for the power, period and profile applied for. For fiscal years ended December 31, 2015, 2014 and 2013, FerroAtlántica, S.A. and Hidro Nitro Española, S.A. made payments under these contracts to VM Energía of $85,509,925, $87,032,692 and $86,413,826, respectively.

c. Electricity Supply Agreement, dated as of June 22, 2010, between Villar Mir Energía, S.L. and FerroAtlántica, S.A.

d. Electricity Supply Agreement, dated as of December 29, 2010, between Villar Mir Energía, S.L. and FerroAtlántica, S.A.

e. Electricity Supply Agreement, dated as of December 27, 2012, between Villar Mir Energía, S.L. and Hidro Nitro Española, S.A.

Under the following contracts, Enérya VM Generación, S.L. ("Energya VM"), a Spanish company wholly owned by VM Energía, arranges for the sale of energy produced by FerroAtlántica, S.A. and Hidro Nitro Española, S.A.'s hydro-electric plants (which would be disposed pursuant to the Energy Sale SPA). Pursuant to these contracts, Energya VM provides energy market brokerage services and represents the Company's subsidiaries before the applicable energy market operator, the system operator and the Spanish National Markets and Competition Commission. FerroAtlántica, S.A. and Hidro Nitro Española, S.A. pay Energya VM a monthly remuneration calculated as a percentage of the sales made each month by their hydro-electric power plants. For fiscal years ended December 31, 2015, 2014 and 2013, Hidro Nitro Española made payments under its contract to Energya VM of $166,851, $666,907 and $1,969,572, respectively, and FerroAtlántica made payments under its contracts to Energya VM of $474,161, $1,234,176 and $1,667,000, respectively.

f. Representation Agreement, dated as of June 30, 2012, between Enérgya VM Generación, S.L. and FerroAtlántica, S.A.

g. Representation Agreement, dated as of June 30, 2012, between Enérgya VM Generación, S.L. and Hidro Nitro Española, S.A.

FerroAtlántica, S.A. entered into the following swap contract with Energya VM to lock in energy prices for approximately 35-40% of its energy needs for 2016. Payments under this contract in 2016 are estimated at approximately €21,000,000.

h. Power Sale and Purchase Contract for Differences, dated as of January 25, 2016, between Enérgya VM Gestión de Energía, S.L.U. and FerroAtlántica, S.A.

4. IT Outsourcing Agreements

Espacio Information Technology, S.A. ("Espacio IT"), a Spanish company wholly owned by Grupo Villar Mir, S.A.U., provides information technology and data processing services to certain of the Company's subsidiaries.

a. IT Outsourcing Agreement, dated January 1, 2004, between Espacio Information Technology, S.A. and FerroAtlántica, S.A. (formerly FerroAtlántica, S.L.).

This contract has a one-year term, subject to automatic yearly renewal, unless terminated with three months' notice prior to the scheduled renewal. The base yearly amount due under this contract is $519,788, exclusive of VAT and subject to inflation adjustment. For the fiscal years ended December 31, 2015, 2014 and 2013, FerroAtlántica, S.A. made payments under this contract to Espacio I.T. of 939,464, $1,235,505 and $1,342,709, respectively.

b. IT Outsourcing Agreement, dated January 1, 2006, between Espacio Information Technology, S.A. and and FerroPem, S.A.S.

This contract has a one-year term, subject to automatic yearly renewal, unless terminated with three months' notice prior to the scheduled renewal. The base yearly amount due under the contract for these services is $762,094, exclusive of VAT and subject to inflation adjustment. For the fiscal years ended December 31, 2015, 2014 and 2013, FerroPem, S.A.S. made payments under this contract to Espacio I.T. of $861,133, $1,146,495 and $913,733, respectively.

c. IT Outsourcing Agreement, dated January 1, 2009, between Espacio Information Technology, S.A. and Silicon Smelters (Pty) Ltd.

This contract has a one-year term, subject to automatic yearly renewal, unless terminated with notice three months prior to the scheduled renewal. The base yearly amount due under the contact is $265,700, subject to inflation adjustment. For the twelve months ended December 31, 2015, 2014 and 2013, Silicon Smelters (Pty.), Ltd. made payments under this contract to Espacio I.T. of $243,572, $299,533 and $290,608, respectively.

d. IT Outsourcing Agreement, dated June 26, 2014, between Espacio Information Technology, S.A. and and FerroAtlántica de México, S.A. de C.V.

This contract has a two year term, subject to automatic renewal every two years, unless terminated with notice six months prior to the scheduled renewal. The base yearly amount due under the contract for these services is $21,920, exclusive of VAT and subject to inflation adjustment and adjustment based on the level of production of the previous year. From the date of effectiveness of the contract in July 2014 through December 31, 2014, FerroAtlántica de Mexico made payments to Espacio I.T. of $5,480. In fiscal year 2015 FerroAtlántica de Mexico made payments to Espacio IT for $18,313.

e. Future Agreement with Espacio I.T.

In April 2016, the Ferroglobe Board approved a proposal to obtain certain information technology services from Espacio I.T., and the parties are currently negotiating a contract for the provision of these services. The contract is

anticipated to have a minimum of five years term, to require an initial investment of $1.7 million during 2016 and an annual base payment of $360,000. These investments and services are required to consolidate the IT infrastructure and information systems of Globe and FerroAtl´antica. Additional services may be required in 2017 to achieve full convergence of IT systems.

5. Joint Venture Agreement, dated December 20, 2016, among Aurinka Photovoltaic Group, S.L., Blue Power Corporations, S.L., Grupo FerroAtlántica, S.A.U., FerroAtlántica, S.A. and Silicio Ferrosolar, S.L.U., and all transactions entered into pursuant thereto or in connection therewith.

Javier López Madrid, a current member of the Board is affiliated with Aurinka Photovoltaic Group, S.L. ("Aurinka"). Mr. López Madrid currently owns approximately 100% of the outstanding share capital of Financiera Siacapital, which holds a (i) 31.33% interest in Blue Power Corporation, S.L. ("Blue Power"), a party to the joint venture, and (ii) 31.33% interest in Aurinka.

Blue Power owns the main intellectual property being contributed to the joint venture and which will provide certain technology consulting services to the joint venture. The remaining equity interests in Blue Power and Aurinka are owned by third party outside investors.

On December 20, 2016, Grupo FerroAtlántica, S.A.U., FerroAtlántica, S.A., and Silicio Ferrosolar, S.L.U., a wholly owned subsidiary of Grupo FerroAtlántica, S.A.U., entered into a joint venture agreement (the "Solar JV Agreement") with Blue Power and Aurinka providing for the formation and operation of a joint venture with the purpose of producing UMG solar silicon. The entry into the joint venture pursuant to the Solar JV Agreement is subject to certain conditions precedent, including the satisfactory completion of an ex-ante verification procedure in relation to the ability of the technology to be contributed to the joint venture by Blue Power to meet certain technical and cost parameters and the authorization of the joint venture by Ferroglobe PLC, Blue Power and Aurinka's management bodies. Under the Solar JV Agreement, FerroAtlántica will indirectly own 75% of the operating companies to be formed as part of the joint venture, one of which will own certain assets comprising, among others, constructions at Sab´on and a UMG solar silicon plant at Puertollano, Spain, and 51% of the company to be formed as part of the joint venture to hold certain intellectual property rights and know-how contributed by Blue Power and FerroAtl´antica, which will license such intellectual property rights and know how to the aforementioned operating companies. Pursuant to the Solar JV Agreement, and subject to the satisfaction of the conditions precedent described above, FerroAtlántica has committed to incur capital expenditures in connection with the joint venture of approximately $118 million over an initial phase estimated for up to two years. Further investment in the joint venture will be determined as the joint venture progresses. In connection with the Solar JV Agreement, FerroAtl´antica has obtained two loans, principal amounts approximately €45 million and approximately €27 million, respectively, from the Spanish Ministry of Industry and Energy for the purpose of building and operating the UMG solar silicon plant. See Items 11 and 12 of Schedule 7.1.

6. Loan Facility Agreement, dated June 13, 2016, between Blue Power Corporation, S.L. and Silicio Ferrosolar, S.L. (aggregate principal amount €9,000,000).

SCHEDULE 10.8

FUNDING AND PAYMENT OFFICE; CERTAIN ADDRESSES FOR NOTICE

Administrative Agent

Citizens Bank of Pennsylvania
Attention: Dwayne Nelson
28 State St, MS1515
Boston, MA 02109
Telephone: 617-994-7625
Fax: 855-215-1525
Email: dwayne.l.nelson@citizensbank.com

with a copy to:

Citizens Bank of Pennsylvania
Attention: Anh Tran
20 Cabot Rd
Medford, MA 02155
Telephone: 781-655-2248
Fax: 855-212-7541
Email: Anh.Tran@citizensbank.com

Issuing Lender

Citizens Bank of Pennsylvania Attention: Dwayne Nelson
28 State St, MS1515 Boston, MA 02109
Telephone: 617-994-7625
Fax: 855-215-1525
Email: dwayne.l.nelson@citizensbank.com

Company

Ferroglobe Plc
5 Fleet Place
London
EC4M 7RD

Exhibit C

Exhibits to Credit Agreement

[see attached]

EXHIBIT I

[FORM OF NOTICE OF BORROWING]

NOTICE OF BORROWING

To: Citizens Bank of Pennsylvania, as Administrative Agent

Date: [ ]

Pursuant to that certain Credit Agreement dated as of August 20, 2013, as amended, restated, supplemented or otherwise modified to the date hereof (said Credit Agreement, as so amended, restated, supplemented or otherwise modified, being the "**Credit Agreement**", the terms defined therein and not otherwise defined herein being used herein as therein defined), by and among Ferroglobe PLC, a public limited company incorporated under the laws of England and Wales ("**Company**"), Globe Specialty Metals, Inc., a Delaware corporation ("**Globe**"), certain Subsidiaries of the Company from time to time party thereto (collectively the "**Co- Borrower**" and together with Company and Globe, the "**Borrowers**" and each a "**Borrower**"), the financial institutions from time to time party thereto as Lenders ("**Lenders**"), and Citizens Bank of Pennsylvania, as Administrative Agent ("**Administrative Agent**"), this represents the undersigned Borrower's request to borrow as follows:

Funding Date: ,

Amount of Loans:

Lender(s):

☐ a. Lenders, in accordance with their applicable Pro Rata Shares
☐ b. Swing Line Lender

Type of Loans:

☐ a. Revolving Loans

☐ b. Swing Line Loan

Currency:

Interest rate option:

☐ a. Base Rate Loan(s)

☐ b. Eurocurrency Rate Loans with an initial Interest Period of

[one][two][three][six]month(s)

The proceeds of such Loans are to be:

☐ a. deposited in **[Company's][Globe's][Co-Borrower's]** account at [_____] in accordance with the following instructions:

☐ b. transferred to **[Company][Globe][Co-Borrower]** via wire transfer in accordance with the following instructions:

☐ c. transferred via wire transfer in accordance with the following instructions:

The undersigned Officer, to the best of his or her knowledge, certifies on behalf of **[Company][Globe][Co-Borrower]** that:

(i) The representations and warranties contained in the Credit Agreement and the other Loan Documents are true, correct and complete in all material respects on and as of the Funding Date to the same extent as though made on and as of the Funding Date, except to the extent such representations and warranties specifically relate to an earlier date, in which case such representations and warranties were true, correct and complete in all material respects on and as of such earlier date; provided, that, if a representation and warranty is qualified as to materiality, with respect to such representation and warranty the materiality qualifier set forth above shall be disregarded for purposes of this certification; and

(ii) No event has occurred and is continuing or would result from the consummation of the borrowing contemplated hereby that would constitute an Event of Default or a Potential Event of Default.

DATED: _____

[BORROWER]

[_____]

By: _____
Title: _____

Exhibit D

Disclosure Information

Legal Name of Loan Party (and any previous legal names within the past four months):	Ferroglobe PLC
Jurisdiction of Organization:	England and Wales
Jurisdictions where Qualified to do Business:	England and Wales
Type of Organization:	public limited company incorporated under the laws of England and Wales with registered number 09425113
Address of Chief Executive Office:	2nd Floor West Wing, Lansdowne House, 57 Berkeley Square, London, W1J 6ER, United Kingdom
Address of Principal Place of Business:1	2nd Floor West Wing, Lansdowne House, 57 Berkeley Square, London, W1J 6ER, United Kingdom
Business Phone Number:	+44 (0)203 129 2420
Federal Tax Identification Number:	N/A
Ownership Information (e.g. publicly held, if private or partnership—identity of owners/partners):	publicly held
All of the financial institutions at which Company maintains any deposit accounts, investment accounts, securities accounts or similar accounts, together with the name of account, account number and a description for each such account:	See attached.

1 Please note, the registered office of Company is 5 Fleet Place, London EC4M 7RD, United Kingdom.

FP	FERROGLOBE	Cuenta Corriente	DEU	DEUTSCHE BANK LONDON	GBP	GB 08 DEUT 405081 15470500	DEUTGB2LXXX
FP	FERROGLOBE	Cuenta Corriente	DEU	DEUTSCHE BANK LONDON	EUR	GB 78 DEUT 405081 15470501	DEUTGB2LXXX
FP	FERROGLOBE	Cuenta Corriente	DEU	DEUTSCHE BANK LONDON	USD	GB 51 DEUT 405081 15470502	DEUTGB2LXXX
FP	FERROGLOBE	Cuenta Corriente	DEU	DEUTSCHE BANK LONDON	ZAR	GB 24 DEUT 405081 15470503	DEUTGB2LXXX
FP	FERROGLOBE	Cuenta Corriente	BNL	BNP PARIBAS LONDON	EUR	GB28BNPA40638485752048	BNPAGB22XXX
FP	FERROGLOBE	Cuenta Corriente	BNL	BNP PARIBAS LONDON	GBP	GB29BNPA40638485752030	BNPAGB22XXX
FP	FERROGLOBE	Cuenta Corriente	BNL	BNP PARIBAS LONDON	ZAR	GB51BNPA40638485752022	BNPAGB22XXX
FP	FERROGLOBE	Cuenta Corriente	BNL	BNP PARIBAS LONDON	USD	GB73BNPA40638485752014	BNPAGB22XXX
FP	FERROGLOBE	Cuenta Corriente	SAL	SANTANDER LONDON	EUR	GB97ABBY09071500041556	ABBYGB2L
FP	FERROGLOBE	Cuenta Corriente	SAL	SANTANDER LONDON	GBP	GB74ABBY09022210489033	ABBYGB2L
FP	FERROGLOBE	Cuenta Corriente	SAL	SANTANDER LONDON	ZAR	GB37ABBY09071500041569	ABBYGB2L
FP	FERROGLOBE	Cuenta Corriente	SAL	SANTANDER LONDON	USD	GB60ABBY09071500041543	ABBYGB2L

Exhibit 4.10

21 JUNE 2016

JAVIER LÓPEZ MADRID

FERROGLOBE PLC

SERVICE AGREEMENT

CONTENTS

THIS AGREEMENT IS MADE ON 21 JUNE 2016

BETWEEN

(1) **FERROGLOBE PLC**, a company with registered number 09425113, which has its registered office at Legalinx Ltd., One Fetter Lane, London, EC4A 1BR (the *Company);* and

(2) **Javier López Madrid** of 30, Eaton Mews North, London, SW1X8AS (the ***Executive)***

IT IS AGREED as follows:

1. Term and Job Description

1.1 The Executive shall be employed by the Company as Executive-Vice Chairman.

1.2 The Employment shall begin on the Effective Date. For statutory purposes, there is no previous period of continuous employment.

1.3 Subject to clauses 1.4 and 16 below, the Employment will continue until terminated by:

(a) the Company giving the Executive 12 months' written notice; or

(b) the Executive giving the Company 6 months' written notice.

1.4 Notwithstanding clause 1.3(a) above, prior to the third anniversary of the Effective Date, the Company shall be required to give the Executive the following written notice:

(a) 24 months' written notice, if notice is given prior to the first anniversary of the Effective Date;

(b) 21 months' written notice, if notice is given between the first and second anniversaries of the Effective Date; and

(c) 18 months' written notice, if notice is given between the second and third anniversaries of the Effective Date.

2. Duties

2.1 During the Employment, the Executive will:

(a) diligently perform all such duties and exercise all such powers as are lawfully and properly assigned to him from time to time by the Board, whether such duties or powers relate to the Company or any other Group Company;

(b) comply with all Company rules, regulations, policies and procedures (including the Company's code of business ethics) and those of any applicable Group Company from time to time in force;

(c) comply with all directions lawfully and properly given to him by the Board;

(d) unless prevented by sickness, injury or other incapacity, devote the whole of his time, attention and abilities during his Working Hours to the business of the Company or any other Group Company for which he is required to perform duties;

(e) promptly provide the Board with all such information as it may require in connection with the business or affairs of the Company and of any other Group Company for which he is required to perform duties; and

(f) report to the Company and any applicable Group Company any matters of concern that come to his attention, or of which he is aware, in particular any acts of misconduct, dishonesty, breach of any of the Company or Group policies, including but not limited to the Code of Conduct or breach of any relevant regulatory rules committed, contemplated or discussed by any member of staff, contractor or other third party.

2.2 The Executive's Working Hours shall be such hours as are required in the proper performance of his duties.

2.3 The Executive agrees, in accordance with Regulation 5 of the Working Time Regulations 1998 (the *Regulations)*, that the provisions of Regulation 4(1) do not apply to the Executive, and that the Executive shall give the Company three months' notice in writing if he wishes Regulation 4(1) to apply to him.

2.4 The Executive's normal place of work is the Company's headquarters in central London. The Company may from time to time reasonably require the Executive to base himself in other locations. New York City, Miami, other similarly major cities on the East Coast of the United States, Madrid, and Barcelona shall be considered reasonable locations for the purpose of this clause.

2.5 The Executive agrees to travel and work (both within and outside the United Kingdom) as may be required for the proper performance of his duties under the Employment.

3. SALARY

3.1 The Executive's initial Salary is £555,000 (five hundred and fifty-five thousand) (less any required deductions). The Salary will be reviewed annually during the Employment, with the first review to take place in 2017 with any increase effective 1 January 2017 thereafter. No Salary review will be undertaken after notice has been given by either party to terminate the Employment. The Company is under no obligation to increase the Executive's Salary following a Salary review, but will not decrease it.

3.2 The Executive's Salary will accrue on a daily basis, and will be payable in arrears in equal monthly instalments.

3.3 The Executive's Salary will be inclusive of all fees and other remuneration to which he may be or become entitled as an officer of the Company or of any other Group Company.

3.4 The Executive agrees that, pursuant to Part II of the Employment Rights Act 1996 the Company has the right to deduct from his Salary and/or bonus any amount owed to the Company or any Group Company by the Executive.

3.5 While the Executive's normal place of work is outside of Spain, the Employee will be entitled to an annual expatriate benefits allowance equivalent to:

(a) 20% of the Salary per annum, plus, provided the Executive's normal place of work is located in London, an exceptional allowance of a further 20% of the Salary per annum for the first 3 years of the Employment, and

(b) 20% of Salary per annum thereafter, provided that any such allowance shall be determined in a manner consistent with the Company's Remuneration Policy.

3.6 The Company shall comply with all administrative requirements, including (subject to that being the correct legal position in relevant jurisdictions) the making of any necessary applications, to ensure that the Executive pays employee's national insurance contributions in the United Kingdom and is not required to pay social security contributions in any other jurisdiction with respect to the Employment.

4. BONUS AND LONG-TERM INCENTIVE ARRANGEMENTS

4.1 The Company operates a long-term incentive plan, and the Executive is eligible to participate therein.

The term of vesting and the conditions of such vesting will be determined by the Company in a manner consistent with the Company's Remuneration Policy and any such award will be governed by the rules of the relevant long-term incentive plan. The 2016 Remuneration Policy establishes a long-term incentive award with a target level of vesting ***(Target LTIP)*** of 200% of Salary. Any long-term incentive award will be non-pensionable.

4.2 The Executive is eligible for an annual bonus if objectives established by the Compensation Committee are met ***(Annual Bonus)*** in accordance with the Company's Remuneration Policy. The Compensation Committee will set the target annual bonus opportunity ***(Target Annual Bonus)*** and the maximum bonus opportunity ***(Maximum Annual Bonus)*** applicable to an Annual Bonus. Under the 2016 Remuneration Policy, (i) the Target Annual Bonus for the Executive will normally be 100% of Salary; (ii) the Maximum Annual Bonus for the Executive is normally 200% of the Executive's Target Annual Bonus; and (iii) in circumstances where there has been exceptional performance, the Maximum Annual Bonus for the Executive will be up to 500% of Salary. Any bonus payment will be non-pensionable.

4.3 Notwithstanding clauses 4.1 and 4.2, reflecting the special nature of the challenges of integrating two businesses, achieving working capital savings, maximising free cashflow and achieving cost synergies as soon as possible, the Company's Compensation Committee has decided to rebalance for the 2016 incentives. The Target Annual Bonus will therefore be 215% of Salary for 2016, and the Maximum Annual Bonus will be 200% of the Executive's Target Annual Bonus. For 2016, the Executive will be granted a reduced long-term incentive award with a Target LTIP of 115% of Salary.

4.4 In exceptional circumstances, and particularly in 2016 as set out above, the Compensation Committee may decide to change the weighting of the Target Annual Bonus and the long-term incentive plan benefits provided to the Executive. In 2017 and 2018, provided that the market conditions remain similar and subject to the Company's Remuneration Policy, it is the Company's intention (without being legally bound) that there will be no material reduction to the level of the aggregate of Target Annual Bonus and the Target LTIP (based on face value of shares at grant date) granted during each such financial year ***(Aggregate Incentive Awards)***. Any changes to the level of Aggregate Incentive Awards applicable generally to the Company's Tier 1 Executives and Tier 2 Executives will not be considered a material reduction for the purpose of this clause.

5. TAXATION

5.1 To the extent required by any applicable regulations, the Company shall make all necessary deductions of tax at source in respect of the Executive's employment income and benefits in any applicable jurisdiction, including PAYE income tax and employee's national insurance contributions in the United Kingdom.

5.2 Subject to the Executive providing full, correct and timely information to the Company, the Company shall apply any tax reliefs available to the Executive at source and shall cooperate with the Executive in making such applications to HM Revenue and Customs as may be required to obtain their approval to make adjustments in respect of overseas work day relief pursuant to section 690 of the Income Tax (Earnings and Pensions) Act 2003 or any other reliefs that may become available to the Executive in the future.

5.3 The Executive shall be entitled to direct the amount of payment of the Executive's salary and cash benefits into two separate bank accounts as follows:

(b) into a UK bank account; and

(c) into a non-UK bank account with such sum to be paid in the currency (which the Executive may direct) equivalent of the sterling amount, based on the official exchange rate on the date of payment, and the Company will, in its discretion, bear administrative fees associated with such payment,

provided that,

(i) unless until the Executive makes a direction, the entire earnings shall be paid into a UK bank account, and

(ii) the Company shall be under no obligation to comply with such a direction if the Company considers that the amount to be paid into the non-UK bank account would result in insufficient earnings to pay UK PAYE income tax, is otherwise not in compliance with applicable regulations, or the Compensation Committee by unanimity determines, based on the advice of its external independent advisers, that such payment into the non-UK bank account would materially prejudice the Company.

6. EXPENSES

The Company will reimburse (or procure the reimbursement of) all out-of-pocket expenses properly and reasonably incurred by the Executive in the course of his Employment subject to production of receipts or other appropriate evidence of payment.

7. PENSION

7.1 Subject to clause 7.2 below, the Company will pay the Executive an annual allowance in lieu of a pension contribution on his behalf at a rate of 20% of his Salary from time to time. The allowance will accrue on a daily basis and will be payable in arrears (less any required deductions) in equal monthly instalments with the Executive's Salary.

7.2 The Executive acknowledges that the Company may have an obligation to auto enrol him into a pension scheme and agrees that to the extent such an obligation exists and he does not opt out of the pension scheme, the Company may reduce the amount payable to him pursuant to clause 7.1 above by an amount equal to the contributions it is required to make to the pension scheme.

8. INSURANCE

During the Employment, subject to the Executive's age or health not being such as to prevent cover being obtained without exceptional conditions or unusually high premiums, the Company will:

(a) pay for the benefit of the Executive, his Spouse and any dependent children (as determined in accordance with the rules of the applicable scheme) subscriptions to the Company's private medical expenses insurance arrangements for the time being in force;

(b) pay for the benefit of the Executive subscriptions to the Company's permanent health insurance arrangements for the time being in force; and

(c) pay for the benefit of the Executive subscriptions to the Company's life assurance arrangements for the time being in force.

For the avoidance of doubt, the Executive will be liable for any income tax and employee's national insurance contributions payable in respect of the provision of these benefits.

9. Holiday

9.1 The Executive is entitled to 25 working days' paid holiday per calendar year during his Employment (plus bank and public holidays in England), to be taken at a time or times convenient to, and with prior approval from, the Company. The right to paid holiday will accrue pro-rata during each calendar year of the Employment.

9.2 Subject to clause 9.3 the Executive has no entitlement to be paid in lieu of accrued but untaken holiday.

9.3 On termination of the Employment, the Executive's entitlement to accrued holiday pay shall be calculated on a pro-rata basis (which calculation shall be made on the basis that each day of paid holiday is equivalent to 1/260 of the Executive's Salary). If the Executive has taken more working days' paid holiday than his accrued entitlement, the Company is authorised to deduct the appropriate amount from his final Salary instalment (which deduction shall be made on the basis that each day of paid holiday is equivalent to 1/260 of the Executive's Salary).

10. Sickness and Other Incapacity

10.1 Subject to the Executive's compliance with the Company's policy on notification and certification of periods of absence from work, the Executive will continue to be paid his full Salary during any period of absence from work due to sickness, injury or other incapacity, up to a maximum of 26 weeks in aggregate in any period of 52 consecutive weeks. Such payment will be inclusive of any statutory sick pay payable in accordance with applicable legislation in force at the time of absence.

10.2 The Executive will not be paid during any period of absence from work (other than due to holiday, sickness, injury or other incapacity) without the prior permission of the Board.

10.3 The Executive agrees that he will undergo a medical examination by a doctor appointed by the Company at any time (provided that the costs of all such examinations are paid by the Company). The Company will be entitled to receive a copy of any report produced in connection with all such examinations and to discuss the contents of the report with the doctor who produced it.

11. Representations and Warranties

By entering into this Agreement the Executive represents, warrants and acknowledges to the Company that he is not subject to any contract of service or for the provision of services, any notice period or any restrictive covenant with a previous employer which would be breached by signing this Agreement and/or commencing his Employment with the Company and he is legally free from all agreements, arrangements or other restrictions seeking to restrict his right to compete with any person or to deal with or solicit clients or solicit, employ or engage employees of any person or in any way restricting him from entering into and performing the terms of this Agreement and he may join the Company to commence his duties on the Effective Date.

12. Other Interests

12.1 The Company acknowledges that the Executive has business interests other than those of the Company and that the Executive has declared any conflicts that are apparent as of the Effective Date. In the event that the Executive becomes aware of any conflicts of interest that may arise, he must disclose these to the Board together with any information or knowledge acquired or gained by him in any manner whatsoever whilst he continues in office which may be of value or which may be to the detriment of the Company or any of its subsidiary undertakings.

12.2 The Board confirms that it has given its consent to the continuation of the Employee's material business interests (including current directorships) notified to the Board as of the Effective Date as detailed in Schedule 1.

12.3 Subject to clauses 12.4and 12.5, during the Employment the Executive will not (without the Board's prior written consent) be directly or indirectly engaged, concerned or interested in any other business activity, trade or occupation.

12.4 Notwithstanding clause 12.3, the Executive may, subject to his duty as a director, hold:

(a) an investment by way of shares or other securities in a business which is similar to or competitive with the Company of not more than 3% of the total issued share capital of any company (whether or not it is listed or dealt in on a recognised stock exchange) provided he has obtained prior written approval from the Board; and

(b) investments in companies and executive directorships in unquoted companies which do not carry on a business similar to or competitive with any business for the time being carried on by the Company without restriction provided only that (i) such holdings and directorships are notified to the Board, (ii) there is, in the reasonable opinion of the Board, no conflict of interest between the Company and the Executive, and (iii) such holdings and directorships (including, but without limitation, in respect of their time commitment) do not, in the reasonable opinion of the Board, interfere with the Employment. Subject always to the Executive's duty as a director, the obligation to notify the Board does not apply (x) if the Executive's investment in any one business does not exceed £100,000 and the Executive has no active participation or involvement in the business of the entity in which the investment is made; or (y) if the Executive's investment is in a mutual fund or any other form of undertakings for collective investment where the Executive has no active participation or involvement in the investment decisions (in this case, without any maximum amount).

12.5 Notwithstanding clause 12.3 above, during the Employment, the Executive may accept positions as a non-executive director (but, for the avoidance of doubt, not as a non-executive chairman) of another publicly listed company provided (i) he has obtained prior written approval from the Board, which shall not be unreasonably withheld, (ii) there is, in the reasonable opinion of the Board, no conflict of interest between the Company with

respect to the proposed role, and (iii) such positions do not, in the reasonable opinion of the Board, interfere with the Employment. Depending on the Executive's other external business activities at the time, the Board will normally consider two such non-executive director roles in other publicly listed companies to be reasonable. For the avoidance of doubt, (a) the Executive is not entitled to accept a position as an executive director in any company that is not a Group Company (except for those within the scope of clause 12.4(b) above), and (b) a role as advisor to any business shall be considered a non-executive director role of a publicly listed company for the purpose of this clause.

13. Share Dealing and Other Codes of Conduct

The Executive will comply with all codes of conduct adopted from time to time by the Board and with all applicable rules and regulations of relevant regulatory bodies, including (a) Nasdaq Stock Market or any other exchanges on which the Company's securities may be listed and (b) any applicable regulations on dealings in securities. The Executive acknowledges that compliance may require him to take appropriate steps to ensure that his connected persons (as defined in section 96B(2) of the Financial Services and Markets Act 2000) also comply with any such codes of conduct and regulations.

14. Intellectual Property

It shall be part of the Executive's normal duties or other duties specifically assigned to him (whether or not during normal working hours and whether or not performed at the Executive's normal place of work) at all times to consider in what manner and by what new methods or devices the products, services, processes, equipment or systems of the Company with which he is concerned or for which he is responsible might be improved and might, as part of such duties, originate designs (whether registrable or not) or patentable work or other work in which copyright, database rights or trade mark rights (together *Employee Works)* may subsist. Accordingly:

(a) the Executive shall forthwith disclose full details of any Employee Works in confidence to the Company and shall regard himself in relation to any Employee Works as a trustee for the Company;

(b) all intellectual property rights in any Employee Works shall vest absolutely in the Company which shall be entitled, so far as the law permits, to the exclusive use thereof;

(c) notwithstanding (b) above, the Executive assigns to the Company all right, title and interest, present and future, anywhere in the world, in copyright and in any other intellectual property rights in respect of all Employee Works written, originated, conceived or made by the Executive (except only those Employee Works written, originated, conceived or made by the Executive wholly outside his normal working hours hereunder and wholly unconnected with the Employment) during the continuance of the Employment;

(d) the Executive hereby waives all moral rights as author under the Copyright Designs and Patents Act 1988 or any equivalent laws in respect of any Employee Works; and

(e) the Executive agrees and undertakes that at any time during or after the termination of the Employment he will execute such deeds or documents and do all such acts and things as the Company may deem necessary or desirable to substantiate its rights in respect of the matters referred to above including for the purpose of obtaining letters patent or other privileges in all such countries as the Company may require.

15. Disciplinary and Grievance Procedures

15.1 If the Executive is dissatisfied with any disciplinary decision taken in relation to him he may appeal in writing to the Chairman of the Board within 7 days of that decision. The Chairman's decision shall be final.

15.2 If the Executive has any grievance in relation to the Employment he may raise it in writing with the Chairman of the Board whose decision shall be final.

16. Termination

16.1 Either party may terminate the Employment in accordance with clause 1.3 or clause 1.4, as applicable.

16.2 In lieu of giving notice to terminate the Executive's employment or at any time during any notice period under clause 1.3 or clause 1.4, as applicable (following service of notice either by the Executive or the Company), the Company may in its absolute discretion (but is not obliged to) terminate the Executive's employment with immediate effect and, subject to clause 16.5 make a payment in lieu of notice (the *Payment in Lieu)* within 28 days of the Termination Date of an amount equal to:

(a) the basic Salary which the Executive would have been entitled to receive under this Agreement during the notice period referred to at clause 1.3 or clause 1.4, as applicable if notice had been given on the date that the Employment was terminated with immediate effect (or, if notice has already been given, during the remainder of the notice period) (the *Unserved Notice Period);* and

(b) the pension allowance the Executive would have been entitled to receive in the Unserved Notice Period. For the avoidance of doubt, where the Unserved Notice Period covers multiple years then the Executive will be entitled to a payment in lieu of a pension allowance applicable for the year in which the Termination Date occurs;

(c) the bonus(es) the Executive would have been entitled to receive in the Unserved Notice Period, calculated in each case, by way of an average of Annual Bonuses awarded (including the value of any deferred portion thereof on the date of the award) to the Executive by the Company in respect of the last three completed

financial years immediately prior to the Termination Date (provided that (i) if the Termination Date occurs before the third anniversary of the Effective Date, the average shall mean the amount of the Annual Bonuses awarded since the Effective Date divided by the number of Annual Bonuses awarded, and (ii) if during the period between the Effective Date and the Termination Date, the Company has not awarded any Annual Bonus (other than as a result of failure to satisfy the applicable performance conditions), the average shall be determined by reference to the mid-point between the threshold opportunity (at which the lowest level of Annual Bonus is payable) and the Target Annual Bonus, and by reference to the Salary on the Termination Date). In all cases, the average amount calculated under this sub-clause shall be proportionately adjusted for the length of the Unserved Notice Period; and

(d) the cost to the Company of the benefits consisting of (i) those provided pursuant to clause 8 the Executive would have been entitled to receive during the Unserved Notice Period, and (ii) if an allowance under clause 3.5 is being paid at the time of the Termination Date, an annual expatriate benefits allowance equivalent to 20% of Salary pro-rated for the length of the Unserved Notice Period but not exceeding six months.

For the avoidance of doubt, the Executive will remain bound by the post-termination covenants set out in clause 21.

16.3 In the event the Employment is terminated by resignation by the Executive for Good Reason (as defined in clause 17), the Company will make an immediate payment of a liquidated sum to the Executive of an amount equal to the Payment in Lieu (described in clause 16.2) that would be applicable at that time. The liquidated sum shall be subject to such deductions as the Company may be required to make and shall be made in full and final settlement of any claims (other than statutory claims) the Executive may have against the Company or any Group Company arising from the employment or the termination thereof. In consideration for this payment, the Executive agrees to remain bound by the post-termination covenants set out in clause 21.

16.4 For the avoidance of doubt:

(a) the Payment in Lieu or the liquidated sum will not include any amount in respect of any other amount or benefit envisaged under this Agreement; and

(b) the Executive will not be entitled to receive any payment in addition to the Payment in Lieu or the liquidated sum in respect of any holiday entitlement that would have accrued during the period for which the Payment in Lieu or the liquidated sum is made.

16.5 The Company may determine in its absolute discretion that up to one-third of the Payment in Lieu under clause 16.2 or the liquidated sum under clause 16.3 will be payable in equal monthly instalments on the normal payroll dates over a 12 month period following the Termination Date.

16.6 The Payment in Lieu shall be subject to such deductions as may be required by law and shall be made in full and final settlement of any claims (other than statutory claims) the Executive may have against the Company or any Group Company arising from the employment or the termination thereof.

16.7 The Company may also terminate the Employment immediately and with no liability to make any further payment to the Executive (other than in respect of amounts accrued due at the date of termination) for Cause. ***Cause*** means if the Executive :

(a) commits any repeated breach (provided that the Company has notified the Executive of such breach and if capable of cure, the breach has not been cured within 30 days following receipt of the notice) or any serious breach of any of his obligations under this Agreement or his Employment;

(b) provides materially false or misleading information about himself or his previous employment history or omits to divulge material factors relevant to his suitability for the Employment;

(d) is guilty of serious misconduct which, in the Board's reasonable opinion, has damaged or may damage the business or affairs of the Company or any other Group Company;

(e) is guilty of conduct which, in the Board's reasonable opinion, brings or is likely to bring himself, the Company or any other Group Company into disrepute;

(f) is charged with a criminal offence (other than a road traffic offence not subject to a custodial sentence);

(g) is disqualified from acting as a director of a company by order of a competent court;

(h) is declared bankrupt or makes any arrangement with or for the benefit of his creditors, has an interim order made against him under Part VIII of the Insolvency Act or has an administration order made against him under the County Courts Act 1984; or

(i) resigns his directorship of the Company or any Group Company (other than at the explicit request of the Board).

This clause shall not restrict any other right the Company may have (whether at common law or otherwise) to terminate the Employment summarily.

Any delay by the Company in exercising its rights under this clause shall not constitute a waiver of those rights.

16.8 The Company may terminate the Employment even when, as a result, the Executive would or may forfeit any entitlement to benefit under the permanent health insurance arrangements referred to in clause 8 or to sick pay under clause 10, save that the Company

will not terminate the Employment solely on grounds of the Executive's ill health where such an entitlement or benefit would be forfeited.

16.9 On termination of the Employment for whatever reason (and whether in breach of contract or otherwise) the Executive will:

(a) immediately deliver to the Company all books, documents, papers, computer records, computer data, credit cards, and any other property relating to the business of or belonging to the Company or any other Group Company which is in his possession or under his control. The Executive is not entitled to retain copies or reproductions of any documents, papers or computer records relating to the business of or belonging to the Company or any other Group Company;

(b) immediately resign from any office he holds with the Company or any other Group Company (and from any related trusteeships) without any compensation for loss of office. Should the Executive fail to do so he hereby irrevocably authorises the Company to appoint some person in his name and on his behalf to sign any documents and do anything to give effect to his resignation from office; and

(c) immediately pay to the Company or, as the case may be, any other Group Company all outstanding loans or other amounts due or owed to the Company or any Group Company. The Executive confirms that, should he fail to do so, the Company is to be treated as authorised to deduct from any amounts due or owed to the Executive by the Company (or any other Group Company) a sum equal to such amounts.

16.10 The Executive will not at any time after termination of the Employment represent himself as being in any way concerned with or interested in the business of, or employed by, the Company or any other Group Company.

16.11 Any long-term incentive awards, including deferred bonus awards, held by the Executive under the Company's long-term incentive plan on the Termination Date will be treated in accordance with the applicable rules of the plan.

17. Resignation by the Executive for Good Reason

17.1 For the avoidance of doubt, the Executive may resign from the Employment at any time under any of the following circumstances (each a *Good Reason):*

(a) the Company's material failure to comply with the clauses of this Agreement, provided that the Executive has submitted a written notice of such failure to the Board and the failure is not cured within 90 days following receipt of the notice;

(b) the overall compensation (including Salary, Aggregate Incentive Awards, pension and other benefits) granted to the Executive by the Company in a given financial year is materially reduced from the preceding financial year, unless such reduction (i) is applied generally to the Company's Tier 1 and Tier 2 Executives and (ii) is a result of substantial changes in the market conditions affecting the Company. For the avoidance of doubt, both (i) and (ii) need to be met;

(c) his duties or responsibilities are substantially altered;

(d) as a result of long-term sickness he is unable to carry out his duties and his entitlements under clause 10 have ceased;

(e) he ceases to report to the Board or the Executive Chairman of the Company (or of any holding company of the Company, if applicable); or

(f) the Company's headquarters are relocated outside the United Kingdom (and not to New York City, Miami, similarly major cities on the East Coast of the United States, Madrid or Barcelona).

18. Remuneration Policy, Malus and Clawback

18.1 Notwithstanding any other provision of this Agreement, the Executive acknowledges and agrees that the payment of any amount or provision of any benefit to him is conditional upon such payment or provision being consistent with the Company's Remuneration Policy. Any provision of this Agreement which is not consistent with the Company's Remuneration Policy shall be void and the Executive shall have no entitlement to compensation or damages in respect of any loss suffered in consequence thereof.

18.2 The Executive acknowledges that in order to comply with UK corporate governance standards the discretionary bonus arrangements and share incentive plans operated by the Company from time to time (the *Plans)* include, or may in the future include, provisions which in certain circumstances allow for the reduction of amounts payable to the Executive and/or for the Executive to repay to the Company all or part of any amounts received by him pursuant to those Plans. The Executive hereby agrees to be bound by such provisions of the Plans both during and following the Employment and, without prejudice to clause 3.4, acknowledges the right of the Company to deduct from any amount payable to him any amount he owes to the Company or any Group Company pursuant to the Plans.

19. Suspension and Gardening Leave

19.1 Where notice of termination has been served by either party whether in accordance with clause 1.3 or otherwise, the Company shall be under no obligation to provide work for Or assign any duties to the Executive for the whole or any part of the relevant notice period ("Gardening Leave") and may require him:

(a) not to attend any premises of the Company or any other Group Company;

(b) to resign with immediate effect from any offices he holds with the Company or any other Group Company (and any related trusteeships);

(c) to refrain from business contact with any customers, clients or employees of the Company or any Group Company;

(d) to take any holiday which has accrued under clause 9 during any period of suspension under this clause 19.1;

(e) to deliver promptly to the Company all papers, Confidential Information and property relating to the business of the Company or any Group Company which is in his possession or under his control (including, for the avoidance of doubt, any shares held by him as nominee for any member of the Group);

(f) not to compete with the Company or any Group company; and/or

(g) not to do any act or thing or make or cause to be made any statement reasonably likely to damage the business or reputation of the Company or any Group Company and the Executive must use all reasonable efforts to ensure that his Spouse does not do any such act or thing or make or cause to be made any such statements.

19.2 For the avoidance of doubt, the Executive's entitlement to the annual bonus (clause 4) shall continue during any period of Gardening Leave. To the extent that the Executive is required not to attend work or otherwise carry out his Duties during any period of Gardening Leave, the Company agrees that his Annual Bonus entitlements shall not be adversely affected and he shall receive such sums as he would have received had he remained at work and/or performing his duties calculated by way of an average of the last three years' bonus awards (or an average across the Executive's length of service, if lower than 3 years).

19.3 The provisions of clause 12.2 shall remain in full force and effect during any period of suspension under clause 19.1. The Executive will also continue to be bound by duties of good faith and fidelity to the Company and remain available to perform such duties and/or exercise such powers, authorities and discretions (if any) when called upon by the Company to do so during any period of suspension under clause 19.1.

Any suspension under clause 19.1 shall be on full Salary and benefits (save that the Executive shall not be entitled to earn or be paid any bonus during any period of suspension).

19.4 The Company may suspend the Executive from the Employment during any period in which the Company is carrying out a disciplinary investigation into any alleged acts or defaults of the Executive. Such suspension shall be on full Salary and benefits.

20. Restraint on Activities f Executive and Confidentiality

The Executive will keep secret and will not at any time (whether during the Employment or thereafter) use for his own or another's advantage, or reveal to any person, firm, company or organisation and shall use his best endeavours to prevent the publication or disclosure of any Confidential Information or information which the Executive knew or ought reasonably to have known to be confidential, concerning the business or affairs of the Company or any Group Company or any of its or their customers.

The restrictions in this clause shall not apply:

(a) to any disclosure of information which is already in the public domain otherwise than by breach of this Agreement;

(b) to any disclosure of information which was known to, or in the possession of, the Executive prior to his receipt of such information from the Company or any Group Company whenever so received;

(c) to any disclosure of information which has been conceived or generated by the Executive independently of any information or materials received or acquired by the Executive from the Company or any Group Company;

(d) to any disclosure or use authorised by the Board or required by the Employment or by any applicable laws or regulations, including, without limitation, to any disclosure required for patent purposes provided that the Executive promptly notifies the Company when any such disclosure requirement arises to enable the Company to take such action as it deems necessary, including, without limitation, to seek an appropriate protective order and/or make known to the appropriate government or regulatory authority or court the proprietary nature of the Confidential Information and make any applicable claim of confidentiality with respect hereto;

(e) so as to prevent the Executive from using his own personal skill, experience and knowledge in any business in which he may be lawfully engaged after the Employment is ended; or

(f) to prevent the Executive making a protected disclosure within the meaning of section 43A of the Employment Rights Act 1996.

21. Post-Termination Covenants

21.1 In order to protect the confidential information, trade secrets and business connections of the Company and any Group Company to which the Executive has access as a result the Employment, the Executive covenants with the Company (for itself and as trustee and agent for each other Group Company) that he shall not, whether directly or indirectly, on his own behalf or on behalf of or in conjunction with any other person, firm, company or other entity: -

(a) for the period of (subject to clause 21.2 below) 12 months following the Termination Date, solicit or entice away or endeavour to solicit or entice away from the Company or any Group Company any person, firm, company or other entity who is, or was, in the period of 12 months immediately prior to the Termination Date, a client of the Company or any Group Company with whom the Executive had business dealings during the course of the Employment in that period. Nothing in this clause 21.1(a) shall prohibit the seeking or doing of business not in direct or indirect competition with the business of the Company or any Group Company;

(b) for the period of (subject to clause 21.2 below) 12 months following the Termination Date, have any business dealings with any person, firm, company or other entity who is, or was, in the period of 12 months immediately prior to the Termination Date, a client of the Company or any Group Company with whom the Executive had business dealings during the course of the Employment in that period. Nothing in this clause 21.1(b) shall prohibit the seeking or doing of business not in direct or indirect competition with the business of the Company or any Group Company;

(c) for the period of (subject to clause 21.2 below) 12 months following the Termination Date, solicit or entice away or endeavour to solicit or entice away any individual who is employed or engaged by the Company or any Group Company as a director or in a managerial or technical capacity and with whom the Executive had business dealings during the course of the Employment in the 12 month period immediately prior to the Termination Date;

(d) for the period of (subject to clause 21.2 below) 12 months following the Termination Date, carry on, set up, be employed, engaged or interested in a business anywhere in the United Kingdom, United States of America, or such other country in which a Major Division operates as at the Termination Date, which is or is about to be in competition with the business of the Company or any Group Company as at the Termination Date with which the Executive was actively involved (including in an oversight capacity as a director of the Company) during the 12 month period immediately prior to the Termination Date. A *Major Division* means a division or business carried on as at the Termination Date by the Company or any Group Company which accounts for at least 20% of the Group's revenues or 20% of the Group's profits and with which the Executive was actively involved during the six month period to the Termination Date. The provisions of this clause 21.1(d) shall not, at any time following the Termination Date, prevent the Executive from holding shares or other capital not amounting to more than 3% of the total issued share capital of any company whether listed on a recognised stock exchange or not and, in addition, shall not prohibit the seeking or doing of business not in direct or indirect competition with the business of the Company or any Group Company.

21.2 The period during which the restrictions referred to in clauses 21.1(a), (b), (c) and (d) inclusive shall apply following the Termination Date shall be reduced by the amount of time during which, if at all, the Company suspends the Executive under the provisions of clause 19.1.

21.3 The Executive agrees that if, during either the Employment or the period of the restrictions set out in 21.1(a), (b), (c) and (d) inclusive (subject to the provisions of clause 21.2), he receives an offer of employment or engagement, he will provide a copy of clause 21 to the offeror as soon as is reasonably practicable after receiving the offer and will inform the Company of the identity of the offeror as soon as possible after the offer is accepted.

21.4 The Executive warrants that the covenants contained in this clause are reasonable and necessary to protect the Company and any Group Company legitimate business interests.

21.5 Each of the restrictions in this clause is intended to be separate and severable. If any of the restrictions shall be held to be void but would be valid if part of their wording were deleted, such restriction shall apply with such deletion as may be necessary to make it valid or effective.

21.6 The Executive will, at the request and expense of the Company, enter into a separate agreement with any Group Company that the Company may require under the terms of which he will agree to be bound by restrictions corresponding to those contained in clauses 21.1(a), (b), (c) and (d) inclusive (or such as may be appropriate in the circumstances).

22. Executive's Position as Director

22.1 The Executive's duties as a director of the Company or any other Group Company, as applicable are subject to the Articles of Association of the relevant company for the time being.

22.2 The Company shall provide and maintain for the benefit of the Executive directors' and officers' liability insurance coverage in respect of the period for which the Executive is a director of the Company or any Group Company and for a period of not less than six years following the Termination Date at such level as the Company (or any Group Company as applicable) maintains such cover for its directors generally.

23. Waiver of Rights

If the Employment is terminated by either party and the Executive is offered re-employment by the Company (or employment with another Group Company) on terms no less favourable in all material respects than the terms of the Employment under this Agreement, the Executive shall have no claim against the Company in respect of such termination.

24. Data Protection

24.1 The Executive consents to the Company and any Group Company processing data relating to him at any time (whether before, during or after the Employment) for the following purposes:

(a) performing its obligations under this Agreement (including remuneration, payroll, pension, insurance and other benefits, tax and social security (including national insurance) obligations;

(b) the legitimate interests of the Company and any Group Company including any sickness policy, working time policy, investigating acts or defaults (or alleged or suspected acts or defaults) of the Executive, security, management forecasting or planning and negotiations with the Executive;

(c) processing in connection with any merger, sale or acquisition of a company or business in which the Company or any Group Company is involved or any transfer of any business in which the Executive performs his duties; and

(d) transferring data to countries outside the European Economic Area for the purposes of maintaining comprehensive records and conducting analyses of the Group-wide employee population, in particular in the United States of America.

24.2 The Executive explicitly consents to the Company and any Group Company processing sensitive personal data (within the meaning of the Data Protection Act 1998) at any time (whether before, during or after the Employment) for the following purposes:

(a) where the sensitive personal data relates to the Executive's health, any processing in connection with the operation of the Company's (or any Group Company's) sickness policy or any relevant pension scheme or monitoring absence;

(b) where the sensitive personal data relates to an offence committed, or allegedly committed, by the Executive or any related proceedings, processing for the purpose of disciplinary investigation and/or action by the Company or any Group Company;

(c) for all sensitive personal data, any processing in connection with any merger, sale or acquisition of a company or business in which the Company or any Group Company is involved or any transfer of any business in which the Executive performs his duties; and

(d) for all sensitive personal data, any processing in the legitimate interests of the Company or any Group Company.

25. EMAIL AND INTERNET USE

25.1 In accordance with the Company Policy and within the bounds of the law, the Company reserves the right to monitor the Executive's electronic communications on a regular basis (including during any notice period, if applicable) and to monitor and record logging and traffic information as well as actual content (including the content of personal email and internet sites visited) in the Company's legitimate business interest, for example security or disciplinary reasons. All documents, communications and other files created, sent or received on email or through the internet or intranet are the Company's property.

25.2 Upon request by the Company, the Executive must give the Company access to his Company PC, laptop, Blackberry or other electronic device provided by the Company. Failure to comply with such a request will be regarded as a serious breach by the Executive and may result in disciplinary action being taken against him, including dismissal without notice or pay in lieu of notice.

26. COUNTERPARTS

This Agreement may be executed in any number of counterparts, and by each party on separate counterparts. Each counterpart is an original, but all counterparts shall together

constitute one and the same instrument. Delivery of an executed counterpart signature page of this agreement by e-mail or fax shall be as effective as delivery of a manually executed counterpart of this agreement. In relation to each counterpart, upon confirmation by or on behalf of the signatory that the signatory authorises the attachment of such counterpart signature page to the final text of this agreement, such counterpart signature page shall take effect together with such final text as a complete authoritative counterpart.

27. Contracts (rights of third parties) act 1999

A person who is not a party to this Agreement shall have no right under the Contracts (Rights of Third Parties) Act 1999 to enforce any of its terms.

28. Definitions

In this Agreement the following expressions have the following meanings:

2016 Remuneration Policy means the Remuneration Policy that is subject to approval by the Company's shareholders at the 2016 Annual General Meeting;

Board means the board of directors of the Company or a duly constituted committee of the board of directors;

Compensation Committee means a compensation committee of the Board; *Civil Partner* has the same meaning as in the Civil Partnerships Act 2004;

Confidential Information means any information relating to the business, customers, transactions, processes, products, know-how, secrets or affairs of the Company, or any Group Company received or acquired by the Executive in pursuance of his duties under this Agreement or any information which is specified as confidential by the Company or a Group Company. Without prejudice to the pregoing generality; ***Confidential Information*** also applies to information concerning:

(a) the markets, customers and potential markets and customers of the Company or any Group Company;

(b) the pricing policy, costs of products and services to the Company or any Group Company;

(c) the profits turnover, profit margins, business expectations, budgets, business plans or any other similar financial information of the Company or any Group Company;

(d) technical data or know-how relating to the business carried on by the Company or any Group Company;

(e) research projects of the Company or any Group Company; and

(f) administrative, managerial, employment or other internal policies of the Company or any Group Company or the relations of the Company or any Group Company

with customers, suppliers, competitors, the business community or the general public.

Effective Date means 1 January 2016;

Employment means the Executive's employment in accordance with the terms and conditions of this Agreement;

Group Company means the Company, any holding company and any subsidiary of the Company or any holding company (as defined in the Companies Act 2006) and ***Group*** shall be defined accordingly;

Remuneration Policy means the remuneration policy of the Company most recently approved by shareholders in accordance with section 439A of the Companies Act 2006;

Salary means the salary referred to in clause 3.1 as increased from time to time;

Spouse means the person to whom the Executive is married and shall include a Civil Partner. For the avoidance of doubt, references to *`marry', 'married'* and *'marriage'* throughout shall be deemed to include a registered Civil Partnership and entering into or being in a registered Civil Partnership;

Termination Date means the date of termination of the Employment howsoever caused (including, without limitation, termination by the Company which is in repudiatory breach of this Agreement);

Tier 1 Executives means executive directors and chief executive officer (if not a director) of the Company;

Tier 2 Executives means executive officers, including chief financial officer and chief legal officer, and deputy executive officers of the Company (including, for the avoidance of doubt, the deputy chief executive officer of the Company); and

Working Hours has the meaning given to it by clause 2.2.

29. MISCELLANEOUS

29.1 This Agreement, together with any other documents referred to in this Agreement, constitutes the entire agreement and understanding between the parties, and supersedes all other agreements both oral and in writing between the Company and the Executive (other than those expressly referred to herein). The Executive acknowledges that he has not entered into this Agreement in reliance upon any representation, warranty or undertaking which is not set out in this Agreement or expressly referred to in it as forming part of the Executive's contract of employment.

29.2 The Executive represents and warrants to the Company that he will not by reason of entering into the Employment, or by performing any duties under this Agreement, be in

breach of any terms of employment with a third party whether express or implied or of any other obligation binding on him.

29.3 Any notice to be given under this Agreement to the Executive may be served by being handed to him personally or by being sent by recorded delivery first class post to him at his usual or last known address; and any notice to be given to the Company may be served by being left at or by being sent by recorded delivery first class post to its registered office for the time being. Any notice served by post shall be deemed to have been served on the day (excluding Sundays and public and bank holidays) next following the date of posting and in proving such service it shall be sufficient proof that the envelope containing the notice was properly addressed and posted as a prepaid letter by recorded delivery first class post.

29.4 Any reference in this Agreement to an Act of Parliament shall be deemed to include any statutory modification or re-enactment thereof.

29.5 This Agreement is governed by, and shall be construed in accordance with, the laws of England. The Courts of England shall have exclusive jurisdiction in relation to all disputes arising out of or in connection with this Agreement.

SIGNED as a **DEED** and)
DELIVERED by)
JAVIER LÓPEZ MADRID) /s/ Javier López Madrid

in the presence of)
Name:
Address:

SIGNED for and on behalf of)
FERROGLOBE PLC)

SCHEDULE 1

Schedule of Employee's Material Business Interests
and Current Directorships as of Effective Date
Consented by the Board

SCHEDULE 1

Schedule of Executive's Material Business Interests
and Current Directorships[1] as of Effective Date
Consented by the Board

Material business interests and directorships

- 99% shareholding in Siacapital (Financiera Siacapital, S.L. And Siacapital Management, S,A.) and 25% shareholding in Tressis (Tressis Sociedad de Valores, S.A.).
- Non-executive Chairman of both Siacapital and Tressis.
- 29% indirect interest in Aurinka (Aurinka International, S.L.), a company with common interest with Ferroglobe in the Ferrosolar Project, as previously disclosed to the Board (February and April 2016 meetings).
- Co-Managing Director of the family holding GVM (Villar Mir Group) and board member of other two GVM's controlled companies: OHL (Obrascon Huarte Lain, S.A.) and Fertiberia, S.A.

[1] This list does not include director position in subsidiaries of Ferroglobe PLC.

EXHIBIT 3

Employment Contract

Exhibit 4.11

7th February 2017

JAVIER LÓPEZ MADRID

FERROGLOBE PLC

AMENDMENT TO SERVICE AGREEMENT
DATED 21 JUNE 2016

THIS AMENDMENT AGREEMENT IS MADE ON 7th February 2017

BETWEEN

(1) **FERROGLOBE PLC**, a company with registered number 09425113, which has its registered office at 5 Fleet Place, London, EC4M 7RD, UK (the ***Company);*** and

(2) **JAVIER LÓPEZ MADRID** of 30 Eaton Mews North, London, SW1X 8AS (the ***Executive).***

WHEREAS:

(A) This amendment (the ***Amendment Agreement)*** amends the service agreement dated 21 June 2016 between the Company and the Executive (the ***Agreement)***, with effect on and from 1 January 2017.

(B) The Company desires to continue the employment of the Executive on the terms and conditions set forth in the Agreement, subject to the modifications set forth herein.

(C) The Executive has agreed to continue to perform the services for the Company pursuant to the Agreement subject to the modifications set forth herein.

(D) The Executive agrees that nothing in this Amendment Agreement shall constitute a Good Reason (as defined in the Agreement) for which the Executive may resign from his employment with the Company pursuant to clause 17 of the Agreement or otherwise.

IT IS AGREED as follows:

1. Job Description

With effect on and from 1 January 2017, clause 1.1 of the Agreement is hereby amended and restated in its entirety to read as follows:

"The Executive shall be employed by the Company as Executive Chairman."

2. Disciplinary and Grievance Procedures

With effect on and from 1 January 2017, the references to "Chairman of the Board" in clause 15 of the Agreement will be deleted and replaced with "Chairman of the Audit Committee".

3. Resignation by the Executive for Good Reason

With effect on and from 1 January 2017, clause 17.1(e) of the Agreement is hereby amended and restated in its entirety to read as follows:

"he ceases to report to the Board of the Company (or of any holding company of the Company, if applicable); or".

4. Resignation by the Executive for Good Reason

The Executive agrees that nothing in this Amendment Agreement shall constitute a Good Reason (as defined in the Agreement) for which the Executive may resign from his employment with the Company pursuant to clause 17 of the Agreement or otherwise.

5. Continuation

Except as modified herein, the Agreement continues in full force and effect in accordance with its original terms.

6. Counterparts

This Amendment Agreement may be executed in any number of counterparts, and by each party on separate counterparts. Each counterpart is an original, but all counterparts shall together constitute one and the same instrument. Delivery of a counterpart of this Amendment Agreement by e-mail attachment or telecopy shall be an effective mode of delivery.

7. Governing Law and Jurisdiction

7.1 This Amendment Agreement and any non-contractual obligations arising out of or in connection with this Amendment Agreement shall be governed by, and interpreted in accordance with, English law.

7.2 The English courts shall have exclusive jurisdiction in relation to all disputes arising out of or in connection with this Amendment Agreement.

IN WITNESS WHEREOF this Amendment Agreement has been duly executed by the parties and is intended to be and is hereby delivered on the date first above written.

SIGNED as a **DEED** and)
DELIVERED by the) /s/ Javier López Madrid
EXECUTIVE in the presence of:)

/s/ Lucy Henrit
Signature of witness:

Witness name: Lucy Henrit

Witness address: 3 Hawthorn Grove
EN2 0DU

Witness occupation: Office Manager

SIGNED for and on behalf of)
FERROGLOBE PLC:) /s/

Exhibit 4.35

Ferroglobe PLC

and

Globe Specialty Metals, Inc.,

as Issuers

and the Guarantors party hereto

9⅜% Senior Notes due 2022

INDENTURE

Dated as of February 15, 2017

WILMINGTON TRUST, NATIONAL ASSOCIATION,
as Trustee, Registrar, Transfer Agent and Paying Agent

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Exhibits

INDENTURE dated as of February 15, 2017, among Ferroglobe PLC, a public limited company incorporated under the laws of England and Wales (the "*Parent*"), and Globe Specialty Metals, Inc., a corporation incorporated under the laws of the State of Delaware (the "US Co-Issuer" and, together with the Parent, the "*Issuers*"), the Guarantors (as defined herein) from time to time party hereto, and Wilmington Trust, National Association, as trustee (in such capacity, the "*Trustee*"), registrar (in such capacity, the "*Registrar*"), transfer agent (in such capacity, the "*Transfer Agent*") and paying agent (in such capacity, the "*Paying Agent*").

Each party agrees as follows for the benefit of the other parties and for the equal and ratable benefit of the Holders (as defined herein) of (a) the Issuers' U.S. dollar-denominated 9⅜% Senior Notes due 2022 (the "*Notes*") and (b) additional securities having identical terms and conditions as the Notes (the "*Additional Notes*") that may be issued on any later issue date subject to the conditions and in compliance with the covenants set forth herein. Unless the context otherwise requires, in this Indenture references to the "Notes" include the Notes and any Additional Notes that are actually issued.

ARTICLE I

DEFINITIONS

Section 1.01. Definitions.

"*Acquired Indebtedness*" means Indebtedness (1) of a Person or any of its Subsidiaries existing at the time such Person becomes a Restricted Subsidiary, (2) assumed in connection with the acquisition of assets from such Person, in each case whether or not Incurred by such Person in connection with such Person becoming a Restricted Subsidiary or such acquisition or (3) of a Person at the time such Person merges with or into or consolidates or otherwise combines with the Parent or any Restricted Subsidiary. Acquired Indebtedness shall be deemed to have been Incurred, with respect to clause (1) of the preceding sentence, on the date such Person becomes a Restricted Subsidiary and, with respect to clause (2) of the preceding sentence, on the date of consummation of such acquisition of assets and, with respect to clause (3) of the preceding sentence, on the date of the relevant merger, consolidation or other combination.

"*Affiliate*" of any specified Person means any other Person, directly or indirectly, controlling or controlled by or under direct or indirect common control with such specified Person. For the purposes of this definition, "control" when used with respect to any Person means the power to direct the management and policies of such Person, directly or indirectly, whether through the ownership of voting securities, by contract or otherwise; and the terms "controlling" and "controlled" have meanings correlative to the foregoing.

"*Agent*" means any Registrar, co-registrar, Transfer Agent, Paying Agent or additional paying agent.

"*Asset Disposition*" means any direct or indirect sale, lease (other than an operating lease entered into in the ordinary course of business), transfer, issuance or other disposition, or a series of related sales, leases (other than operating leases entered into in the ordinary course of business), transfers, issuances or dispositions that are part of a common plan, of shares of Capital Stock of a Subsidiary (other than directors' qualifying shares), property or other assets (each referred to for the purposes of this definition as a "disposition") by the Parent or any of its Restricted Subsidiaries, including any disposition by means of a merger, consolidation or similar transaction. Notwithstanding the preceding provisions of this definition, the following items shall not be deemed to be Asset Dispositions:

(1) a disposition by a Restricted Subsidiary to the Parent or by the Parent or a Restricted Subsidiary to a Restricted Subsidiary;

(2) a disposition of cash, Cash Equivalents, Temporary Cash Investments or Investment Grade Securities;

(3) a disposition of inventory, trading stock, security equipment or other equipment or assets in the ordinary course of business;

(4) a disposition of obsolete, damaged, retired, surplus or worn out equipment or assets or equipment, facilities or other assets that are no longer useful in the conduct of the business of the Parent and its Restricted Subsidiaries and any transfer, termination, unwinding or other disposition of hedging instruments or arrangements not for speculative purposes;

(5) transactions permitted under Section 5.01 or a transaction that constitutes a Change of Control;

(6) an issuance of Capital Stock by a Restricted Subsidiary to the Parent or to another Restricted Subsidiary or as part of or pursuant to an equity incentive or compensation plan approved by the Board of Directors or the issuance of directors' qualifying shares and shares issued to individuals as required by applicable law;

(7) any dispositions of Capital Stock, properties or assets in a single transaction or series of related transactions with a fair market value (as determined in good faith by the Board of Directors or an Officer of the Parent) of less than $15.0 million;

(8) any Restricted Payment that is permitted to be made, and is made, under Section 4.02 and the making of any Permitted Payment or Permitted Investment or, solely for purposes of Section 4.05(b), asset sales, the proceeds of which are used to make such Restricted Payments or Permitted Investments;

(9) the granting of Liens not prohibited by Section 4.03;

(10) dispositions of receivables in connection with the compromise, settlement or collection thereof in the ordinary course of business or in bankruptcy or similar proceedings and exclusive of factoring or similar arrangements or any sale of assets received by the Parent or a Restricted Subsidiary upon the foreclosure of a Lien granted in favor of the Parent or any Restricted Subsidiary;

(11) the licensing or sub-licensing of intellectual property or other general intangibles and licenses, sub-licenses, leases or subleases of other property, in each case, in the ordinary course of business;

(12) foreclosure, condemnation, taking by eminent domain or any similar action with respect to any property or other assets;

(13) the sale or discount (with or without recourse, and on customary or commercially reasonable terms) of accounts receivable or notes receivable arising in the ordinary course of business, or the conversion or exchange of accounts receivable for notes receivable;

(14) sales or dispositions of receivables in connection with any factoring, receivables or securitization financing, including any Qualified Securitization Financing, or in the ordinary course of business;

(15) any issuance, sale or disposition of Capital Stock, Indebtedness or other securities of an Unrestricted Subsidiary;

(16) any disposition of Capital Stock of a Restricted Subsidiary pursuant to an agreement or other obligation with or to a Person (other than the Parent or a Restricted Subsidiary) from whom such Restricted Subsidiary was acquired, or from whom such Restricted Subsidiary acquired its business and assets (having been newly formed in connection with such acquisition), made as part of such acquisition and in each case comprising all or a portion of the consideration in respect of such sale or acquisition;

(17) any surrender or waiver of contract rights or the settlement, release or surrender of contract, tort or other claims of any kind;

(18) any disposition of assets to a Person who is providing services related to such assets, the provision of which have been or are to be outsourced by the Parent or any Restricted Subsidiary to such Person; *provided*, *however*, that the Board of Directors shall certify that in the opinion of the Board of Directors, the outsourcing

transaction will be economically beneficial to the Parent and its Restricted Subsidiaries (considered as a whole); *provided further* that the fair market value of the assets disposed of, when taken together with all other dispositions made pursuant to this clause (18), does not exceed $25.0 million;

(19) an issuance of Capital Stock by a Restricted Subsidiary to the Parent or to another Restricted Subsidiary, an issuance or sale by a Restricted Subsidiary of Preferred Stock or Redeemable Capital Stock that is permitted by Section 4.01 or an issuance of Capital Stock by the Parent pursuant to an equity incentive or compensation plan approved by the Board of Directors;

(20) sales, transfers or other dispositions of Investments in joint ventures to the extent required by, or made pursuant to, customary buy/sell arrangements between the joint venture parties set forth in joint venture arrangements and similar binding agreements; *provided* that any cash or Cash Equivalents received in such sale, transfer or disposition is applied in accordance with Section 4.05;

(21) any disposition with respect to property built, owned or otherwise acquired by the Parent or any Restricted Subsidiary pursuant to customary sale and lease-back transactions, asset securitizations and other similar financings permitted by this Indenture; and

(22) any disposition of Capital Stock, properties or assets of Ferroatlántica de Venezuela (Ferroven), S.A. and Cuarzos Industriales de Venezuela, S.A.

"*Associate*" means (i) any Person engaged in a Similar Business of which the Parent or its Restricted Subsidiaries are the legal and beneficial owners of between 20% and 50% of all outstanding Voting Stock and (ii) any joint venture entered into by the Parent or any Restricted Subsidiary.

"*Bankruptcy Law*" means (a) the United States Bankruptcy Code of 1978, as amended, or any similar U.S. federal or state law for the relief of debtors and (b) any other bankruptcy, insolvency, liquidation or similar laws of any relevant jurisdiction that are of general application (including, without limitation, the laws of England and Wales relating to moratorium, bankruptcy, insolvency, receivership, winding up, liquidation, reorganization or relief of debtors), and in each case, any amendment to, succession to or change in any such law.

"*Board of Directors*" means (1) with respect to an Issuer or any corporation, the board of directors or managers, as applicable, of the corporation, or any duly authorized committee thereof; (2) with respect to any partnership, the board of directors or other governing body of the general partner of the partnership or any duly authorized committee thereof; and (3) with respect to any other Person, the board or any

duly authorized committee of such Person serving a similar function. Whenever any provision of this Indenture requires any action or determination to be made by, or any approval of, a Board of Directors, such action, determination or approval shall be deemed to have been taken or made if approved by a majority of the directors (excluding employee representatives, if any) on any such Board of Directors (whether or not such action or approval is taken as part of a formal board meeting or as a formal board approval). The obligations of the "Board of Directors" of an Issuer under this Indenture may be exercised by the Board of Directors of a Restricted Subsidiary or a Parent Holdco pursuant to a delegation of powers of the Board of Directors of such Issuer.

"*Business Day*" means each day that is not a Saturday, Sunday or other day on which banking institutions in London, United Kingdom, New York, United States, or Ireland are authorized or required by law to close.

"*Capital Stock*" of any Person means any and all shares of, rights to purchase, warrants or options for, or other equivalents of or partnership or other interests in (however designated), equity of such Person, including any Preferred Stock, but excluding any debt securities convertible into such equity.

"*Capitalized Lease Obligations*" means an obligation that is required to be classified and accounted for as a capitalized lease for financial reporting purposes on the basis of IFRS (as in effect on the Issue Date for purposes of determining whether a lease is a capitalized lease). The amount of Indebtedness will be, at the time any determination is to be made, the amount of such obligation required to be capitalized on a balance sheet (excluding any notes thereto) prepared in accordance with IFRS, and the stated maturity thereof will be the date of the last payment of rent or any other amount due under such lease prior to the first date such lease may be terminated without penalty.

"*Cash Equivalents*" means:

(1) securities issued or directly and fully Guaranteed or insured by the United States or Canadian governments, a Permissible Jurisdiction, Switzerland or Norway or, in each case, any agency or instrumentality thereof (*provided* that the full faith and credit of such country or such member state is pledged in support thereof), having maturities of not more than two years from the date of acquisition;

(2) certificates of deposit, time deposits, eurodollar time deposits, overnight bank deposits or bankers' acceptances having maturities of not more than one year from the date of acquisition thereof (a "Deposit) or cash in credit balance or deposit which are freely transferable or convertible within 90 days issued or held by any lender party to the Secured Credit Facility or by any bank or trust company (a) if at any time since January 1, 2007 the Parent or any of its Subsidiaries held Deposits with such bank or trust company (or any branch or subsidiary thereof), (b) whose commercial paper

is rated at least “A-3” or the equivalent thereof by S&P or at least “P-3” or the equivalent thereof by Moody’s (or if at the time neither is issuing comparable ratings, then a comparable rating of another Nationally Recognized Statistical Rating Organization) or (c) (in the event that the bank or trust company does not have commercial paper which is rated) having combined capital and surplus in excess of $250 million;

(3) repurchase obligations with a term of not more than 30 days for underlying securities of the types described in clauses (1) and (2) entered into with any bank meeting the qualifications specified in clause (2) above;

(4) commercial paper rated at the time of acquisition thereof at least “A-3” or the equivalent thereof by S&P or “P-3” or the equivalent thereof by Moody’s or carrying an equivalent rating by a Nationally Recognized Statistical Rating Organization, if both of the two named rating agencies cease publishing ratings of investments or, if no rating is available in respect of the commercial paper, the issuer of which has an equivalent rating in respect of its long-term debt, and in any case maturing within one year after the date of acquisition thereof;

(5) readily marketable direct obligations issued by any state of the United States of America, any province of Canada, a Permissible Jurisdiction, Switzerland or Norway or any political subdivision thereof, in each case, having one of the two highest rating categories obtainable from either Moody’s or S&P (or, if at the time, neither is issuing comparable ratings, then a comparable rating of another Nationally Recognized Statistical Rating Organization) with maturities of not more than two years from the date of acquisition;

(6) Indebtedness or preferred stock issued by Persons with a rating of “BBB-” or higher from S&P or “Baa3” or higher from Moody’s (or, if at the time, neither is issuing comparable ratings, then a comparable rating of another Nationally Recognized Statistical Rating Organization) with maturities of 12 months or less from the date of acquisition;

(7) bills of exchange issued in the United States, Canada, a Permissible Jurisdiction, Switzerland, Norway or Japan eligible for rediscount at the relevant central bank and accepted by a bank (or any dematerialized equivalent);

(8) interests in investment funds at least 95% of the assets of which constitute Cash Equivalents of the kinds described in clauses (1) through (7) of this definition; and

(9) for purposes of clause (2) of the definition of "Asset Disposition", the marketable securities portfolio owned by the Parent and its Subsidiaries on the Issue Date.

"*CFC*" means any Subsidiary of the US Co-Issuer that is treated as a "controlled foreign corporation" within the meaning of Section 957 of the Code.

"*Change of Control*" means the occurrence of any of the following:

(1) the Parent becoming aware that (by way of a report or any other filing pursuant to Section 13(d) of the Exchange Act, proxy, vote, written notice or otherwise) any "person" or "group" of related persons (as such terms are used in Sections 13(d) and 14(d) of the Exchange Act as in effect on the Issue Date), other than one or more Permitted Holders, is or becomes the "beneficial owner" (as defined in Rules 13d-3 and 13d-5 under the Exchange Act as in effect on the Issue Date), directly or indirectly, of 35% or more of the total voting power of the Voting Stock of the Parent and the Permitted Holders "beneficially own" directly or indirectly in the aggregate the same or a lesser percentage of the total voting power of the Voting Stock of the Company than such other "person" or "group" of related persons; *provided* that for the purposes of this clause, (x) no Change of Control shall be deemed to occur by reason of the Parent becoming a Subsidiary of a Successor Parent; and (y) any Voting Stock of which any Permitted Holder is the "beneficial owner" (as so defined) shall not be included in any Voting Stock of which any such "person" or "group of related persons" is the "beneficial owner" (as so defined), unless such Permitted Holder is controlled by such "person" or "group" of related persons;

(2) the sale, lease, transfer, conveyance or other disposition (other than by way of merger, consolidation or other business combination transaction), in one or a series of related transactions, of all or substantially all of the assets of the Parent and its Restricted Subsidiaries taken as a whole to a Person, other than a Restricted Subsidiary or one or more Permitted Holders;

(3) the Parent ceases to directly or indirectly hold 100% of the Capital Stock of the US Co-Issuer; or

(4) the shareholders of the Parent or the US Co-Issuer approve any plan of liquidation or dissolution of the Parent or the US Co-Issuer.

"*Clearing System Business Day*" means a day on which DTC, or any other clearing system through which a Global Note is being held, or the Paying Agent is open for business.

"*Commodity Hedging Agreements*" means, in respect of a Person, any commodity purchase contract, commodity futures or forward contract, commodities option contract or other similar contract (including commodities derivative agreements or arrangements), to which such Person is a party or a beneficiary.

"*Consolidated EBITDA*" for the period of the four most recent fiscal quarters ending prior to the relevant date of measurement for which internal consolidated financial statements are available, means, without duplication, the Consolidated Net Income for such period, plus the following to the extent deducted in calculating such Consolidated Net Income:

(1) Consolidated Interest Expense;

(2) Consolidated Income Taxes;

(3) consolidated depreciation expense;

(4) consolidated amortization or impairment expense;

(5) any expenses, charges or other costs related to any issuance of Capital Stock, listing of Capital Stock, Investment, acquisition (including amounts paid in connection with the acquisition or retention of one or more individuals comprising part of a management team retained to manage the acquired business and any expenses, charges or other costs related to deferred or contingent payments), disposition, recapitalization or the Incurrence, issuance, redemption or refinancing of any Indebtedness permitted by this Indenture or any amendment, waiver, consent or modification to any document governing any such Indebtedness (whether or not successful) (including any such fees, expenses or charges related to the Refinancing), in each case, as determined in good faith by the Board of Directors or an Officer of the Parent;

(6) any minority interest expense (whether paid or not) consisting of income attributable to minority equity interests of third parties in such period or any prior period or any net earnings, income or share of profit of any Associates, associated company or undertaking;

(7) other non-cash charges, write-downs or items reducing Consolidated Net Income (excluding any such non-cash charge, write-down or item to the extent it represents an accrual of or

reserve for cash charges expected to be paid in any future period) or other items classified by the Parent as special, extraordinary, exceptional, unusual or nonrecurring items less other non-cash items of income increasing Consolidated Net Income (excluding any such non-cash item of income to the extent it represents a receipt of cash expected to be paid in any future period);

(8) the proceeds of any business interruption insurance received or that become receivable during such period to the extent the associated losses arising out of the event that resulted in the payment of such business interruption insurance proceeds were included in computing Consolidated Net Income;

(9) payments received or that become receivable with respect to, expenses that are covered by the indemnification provisions in any agreement entered into by such Person in connection with an acquisition to the extent such expenses were included in computing Consolidated Net Income; and

(10) any Securitization Fees and discounts on the sale of accounts receivables in connection with any Qualified Securitization Financing representing, in the Parent's reasonable determination, the implied interest component of such discount for such period, and any gains (or losses) on the sale of accounts receivables, Securitization Assets and related assets in connection with a Qualified Securitization Financing.

Unless otherwise specified, Consolidated EBITDA shall be determined on a *pro forma* basis, including the *pro forma* application of proceeds of Indebtedness being Incurred in connection with such determination, as per the most recent four fiscal quarters for which financial statements are available immediately preceding such determination.

"*Consolidated Income Taxes*" means taxes or other payments, including deferred Taxes, based on income, profits or capital of any of the Parent and its Restricted Subsidiaries whether or not paid, estimated, accrued or required to be remitted to any governmental authority.

"*Consolidated Interest Expense*" means, for any period (in each case, determined on the basis of IFRS), the consolidated net interest income/expense of the Parent and its Restricted Subsidiaries under IFRS, whether paid or accrued, plus or including (without duplication) any interest, costs and charges consisting of:

(1) interest expense attributable to Capitalized Lease Obligations;

(2) amortization of original issue discount but excluding amortization of debt issuance costs, fees and expenses and the expensing of any finance costs;

(3) non-cash interest expense;

(4) costs associated with Hedging Obligations (excluding amortization of fees or any non-cash interest expense attributable to the movement in mark-to-market valuation of such obligations);

(5) the product of (a) all dividends or other distributions in respect of all Disqualified Stock of the Parent and all Preferred Stock of any Restricted Subsidiary, to the extent held by Persons other than the Parent or a subsidiary of the Parent, multiplied by (b) a fraction, the numerator of which is one and the denominator of which is one minus the then current combined national, state and local statutory tax rate of such Person, expressed as a decimal, as estimated in good faith by a responsible accounting or financial officer of the Parent;

(6) the consolidated interest expense that was capitalized during such period; and

(7) interest actually paid by the Parent or any Restricted Subsidiary under any Guarantee of Indebtedness or other obligation of any other Person,

minus (i) accretion or accrual of discounted liabilities other than Indebtedness, (ii) any expense resulting from the discounting of any Indebtedness in connection with the application of purchase accounting in connection with any acquisition, (iii) interest with respect to Indebtedness of any Holding Company of such Person appearing upon the balance sheet of such Person solely by reason of push-down accounting under IFRS and (iv) any Additional Amounts with respect to the Notes included in interest expense under IFRS or other similar tax gross up on any Indebtedness included in interest expense under IFRS; and excluding amortization of debt discount, premium, issuance costs, commissions, fees and expenses, any commissions, discounts, yield or other fees and charges related to any Qualified Securitization Financing or other factoring, receivables or securitization financings that are non-recourse to the Parent or its Restricted Subsidiaries.

"*Consolidated Leverage*" means the aggregate outstanding Indebtedness of the Parent and its Restricted Subsidiaries (excluding Hedging Obligations) as of the relevant date of calculation, on a consolidated basis and in accordance with IFRS.

"*Consolidated Net Income*" means, for any period, the net income (loss) of the Parent and its Restricted Subsidiaries determined on a consolidated basis on the basis of IFRS; *provided, however*, that there will not be included in such Consolidated Net Income:

(1) subject to the limitations contained in clause (3) below, any net income (loss) of any Person if such Person is not a Restricted

Subsidiary, except that the Parent's equity in the net income of any such Person for such period will be included in such Consolidated Net Income up to the aggregate amount of cash or Cash Equivalents actually distributed by such Person during such period to the Parent or a Restricted Subsidiary as a dividend or other distribution or return on investment or could have been distributed, as reasonably determined by an Officer (subject, in the case of a dividend or other distribution or return on investment to a Restricted Subsidiary, to the limitations contained in clause (2) below);

(2) solely for the purpose of determining the amount available for Restricted Payments under Section 4.02(a)(C)(1), any net income (loss) of any Restricted Subsidiary (other than a Guarantor) if such Subsidiary is subject to restrictions on the payment of dividends or the making of distributions by such Restricted Subsidiary to the Parent by operation of the terms of such Restricted Subsidiary's charter or any agreement, instrument, judgment, decree, order, statute or governmental rule or regulation applicable to such Restricted Subsidiary or its shareholders (other than (a) restrictions that have been waived or otherwise released, (b) restrictions pursuant to the Notes or this Indenture, (c) contractual restrictions in effect on the Issue Date with respect to a Restricted Subsidiary (including pursuant to the Secured Credit Facility) and other restrictions with respect to such Restricted Subsidiary that, taken as a whole, are not materially less favorable to the Holders than such restrictions in effect on the Issue Date and (d) restrictions specified in Section 4.04(b)(xi), except that the Parent's equity in the net income of any such Restricted Subsidiary for such period will be included in such Consolidated Net Income up to the aggregate amount of cash or Cash Equivalents actually distributed or that could have been distributed by such Restricted Subsidiary during such period to the Parent or another Restricted Subsidiary as a dividend or other distribution (subject, in the case of a dividend to another Restricted Subsidiary, to the limitation contained in this clause);

(3) any net gain (or loss) realized upon the sale or other disposition of any asset or disposed operations of the Parent or any Restricted Subsidiaries (including pursuant to any sale/leaseback transaction) which is not sold or otherwise disposed of in the ordinary course of business (as determined in good faith by an Officer or the Board of Directors of the Parent);

(4) any extraordinary, one-off, non-recurring, exceptional or unusual gain, loss, expense or charge, including any charges or reserves in

respect of any restructuring, redundancy, relocation, refinancing, integration or severance or other post-employment arrangements, signing, retention or completion bonuses, transaction costs (including costs related to the Refinancing or any investments), acquisition costs, business optimization, system establishment, software or information technology implementation or development, costs related to governmental investigations and curtailments or modifications to pension or post-retirement benefits schemes, litigation or any asset impairment charges or the financial impacts of natural disasters (including fire, flood and storm and related events);

(5) the cumulative effect of a change in accounting principles;

(6) any non-cash compensation charge or expense arising from any grant of stock, stock options or other equity based awards, any non-cash deemed finance charges in respect of any pension liabilities or other provisions, any non-cash net after tax gains or losses attributable to the termination or modification of any employee pension benefit plan and any charge or expense relating to any payment made to holders of equity based securities or rights in respect of any dividend sharing provisions of such securities or rights to the extent such payment was made pursuant to Section 4.02;

(7) all deferred financing costs written off and premiums paid or other expenses incurred directly in connection with any early extinguishment of Indebtedness or Hedging Obligations and any net gain (loss) from any write-off or forgiveness of Indebtedness;

(8) any unrealized gains or losses in respect of Hedging Obligations or other financial instruments or any ineffectiveness recognized in earnings related to qualifying hedge transactions or the fair value or changes therein recognized in earnings for derivatives that do not qualify as hedge transactions, in each case, in respect of Hedging Obligations;

(9) any unrealized foreign currency transaction gains or losses in respect of Indebtedness or other obligations of the Parent or any Restricted Subsidiary denominated in a currency other than the functional currency of such Person and any unrealized foreign exchange gains or losses resulting from remeasuring assets and liabilities denominated in foreign currencies;

(10) any unrealized foreign currency translation or transaction gains or losses in respect of Indebtedness or other obligations of the Parent

or any Restricted Subsidiary owing to the Parent or any Restricted Subsidiary;

(11) any one-time non-cash charges or any amortization or depreciation, in each case to the extent related to the Refinancing or any acquisition of another Person or business or resulting from any reorganization or restructuring or Incurrence of Indebtedness involving the Parent or its Restricted Subsidiaries; and

(12) any goodwill or other intangible asset impairment charge or write-off or write-down.

"*Consolidated Net Leverage*" means the aggregate outstanding Indebtedness of the Parent and its Restricted Subsidiaries (excluding Hedging Obligations) as of the relevant date of calculation minus cash and cash equivalents at such date, in each case on a consolidated basis and in accordance with IFRS.

"*Consolidated Net Leverage Ratio*" means, as of any date of determination, the ratio of (x) Consolidated Net Leverage at such date to (y) the aggregate amount of Consolidated EBITDA for the period of the four most recent fiscal quarters ending prior to the date of such determination for which internal consolidated financial statements of the Parent are available.

In addition, for purposes of calculating the Consolidated Net Leverage Ratio:

(1) acquisitions and Investments (each, a "*Purchase*") that have been made by the Parent or any of its Restricted Subsidiaries, including through mergers or consolidations, or any Person or any of its Subsidiaries which are Restricted Subsidiaries acquired by the Parent or any of its Restricted Subsidiaries, and including all related financing transactions and including increases in ownership of Subsidiaries which are Restricted Subsidiaries, during the reference period or subsequent to such reference period and on or prior to the date on which the calculation of the Consolidated Net Leverage Ratio is made (the "*Calculation Date*"), or that are to be made on the Calculation Date, will be given *pro forma* effect (as determined in good faith by a responsible accounting or financial officer of the Parent and may include anticipated expense and cost reduction synergies) as if they had occurred on the first day of the reference period; *provided* that if definitive documentation has been entered into with respect to a Purchase that is part of the transaction causing a calculation to be made hereunder, Consolidated EBITDA for such period will be calculated after giving *pro forma* effect to such Purchase (including anticipated synergies and cost savings) as if such Purchase had occurred on the first day of such period, even if the Purchase has not yet been consummated as of the date of determination;

(2) the Consolidated EBITDA (whether positive or negative) attributable to discontinued operations, as determined in accordance with IFRS, and operations, businesses or group of assets constituting a business or operating unit (and ownership interests therein) disposed of during the reference period or subsequent to such reference period and prior to the Calculation Date, will be excluded on a *pro forma* basis as if such disposition occurred on the first day of such period (taking into account anticipated expense and cost reduction synergies resulting from any such disposal, as determined in good faith by a responsible accounting or financial officer of the Parent);

(3) the Consolidated Interest Expense attributable to discontinued operations, as determined in accordance with IFRS, and operations, businesses or group of assets constituting a business or operating unit (and ownership interests therein) disposed of during the reference period or subsequent to such reference period and prior to the Calculation Date, will be excluded on a *pro forma* basis as if such disposition occurred on the first day of such period, but only to the extent that the obligations giving rise to such Consolidated Interest Expense will not be obligations of the Parent or any of its Restricted Subsidiaries following the Calculation Date;

(4) any Person that is a Restricted Subsidiary on the Calculation Date will be deemed to have been a Restricted Subsidiary at all times during such reference period;

(5) any Person that is not a Restricted Subsidiary on the Calculation Date will be deemed not to have been a Restricted Subsidiary at any time during such reference period;

(6) if any Indebtedness is not denominated in the Parent's functional currency, that Indebtedness for purposes of the calculation of Consolidated Net Leverage shall be treated in accordance with IFRS; and

(7) the reasonably anticipated full run rate effect of expense and cost reduction synergies (as determined in good faith by an Officer of the Parent responsible for accounting or financial reporting) projected to result from actions taken by the Parent or its Restricted Subsidiaries shall be included as though such synergies had been achieved on the first day of the relevant period, net of the amount of actual benefits realized during such period from such actions, provided that such synergies (A) are reasonably identifiable and factually supportable and (B) are not duplicative of any cost savings, reductions or synergies already included for such period.

For the purposes of the definitions of Consolidated EBITDA, Consolidated Income Taxes, Consolidated Interest Expense and Consolidated Net Income, calculations will be determined in accordance with the terms set forth above.

"*Consolidated Net Tangible Assets*" means, as of any date of determination, the total amount of assets of the Parent on a consolidated basis (including deferred pension cost and deferred tax assets (without reducing such deferred tax assets by deferred tax liabilities), and less applicable reserves and other properly deductible items), after deducting therefrom:

(1) all current liabilities (excluding any Indebtedness or obligations under capital leases classified as a current liability); and

(2) all goodwill, trade names, trademarks, patents, unamortized debt discount and financing costs and all similar intangible assets,

all as set forth in the Parent's most recent consolidated balance sheet internally available (but, in any event, as of a date within 150 days of the date of determination) and computed in accordance with IFRS.

"*Consolidated Senior Secured Net Leverage*" means (i) the aggregate outstanding Indebtedness of the Parent and its Restricted Subsidiaries (excluding Hedging Obligations) as of the relevant date of calculation that is (a) is secured by a Lien or (b) Incurred by a Restricted Subsidiary that is not a Guarantor, on a consolidated basis on the basis of IFRS, minus (ii) the amount of cash and cash equivalents in excess of any "restricted cash" that would be stated on the balance sheet of the Parent as of the relevant date of calculation on a consolidated basis in accordance with IFRS, up to a maximum amount of $100.0 million.

"*Consolidated Senior Secured Net Leverage Ratio*" means, as of any date of determination, the ratio of (x) Consolidated Senior Secured Net Leverage at such date to (y) the aggregate amount of Consolidated EBITDA for the period of the four most recent fiscal quarters ending prior to the date of such determination for which internal consolidated financial statements of the Parent are available, in each case calculated with such *pro forma* and other adjustments as are consistent with the *pro forma* provisions set forth in the definition of Consolidated Net Leverage Ratio; *provided* that cash proceeds from the Incurrence of Indebtedness on the date of determination pursuant to Section 4.01(b)(i) shall be excluded from sub-clause (ii) of the definition of Consolidated Senior Secured Net Leverage in determining the Consolidated Senior Secured Net Leverage Ratio.

"*Contingent Obligations*" means, with respect to any Person, any obligation of such Person guaranteeing in any manner, whether directly or indirectly, any operating lease, dividend or other obligation that does not constitute Indebtedness ("*primary obligations*") of any other Person (the "*primary obligor*"), including any obligation of such Person, whether or not contingent:

(1) to purchase any such primary obligation or any property constituting direct or indirect security therefor;

(2) to advance or supply funds:

(A) for the purchase or payment of any such primary obligation; or

(B) to maintain the working capital or equity capital of the primary obligor or otherwise to maintain the net worth or solvency of the primary obligor; or

(3) to purchase property, securities or services primarily for the purpose of assuring the owner of any such primary obligation of the ability of the primary obligor to make payment of such primary obligation against loss in respect thereof.

"*Credit Facility*" means, with respect to the Parent or any of its Subsidiaries, one or more debt facilities, arrangements, instruments or indentures (including the Secured Credit Facility or commercial paper facilities and overdraft facilities) with banks, institutions or investors providing for revolving credit loans, term loans, receivables financing (including through the sale of receivables to such institutions or to special purpose entities formed to borrow from such institutions against such receivables), notes, letters of credit or other Indebtedness, in each case, as amended, restated, modified, renewed, refunded, replaced, restructured, refinanced, repaid, increased or extended in whole or in part from time to time (and whether in whole or in part and whether or not with the original administrative agent and lenders or another administrative agent or agents or other banks, institutions or investors and whether provided under the original Secured Credit Facility or one or more other credit or other agreements, indentures, financing agreements or otherwise) and in each case including all agreements, instruments and documents executed and delivered pursuant to or in connection with the foregoing (including any notes and letters of credit issued pursuant thereto and any Guarantee and collateral agreement, patent and trademark security agreement, mortgages or letter of credit applications and other Guarantees, pledges, agreements, security agreements and collateral documents). Without limiting the generality of the foregoing, the term "Credit Facility" shall include any agreement or instrument (1) changing the maturity of any Indebtedness Incurred thereunder or contemplated thereby, (2) adding Subsidiaries of the Parent as additional borrowers or guarantors thereunder, (3) increasing the amount of Indebtedness Incurred thereunder or available to be borrowed thereunder or (4) otherwise altering the terms and conditions thereof.

"*Currency Agreement*" means, in respect of a Person, any foreign exchange contract, currency swap agreement, currency futures contract, currency option contract, currency derivative or other similar agreement to which such Person is a party or beneficiary.

"*Default*" means any event which is, or after notice or passage of time or both would be, an Event of Default.

"*Designated Non-Cash Consideration*" means the fair market value (as determined in good faith by the Board of Directors or an Officer of the Parent) of non-

cash consideration received by the Parent or one of its Restricted Subsidiaries in connection with an Asset Disposition that is so designated as Designated Non-Cash Consideration pursuant to an Officer's Certificate, setting forth the basis of such valuation, less the amount of cash, Cash Equivalents or Temporary Cash Investments received in connection with a subsequent payment, redemption, retirement, sale or other disposition of such Designated Non-Cash Consideration. A particular item of Designated Non-Cash Consideration will no longer be considered to be outstanding when and to the extent it has been paid, redeemed or otherwise retired or sold or otherwise disposed of in compliance with Section 4.05.

"*Disqualified Stock*" means any Capital Stock that, by its terms (or by the terms of any security into which it is convertible or for which it is exchangeable, in each case, at the option of the holder of the Capital Stock), or upon the happening of any event, matures or is mandatorily redeemable, pursuant to a sinking fund obligation or otherwise, or redeemable at the option of the holder of the Capital Stock, in whole or in part, in each case on or prior to the date that is 90 days after the earlier of (a) the Stated Maturity of the Notes or (b) the date on which there are no Notes outstanding. Notwithstanding the preceding sentence, any Capital Stock that would constitute Disqualified Stock solely because the holders of the Capital Stock have the right to require the issuer thereof to repurchase such Capital Stock upon the occurrence of a Change of Control or an Asset Disposition will not constitute Disqualified Stock if the terms of such Capital Stock provide that the issuer thereof may not repurchase or redeem any such Capital Stock pursuant to such provisions unless such repurchase or redemption complies with Section 4.02. For purposes hereof, the amount of Disqualified Stock which does not have a fixed repurchase price shall be calculated in accordance with the terms of such Disqualified Stock as if such Disqualified Stock were purchased on any date on which Indebtedness shall be required to be determined pursuant to this Indenture, and if such price is based upon, or measured by, the fair market value of such Disqualified Stock, such fair market value to be determined as set forth herein. Only the portion of Capital Stock which so matures or is mandatorily redeemable, is so convertible or exchangeable or is so redeemable at the option of the holder thereof prior to such date will be deemed to be Disqualified Stock.

"*Dollar Equivalent*" means, with respect to any monetary amount in a currency other than U.S. dollars, at any time of determination thereof by the Parent, the amount of U.S. dollars obtained by converting such currency other than U.S. dollars involved in such computation into U.S. dollars at the spot rate for the purchase of U.S. dollars with the applicable currency other than U.S. dollars as published in *The Financial Times* in the "Currency Rates" section (or, if *The Financial Times* is no longer published, or if such information is no longer available in *The Financial Times*, such source as may be selected in good faith by the Board of Directors or an Officer of the Parent) on the date of such determination.

"*Equity Offering*" means (x) a sale of Capital Stock of a Parent Holdco, the Parent or a Restricted Subsidiary (other than Disqualified Stock and other than offerings registered on Form S-8 (or any successor form) under the Securities Act or any

similar offering in other jurisdictions and other than offerings to the Parent or any Restricted Subsidiary), or (y) the sale of Capital Stock or other securities by any Person (other than to the Parent or a Restricted Subsidiary), the proceeds of which are contributed to the equity (other than through the issuance of Disqualified Stock or through an Excluded Contribution) of the Parent or any of its Restricted Subsidiaries.

"*Escrowed Proceeds*" means the proceeds from the offering of any debt securities or other Indebtedness paid into escrow accounts with an independent escrow agent on the date of the applicable offering or Incurrence pursuant to escrow arrangements that permit the release of amounts on deposit in such escrow accounts upon satisfaction of certain conditions or the occurrence of certain events. The term "*Escrowed Proceeds*" shall include any interest earned on the amounts held in escrow.

"*European Union*" means all members of the European Union as of January 1, 2004.

"*Exchange Act*" means the U.S. Securities Exchange Act of 1934, as amended, and the rules and regulations of the SEC promulgated thereunder, as amended.

"*Excluded Contribution*" means Net Cash Proceeds or property or assets received by the Parent as capital contributions to the equity (other than through the issuance of Disqualified Stock) of the Parent after the Issue Date or from the issuance or sale (other than to a Restricted Subsidiary or an employee stock ownership plan or trust established by the Parent or any Subsidiary of the Parent for the benefit of its employees to the extent funded by the Parent or any Restricted Subsidiary) of Capital Stock (other than Disqualified Stock) of the Parent, in each case, to the extent designated as an Excluded Contribution pursuant to an Officer's Certificate of the Parent.

"*fair market value*" wherever such term is used in this Indenture (except as otherwise specifically provided in this Indenture), may be conclusively established by means of an Officer's Certificate or a resolution of the Board of Directors of the Parent setting out such fair market value as determined by such Officer or such Board of Directors in good faith.

"*Fitch*" means Fitch, Inc. or any of its successors or assigns that is a Nationally Recognized Statistical Ratings Organization.

"*Fixed Charge Coverage Ratio*" means, as of any date of determination, the ratio of (x) the aggregate amount of Consolidated EBITDA of such Person for the period of the four most recent fiscal quarters prior to the date of such determination for which internal consolidated financial statements are available to (y) the Fixed Charges of such Person for such four fiscal quarters.

In the event that the specified Person or any of its Restricted Subsidiaries Incurs, assumes, guarantees, repays, repurchases, redeems, defeases, retires, extinguishes or otherwise discharges any Indebtedness (other than Indebtedness Incurred under any revolving credit facility unless such Indebtedness has been permanently repaid and has

not been replaced) or issues, repurchases or redeems Disqualified Stock or Preferred Stock subsequent to the commencement of the four-quarter period for which the Fixed Charge Coverage Ratio is being calculated and on or prior to the date on which the event for which the calculation of the Fixed Charge Coverage Ratio is made (the "Calculation Date"), then the Fixed Charge Coverage Ratio will be calculated giving *pro forma* effect (as determined in good faith by a responsible accounting or financial officer of such Person), including in respect of anticipated expense and cost reduction synergies, to such Incurrence, assumption, guarantee, repayment, repurchase, redemption, defeasance, retirement, extinguishment or other discharge of Indebtedness, or such issuance, repurchase or redemption of Disqualified Stock or Preferred Stock, and the use of the proceeds therefrom, as if the same had occurred at the beginning of the applicable four-quarter period; *provided*, *however*, that the *pro forma* calculation of Fixed Charges shall not give effect to (i) any Indebtedness Incurred on the Calculation Date pursuant to the provisions described in Section 4.01(b) (other than for the purposes of the calculation of the Fixed Charge Coverage Ratio under Section 4.01(b)(v) thereunder) or (ii) the discharge on the Calculation Date of any Indebtedness to the extent that such discharge results from the proceeds of Indebtedness Incurred pursuant to the provisions described in Section 4.01(b) (other than Indebtedness Incurred pursuant to Section 4.01(b)(v)).

In addition, for purposes of calculating the Fixed Charge Coverage Ratio:

(1) acquisitions or Investments (each, a "*Purchase*") that have been made by the specified Person or any of its Restricted Subsidiaries, including through mergers or consolidations, or by any Person or any of its Restricted Subsidiaries acquired by the specified Person or any of its Subsidiaries which are Restricted Subsidiaries, and including all related financing transactions and including increases in ownership of Restricted Subsidiaries, during the four-quarter reference period or subsequent to such reference period and on or prior to the Calculation Date, or that are to be made on the Calculation Date, will be given *pro forma* effect (as determined in good faith by a responsible accounting or financial officer of such Person), including in respect of anticipated expense and cost reductions and synergies, as if they had occurred on the first day of the four-quarter reference period; *provided* that, if definitive documentation has been entered into with respect to a Purchase that is part of the transaction causing a calculation to be made hereunder, Consolidated EBITDA for such period will be calculated after giving *pro forma* effect to such Purchase (including anticipated synergies and cost savings) as if such Purchase had occurred on the first day of such period, even if the Purchase has not yet been consummated as of the date of determination;

(2) the Consolidated EBITDA attributable to discontinued operations, as determined in accordance with IFRS, and operations or

businesses (and ownership interests therein) disposed of prior to the Calculation Date, will be excluded;

(3) the Fixed Charges attributable to discontinued operations, as determined in accordance with IFRS, and operations or businesses (and ownership interests therein) disposed of prior to the Calculation Date, will be excluded, but only to the extent that the obligations giving rise to such Fixed Charges will not be obligations of the specified Person or any of its Restricted Subsidiaries following the Calculation Date;

(4) any Person that is a Restricted Subsidiary on the Calculation Date will be deemed to have been a Restricted Subsidiary at all times during such four-quarter period;

(5) any Person that is not a Restricted Subsidiary on the Calculation Date will be deemed not to have been a Restricted Subsidiary at any time during such four-quarter period;

(6) if any Indebtedness bears a floating rate of interest and is being given *pro forma* effect, the interest expense on such Indebtedness will be calculated as if the rate in effect on the Calculation Date had been the applicable rate for the entire period (taking into account any Hedging Obligation applicable to such Indebtedness if such Hedging Obligation has a remaining term as at the Calculation Date in excess of 12 months, or, if shorter, at least equal to the remaining term of such Indebtedness);

(7) Interest on a Capitalized Lease Obligation shall be deemed to accrue at an interest rate reasonably determined by a responsible financial or accounting officer of the Parent to be the rate of interest implicit in such Capitalized Lease Obligation in accordance with IFRS; and

(8) the reasonably anticipated full run rate effect of expense and cost reduction synergies (as determined in good faith by a responsible accounting or financial Officer) projected to result from actions taken by the Parent or its Restricted Subsidiaries shall be included as though such synergies had been achieved on the first day of the relevant period, net of the amount of actual benefits realized during such period from such actions, provided such synergies (A) are reasonably identifiable and factually supportable and (B) are not duplicative of any costs savings, reductions or synergies already included for the period.

"*Fixed Charges*" means, with respect to any specified Person for any period, the sum, without duplication, of:

(1) the Consolidated Interest Expense of such Person for such period; plus

(2) all dividends, whether paid or accrued and whether or not in cash, on or in respect of all Disqualified Stock of the Parent or any series of Preferred Stock of any Restricted Subsidiary, other than dividends on Equity Interests payable to the Parent or a Restricted Subsidiary.

"*French Hydro-electric Sale*" means the disposition by a Subsidiary of the Parent of certain hydro-power operations in France, as described in the Offering Memorandum.

"*Guarantee*" means any obligation, contingent or otherwise, of any Person directly or indirectly guaranteeing any Indebtedness of any other Person, including any such obligation, direct or indirect, contingent or otherwise, of such Person:

(1) to purchase or pay (or advance or supply funds for the purchase or payment of) such Indebtedness of such other Person (whether arising by virtue of partnership arrangements, or by agreements to keep-well, to purchase assets, goods, securities or services, to take-or-pay or to maintain financial statement conditions or otherwise); or

(2) entered into primarily for purposes of assuring in any other manner the obligee of such Indebtedness of the payment thereof or to protect such obligee against loss in respect thereof (in whole or in part),

provided, however, that the term "Guarantee" will not include endorsements for collection or deposit in the ordinary course of business. The term "Guarantee" used as a verb has a corresponding meaning.

"*Government Obligations*" means any security that is (1) a direct obligation of the United States government, for the payment of which the full faith and credit of the United States government is pledged or (2) an obligation of a person controlled or supervised by and acting as an agency or instrumentality of the United States government the payment of which is unconditionally Guaranteed as a full faith and credit obligation by the United States, which, in either case under the preceding clause (1) or (2), is not callable or redeemable at the option of the issuer thereof.

"*Guarantor*" means any Person that executes a Note Guarantee in accordance with the provisions of this Indenture from time to time, and their respective successors and assigns, in each case, until the Note Guarantee of such Person has been released in accordance with the provisions of this Indenture.

"*Hedging Obligations*" of any Person means the obligations of such Person pursuant to any Interest Rate Agreement, Currency Agreement or Commodity Hedging Agreement.

"*Holder*" means each Person in whose name the Notes are registered on the Registrar's books, which shall initially be the nominee of DTC.

"*Holding Company*" means, in relation to any Person, any other Person in respect of which it is a Subsidiary.

"*Hydro-electric Sales*" means the Spanish Hydro-electric Sale and the French Hydro-electric Sale.

"*IFRS*" means International Financial Reporting Standards (formerly International Accounting Standards) ("IFRS") endorsed from time to time by the European Union or any variation thereof with which the Parent or its Restricted Subsidiaries are, or may be, required to comply. Except as otherwise set forth in this Indenture, all ratios and calculations contained in this Indenture shall be computed in accordance with IFRS; *provided* that at any date after the Issue Date the Parent may make an irrevocable election to establish that "IFRS" shall mean, except as otherwise specified herein, IFRS as in effect on a date that is on or prior to the date of such election or generally accepted accounting principles in the United States set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other entity as have been approved by a significant segment of the accounting profession ("*US GAAP*"); *provided further* that upon first reporting its fiscal year results under US GAAP, to the extent required by the SEC or applicable accounting rules, it shall restate its financial statements on the basis of US GAAP for the fiscal year ending immediately prior to the first fiscal year for which financial statements have been prepared on the basis of US GAAP. The Parent shall give notice of any such election to the Trustee. Notwithstanding the foregoing, for purposes of any calculations pursuant to this Indenture, IFRS shall be deemed to treat operating leases in a manner consistent with the treatment thereof under IFRS as in effect on the Issue Date, notwithstanding any modifications or interpretative changes thereto that may occur after the Issue Date.

"*Incur*" means issue, create, assume, enter into any Guarantee of, incur or otherwise become liable for; *provided*, *however*, that any Indebtedness or Capital Stock of a Person existing at the time such Person becomes a Restricted Subsidiary (whether by merger, consolidation, acquisition or otherwise) will be deemed to be Incurred by such Restricted Subsidiary at the time it becomes a Restricted Subsidiary and the terms "Incurred" and "Incurrence" have meanings correlative to the foregoing and any Indebtedness pursuant to any revolving credit or similar facility shall only be "Incurred" at the time any funds are borrowed thereunder.

"*Indebtedness*" means, with respect to any Person on any date of determination (without duplication):

(1) the principal of indebtedness of such Person for borrowed money;

(2) the principal of obligations of such Person evidenced by bonds, debentures, notes or other similar instruments;

(3) all reimbursement obligations of such Person in respect of letters of credit, bankers' acceptances or other similar instruments (the amount of such obligations being equal at any time to the aggregate then undrawn and unexpired amount of such letters of credit or other instruments plus the aggregate amount of drawings thereunder that have been reimbursed) (except to the extent such reimbursement obligations relate to trade payables or other obligations not constituting Indebtedness and such obligations are satisfied within 30 days of Incurrence), in each case only to the extent that the underlying obligation in respect of which the instrument was issued would be treated as Indebtedness;

(4) the principal component of all obligations of such Person to pay the deferred and unpaid purchase price of property (except trade payables), where the deferred payment is arranged primarily as a means of raising finance, which purchase price is due more than one year after the date of placing such property in service or taking final delivery and title thereto;

(5) Capitalized Lease Obligations of such Person;

(6) the principal component of all obligations, or liquidation preference, of such Person with respect to any Disqualified Stock or, with respect to any Restricted Subsidiary, any Preferred Stock (but excluding, in each case, any accrued dividends);

(7) the principal component of all Indebtedness of other Persons secured by a Lien on any asset of such Person, whether or not such Indebtedness is assumed by such Person; *provided*, *however*, that the amount of such Indebtedness will be the lesser of (a) the fair market value of such asset at such date of determination (as determined in good faith by the Board of Directors or an Officer of the Parent) and (b) the amount of such Indebtedness of such other Persons;

(8) Guarantees by such Person of the principal component of Indebtedness of other Persons to the extent Guaranteed by such Person; and

(9) to the extent not otherwise included in this definition, net obligations of such Person under Currency Agreements and Interest Rate Agreements (the amount of any such obligations to be

equal at any time to the termination value of such agreement or arrangement giving rise to such obligation that would be payable by such Person at such time).

The term "Indebtedness" shall not include (i) any lease, concession or license of property (or Guarantee thereof) which would be considered an operating lease under IFRS as in effect on the Issue Date, (ii) prepayments of deposits received from clients or customers in the ordinary course of business, (iii) obligations under any license, permit or other approval (or Guarantees given in respect of such obligations) Incurred prior to the Issue Date or in the ordinary course of business, (iv) any asset retirement obligations, or (v) obligations under or in respect of Qualified Securitization Financings.

The amount of Indebtedness of any Person at any time in the case of a revolving credit or similar facility shall be the total amounts of funds borrowed and then outstanding. The amount of Indebtedness of any Person at any date shall be determined as set forth above or otherwise provided in this Indenture, and (other than with respect to letters of credit or Guarantees or Indebtedness specified in clause (7) or (8) above) shall equal the amount thereof that would appear on a balance sheet of such Person (excluding any notes thereto) prepared on the basis of IFRS.

Notwithstanding the above provisions, in no event shall the following constitute Indebtedness:

(i) Contingent Obligations Incurred in the ordinary course of business and accrued liabilities Incurred in the ordinary course of business that are not more than 90 days past due;

(ii) in connection with the purchase by the Parent or any Restricted Subsidiary of any business, any post-closing payment adjustments to which the seller may become entitled to the extent such payment is determined by a final closing balance sheet or such payment depends on the performance of such business after the closing; *provided*, *however*, that, at the time of closing, the amount of any such payment is not determinable and, to the extent such payment thereafter becomes fixed and determined, the amount is paid within 30 days thereafter;

(iii) for the avoidance of doubt, any obligations in respect of workers' compensation claims, early retirement or termination obligations, pension fund obligations or contributions or similar claims, obligations or contributions or social security or wage Taxes; or

(iv) any "parallel debt" obligations (including any Guarantees with respect thereof).

"*Independent Financial Advisor*" means an investment banking or accounting firm of international standing or any third party appraiser of international standing; *provided*, *however*, that such firm or appraiser is not an Affiliate of the Parent.

"*Interest Rate Agreement*" means, with respect to any Person, any interest rate protection agreement, interest rate future agreement, interest rate option agreement, interest rate swap agreement, interest rate cap agreement, interest rate collar agreement, interest rate hedge agreement or other similar agreement or arrangement to which such Person is party or a beneficiary.

"*Investment*" means, with respect to any Person, all investments by such Person in other Persons (including Affiliates) in the form of any advance, loan or other extensions of credit (other than advances or extensions of credit to customers, suppliers, directors, officers or employees of any Person in the ordinary course of business, and excluding any debt or extension of credit represented by a bank deposit other than a time deposit) or capital contribution to (by means of any transfer of cash or other property to others or any payment for property or services for the account or use of others), or the Incurrence of a Guarantee of any obligation of, or any purchase or acquisition of Capital Stock, Indebtedness or other similar instruments issued by, such other Persons and all other items that are or would be classified as investments on a balance sheet (excluding any notes thereto) prepared on the basis of IFRS; *provided, however*, that endorsements of negotiable instruments and documents in the ordinary course of business will not be deemed to be an Investment. If the Parent or any Restricted Subsidiary issues, sells or otherwise disposes of any Capital Stock of a Person that is a Restricted Subsidiary such that, after giving effect thereto, such Person is no longer a Restricted Subsidiary, any Investment by the Parent or any Restricted Subsidiary in such Person remaining after giving effect thereto will be deemed to be a new Investment equal to the fair market value of the Capital Stock of such Subsidiary not sold or disposed of in an amount determined as provided in Section 4.02(d).

For purposes of Section 4.02:

(1) "Investment" will include the portion (proportionate to the Parent's equity interest in a Restricted Subsidiary to be designated as an Unrestricted Subsidiary) of the fair market value of the net assets of such Restricted Subsidiary at the time that such Restricted Subsidiary is designated an Unrestricted Subsidiary; and

(2) any property transferred to or from an Unrestricted Subsidiary will be valued at its fair market value at the time of such transfer, in each case as determined in good faith by the Board of Directors or an Officer of the Parent.

The amount of any Investment outstanding at any time shall be the original cost of such Investment, reduced (at the Parent's option) by any dividend, distribution, interest payment, return of capital, repayment or other amount or value received in respect of such Investment.

"*Investment Grade Securities*" means:

(1) securities issued or directly and fully Guaranteed or insured by the United States or Canadian government or any agency or instrumentality thereof (other than Cash Equivalents);

(2) securities issued or directly and fully guaranteed or insured by a Permissible Jurisdiction, Switzerland or Norway or any agency or instrumentality thereof (other than Cash Equivalents);

(3) debt securities or debt instruments with a rating of "BBB–" or higher from S&P or "Baa3" or higher by Moody's or the equivalent of such rating by such rating organization or, if no rating of Moody's or S&P then exists, the equivalent of such rating by any other Nationally Recognized Statistical Ratings Organization, but excluding any debt securities or instruments constituting loans or advances among the Parent and its Subsidiaries;

(4) investments in any fund that invests exclusively in investments of the type described in clauses (1), (2) and (3) above which fund may also hold cash and Cash Equivalents pending investment or distribution; and

(5) any investment in repurchase obligations with respect to any securities of the type described in clauses (1), (2) and (3) above which are collateralized at par or over.

"*Investment Grade Status*" shall occur when all of the Notes receive both of the following:

(1) a rating of "BBB–" or higher from Fitch; and

(2) a rating of "Baa3" or higher from Moody's,

or the equivalent of such rating by either such rating organization or, if no rating of Moody's or Fitch then exists, the equivalent of such rating by any other Nationally Recognized Statistical Ratings Organization.

"*Issue Date*" means February 15, 2017.

"*Issuers*" means the Parent and the US Co-Issuer.

"*Lien*" means any mortgage, pledge, security interest, encumbrance, lien or charge of any kind (including any conditional sale or other title retention agreement or lease in the nature thereof).

"*Limited Condition Acquisition*" means any acquisition, including by way of merger, amalgamation or consolidation, by the Parent or one or more of its Restricted Subsidiaries the consummation of which is not conditioned upon the availability of, or on obtaining, third-party financing; *provided* that Consolidated EBITDA, other than for purposes of calculating any ratios in connection with the Limited Condition Acquisition and the related transactions, shall not include any Consolidated EBITDA of or attributable to the target company or assets involved in any such Limited Condition Acquisition unless and until the closing of such Limited Condition Acquisition shall have actually occurred.

"*Management Advances*" means loans or advances made to, or Guarantees with respect to loans or advances made to, directors, officers, employees or consultants of any Parent Holdco, the Parent or any Restricted Subsidiary:

(1) (a) in respect of travel, entertainment or moving related expenses incurred in the ordinary course of business or (b) for purposes of funding any such person's purchase of Capital Stock of the Parent, its Subsidiaries or any Parent Holdco with (in the case of this sub-clause (b)) the approval of the Board of Directors;

(2) in respect of moving related expenses incurred in connection with any closing or consolidation of any facility or office; or

(3) (in the case of this clause (3)) not exceeding $5.0 million in the aggregate outstanding at any time.

"*Management Investors*" means (i) members of the management team of the Parent or its Subsidiaries who subsequently invest directly or indirectly in the Parent from time to time and (ii) any entity that may hold shares transferred by departing members of the management team of the Parent or its Subsidiaries for future redistribution to the management team of the Parent or its Subsidiaries.

"*Materially Significant Subsidiary*" means any Restricted Subsidiary that meets any of the following conditions:

(1) the Parent's and its Restricted Subsidiaries' investments in and advances to the Restricted Subsidiary exceed 20% of the total assets of the Parent and its Restricted Subsidiaries on a consolidated basis as of the end of the most recently completed fiscal year;

(2) the Parent's and its Restricted Subsidiaries' proportionate share of the total assets (after intercompany eliminations) of the Restricted Subsidiary exceeds 20% of the total assets of the Parent and its Restricted Subsidiaries on a consolidated basis as of the end of the most recently completed fiscal year; or

(3) the Parent's and its Restricted Subsidiaries' proportionate share of the Consolidated EBITDA of the Restricted Subsidiary exceeds 20% of the Consolidated

EBITDA of the Parent and its Restricted Subsidiaries on a consolidated basis for the most recently completed fiscal year.

"*Moody's*" means Moody's Investors Service, Inc. or any of its successors or assigns that is a Nationally Recognized Statistical Rating Organization.

"*Nationally Recognized Statistical Rating Organization*" means a nationally recognized statistical rating organization within the meaning of Section 3(a)(62) under the Exchange Act.

"*Net Available Cash*" from an Asset Disposition means cash payments received (including any cash payments received by way of deferred payment of principal pursuant to a note or installment receivable or otherwise and net proceeds from the sale or other disposition of any securities received as consideration, but only as and when received, but excluding any other consideration received in the form of assumption by the acquiring person of Indebtedness or other obligations relating to the properties or assets that are the subject of such Asset Disposition or received in any other non-cash form) therefrom, in each case net of:

(1) all legal, accounting, investment banking, title and recording tax expenses, commissions and other fees and expenses incurred, and all Taxes paid or required to be paid or accrued as a liability under IFRS (after taking into account any available tax credits or deductions and any Tax Sharing Agreements), as a consequence of such Asset Disposition;

(2) all payments made on any Indebtedness which is secured by any assets subject to such Asset Disposition, in accordance with the terms of any Lien upon such assets, or which must by its terms, or in order to obtain a necessary consent to such Asset Disposition, or by applicable law, be repaid out of the proceeds from such Asset Disposition;

(3) all distributions and other payments required to be made to minority interest holders (other than any Parent Holdco, the Parent or any of their respective Subsidiaries) in Subsidiaries or joint ventures as a result of such Asset Disposition; and

(4) the deduction of appropriate amounts required to be provided by the seller as a reserve, on the basis of IFRS, against any liabilities associated with the assets disposed of in such Asset Disposition and retained by the Parent or any Restricted Subsidiary after such Asset Disposition.

"*Net Cash Proceeds*", with respect to any issuance or sale of Capital Stock, means the cash proceeds of such issuance or sale net of attorneys' fees, accountants' fees, underwriters' or placement agents' fees, listing fees, discounts or

commissions and brokerage, consultant and other fees and charges actually Incurred in connection with such issuance or sale and net of taxes paid or payable as a result of such issuance or sale (after taking into account any available tax credit or deductions and any Tax Sharing Agreements).

"*NewCo*" means an entity acquired or formed by the Parent or one of its Subsidiaries for purposes of consummating the Spanish Hydro-electric Sale, which entity will hold the assets held by FerroAtlántica, S.A. prior to the Spanish Hydro-electric Sale other than the assets disposed of in the Spanish Hydro-electric Sale.

"*Note Guarantee*" means the Initial Note Guarantees and the Guarantee by any Guarantor of the Issuers' obligations under this Indenture and the Notes.

"*Notes Documents*" means the Notes (including Additional Notes) and this Indenture.

"*Offering Memorandum*" means the offering memorandum dated February 9, 2017 in relation to the Notes.

"*Officer*" means, with respect to any Person, (1) any member of the Board of Directors, the Chief Executive Officer, the President, the Chief Financial Officer, any Vice President, the Treasurer or the Secretary (a) of such Person or (b) if such Person is owned or managed by a single entity, of such entity, or (2) any other individual designated as an "Officer" for the purposes of this Indenture by the Board of Directors of such Person. The obligations of an "Officer of the Parent" may be exercised by the Officer of any Restricted Subsidiary who has been delegated such authority by the Board of Directors of the Parent.

"*Officer's Certificate*" means, with respect to any Person, a certificate signed by one Officer of such Person.

"*Opinion of Counsel*" means a written opinion from legal counsel reasonably satisfactory to the Trustee. The counsel may be an employee of or counsel to the Parent or its Subsidiaries.

"*Parent*" means Ferroglobe PLC or any other Successor Company in accordance with this Indenture.

"*Parent Holdco*" means any Person of which the Parent at any time is or becomes a Subsidiary after the Issue Date and any holding companies established by any Permitted Holder for purposes of holding its investment in the Parent.

"*Pari Passu Indebtedness*" means Indebtedness of the Issuers or any Guarantor which does not constitute Subordinated Indebtedness.

"*Paying Agent*" means any Person authorized by the Parent to pay the principal of (and premium, if any) or interest on any Note on behalf of the Parent, which shall include the Paying Agent.

"*Permissible Jurisdiction*" means any member state of the European Union (excluding Greece) and the United Kingdom.

"*Permitted Holders*" means, collectively, (i) Grupo Villar Mir, S.A.U., (ii) members of the senior management team of the Parent as of the Issue Date, (iii) Alan Kestenbaum and (iv) any Related Person of any Persons specified in clause (i) to (iii). Any person or group whose acquisition of beneficial ownership constitutes a Change of Control in respect of which a Change of Control Offer is made in accordance with the requirements of this Indenture will thereafter, together with its Affiliates, constitute an additional Permitted Holder.

"*Permitted Investment*" means (in each case, by the Parent or any of its Restricted Subsidiaries):

(1) Investments in (a) a Restricted Subsidiary (including the Capital Stock of a Restricted Subsidiary) or the Parent or (b) a Person that is engaged in any Similar Business (including the Capital Stock of any such Person) and such Person will, upon the making of such Investment, become a Restricted Subsidiary;

(2) Investments in another Person if such Person is engaged in any Similar Business and as a result of such Investment such other Person is merged, consolidated or otherwise combined with or into, or transfers or conveys all or substantially all its assets to, the Parent or a Restricted Subsidiary;

(3) Investments in cash, Cash Equivalents, Temporary Cash Investments or Investment Grade Securities;

(4) Investments in receivables owing to the Parent or any Restricted Subsidiary created or acquired in the ordinary course of business;

(5) Investments in payroll, travel, relocation, entertainment and similar advances to cover matters that are expected at the time of such advances ultimately to be treated as expenses for accounting purposes and that are made in the ordinary course of business;

(6) Management Advances and any advances or loans not to exceed $10.0 million at any one time outstanding to any management equity plan or stock option plan or any other management or employee benefit or incentive plan or unit trust or the trustees of any such plan or trust to pay for the purchase or other acquisition

for value of Capital Stock (other than Disqualified Stock) of the Parent or a Parent Holdco;

(7) Investments in Capital Stock, obligations or securities received in settlement of debts created in the ordinary course of business and owing to the Parent or any Restricted Subsidiary, or as a result of foreclosure, perfection or enforcement of any Lien, or in satisfaction of judgments or pursuant to any plan of reorganization or similar arrangement including upon the bankruptcy or insolvency of a debtor;

(8) Investments made as a result of the receipt of non-cash consideration from a sale or other disposition of property or assets, including an Asset Disposition, in each case, that was made in compliance with Section 4.05;

(9) Investments in existence on, or made pursuant to legally binding commitments in existence on, the Issue Date, and any extension, modification or renewal of any such Investment; *provided* that the amount of the Investment may be increased (a) as required by the terms of the Investment as in existence on the Issue Date or (b) as otherwise permitted under this Indenture;

(10) Currency Agreements, Interest Rate Agreements and related Hedging Obligations, which transactions or obligations are Incurred in compliance with Section 4.01;

(11) Investments, taken together with all other Investments made pursuant to this clause (11) and at any time outstanding, in an aggregate amount at the time of such Investment (net of any distributions, dividends, payments or other returns in respect of such Investments) not to exceed the greater of (a) $50.0 million and (b) 3.0% of Consolidated Net Tangible Assets; *provided* that, if an Investment is made pursuant to this clause in a Person that is not a Restricted Subsidiary and such Person subsequently becomes a Restricted Subsidiary or is subsequently designated a Restricted Subsidiary pursuant to Section 4.02, such Investment shall thereafter be deemed to have been made pursuant to clause (1) or (2) of the definition of “Permitted Investments” and not this clause;

(12) pledges or deposits with respect to leases or utilities provided to third parties in the ordinary course of business or Liens otherwise described in the definition of “Permitted Liens” or made in connection with Liens permitted under Section 4.03;

(13) any Investment to the extent made using Capital Stock of the Parent (other than Disqualified Stock), or Capital Stock of any Parent Holdco as consideration;

(14) any transaction to the extent constituting an Investment that is permitted and made in accordance with Section 4.06(b) (except those described in clauses (b)(i), (b)(iii), (b)(viii), (b)(ix) and (b)(xii) of Section 4.06);

(15) Guarantees not prohibited by Section 4.01 and (other than with respect to Indebtedness) guarantees, keepwells and similar arrangements in the ordinary course of business;

(16) Investments in Associates in an aggregate amount when taken together with all other Investments made pursuant to this clause (16) that are at any time outstanding not to exceed the greater of (a) $50.0 million and (b) 3.0% of Consolidated Net Tangible Assets; *provided* that, if an Investment is made pursuant to this clause in a Person that is not a Restricted Subsidiary and such Person subsequently becomes a Restricted Subsidiary or is subsequently designated a Restricted Subsidiary pursuant to this Indenture, such Investment shall thereafter be deemed to have been made pursuant to clause (1) or (2) of the definition of "Permitted Investments" and not this clause;

(17) Investments in loans under the Secured Credit Facility, the Notes and any Additional Notes;

(18) Investments acquired after the Issue Date as a result of the acquisition by the Parent or any of its Restricted Subsidiaries of another Person, including by way of a merger, amalgamation or consolidation with or into the Parent or any of its Restricted Subsidiaries in a transaction that is not prohibited by Section 5.01 to the extent that such Investments were not made in contemplation of such acquisition, merger, amalgamation or consolidation and were in existence on the date of such acquisition, merger, amalgamation or consolidation;

(19) Investments in licenses, concessions, authorizations, franchises, permits or similar arrangements that are related to the Parent's or any Restricted Subsidiary's business; and

(20) Investments made in connection with any Qualified Securitization Financing, including Investments in funds held in accounts required by the arrangements governing such Qualified Securitization Financing or any related Indebtedness.

"*Permitted Joint Venture*" means any entity formed for purposes of implementing the joint venture agreement, dated as of December 20, 2016, among Grupo FerroAtlántica, S.A.U., Silicio FerroSolar, S.L.U., FerroAtlántica, S.A., Blue Power Corporation, S.L. and Aurinka Photovoltaic Group, S.L., as the same may be amended, extended or otherwise modified from time to time.

"*Permitted Liens*" means, with respect to any Person:

(1) Liens on assets or property of any Restricted Subsidiary that is not a Guarantor (or the US Co-Issuer) securing Indebtedness of any Restricted Subsidiary that is not a Guarantor (or the US Co-Issuer);

(2) pledges, deposits or Liens under workmen's compensation laws, unemployment insurance laws, social security laws or similar legislation, or insurance related obligations (including pledges or deposits securing liability to insurance carriers under insurance or self-insurance arrangements), or in connection with bids, tenders, completion guarantees, contracts (other than for borrowed money) or leases, or to secure utilities, licenses, public or statutory obligations, or to secure surety, indemnity, judgment, appeal or performance bonds, guarantees of government contracts (or other similar bonds, instruments or obligations), or as security for contested taxes or import or customs duties or for the payment of rent, or other obligations of like nature, in each case Incurred in the ordinary course of business;

(3) Liens imposed by law, including carriers', warehousemen's, mechanics', landlords', materialmens' and repairmen's or other similar Liens, in each case for sums not yet overdue for a period of more than 60 days or that are bonded or being contested in good faith by appropriate proceedings;

(4) Liens for taxes, assessments or other governmental charges not yet delinquent or which are being contested in good faith by appropriate proceedings; *provided* that appropriate reserves required pursuant to IFRS have been made in respect thereof;

(5) Liens in favor of issuers of surety, performance or other bonds, guarantees or letters of credit or bankers' acceptances or similar arrangements (not issued to support Indebtedness for borrowed money) issued pursuant to the request of and for the account of the Parent or any Restricted Subsidiary in the ordinary course of its business;

(6) encumbrances, ground leases, easements (including reciprocal easement agreements), survey exceptions, or reservations of, or rights of others for, licenses, rights of way, sewers, electric lines,

telegraph and telephone lines and other similar purposes, or zoning, building codes or other restrictions (including minor defects or irregularities in title and similar encumbrances) as to the use of real properties or Liens incidental to the conduct of the business of the Parent and its Restricted Subsidiaries or to the ownership of its properties which do not in the aggregate materially adversely affect the value of said properties or materially impair their use in the operation of the business of the Parent and its Restricted Subsidiaries;

(7) Liens on assets or property of the Parent or any Restricted Subsidiary securing Hedging Obligations permitted under this Indenture relating to Indebtedness permitted to be Incurred under this Indenture and which is secured by a Lien on the same assets or property that secure such Indebtedness;

(8) leases, licenses, subleases and sublicenses of assets (including real property and intellectual property rights), in each case entered into in the ordinary course of business;

(9) Liens arising out of judgments, decrees, orders or awards not giving rise to an Event of Default so long as any appropriate legal proceedings which may have been duly initiated for the review of such judgment, decree, order or award have not been finally terminated or the period within which such proceedings may be initiated has not expired;

(10) Liens on assets or property of the Parent or any Restricted Subsidiary for the purpose of securing Capitalized Lease Obligations or Purchase Money Obligations, or securing the payment of all or a part of the purchase price of, or securing other Indebtedness Incurred to finance or refinance the acquisition, improvement or construction of, assets or property acquired or constructed in the ordinary course of business; *provided* that (a) the aggregate principal amount of Indebtedness secured by such Liens is otherwise permitted to be Incurred under Section 4.01(b)(vii) and (b) any such Lien may not extend to any assets or property of the Parent or any Restricted Subsidiary other than assets or property acquired, improved, constructed or leased with the proceeds of such Indebtedness and any improvements or accessions to such assets and property;

(11) Liens arising by virtue of any statutory or common law provisions relating to banker's Liens, rights of set-off or similar rights and remedies as to deposit accounts or other funds maintained with a depositary or financial institution;

(12) Liens arising from Uniform Commercial Code financing statement filings (or similar filings in other applicable jurisdictions) regarding operating leases entered into by the Parent and its Restricted Subsidiaries in the ordinary course of business;

(13) Liens (other than Liens securing Indebtedness Incurred under the Secured Credit Facility) existing on, or provided for or required to be granted under written agreements existing on, the Issue Date;

(14) Liens on property, other assets or shares of stock of a Person at the time such Person becomes a Restricted Subsidiary (or at the time the Parent or a Restricted Subsidiary acquires such property, other assets or shares of stock, including any acquisition by means of a merger, consolidation or other business combination transaction with or into the Parent or any Restricted Subsidiary); *provided*, however, that such Liens are not created, Incurred or assumed in anticipation of or in connection with such other Person becoming a Restricted Subsidiary (or such acquisition of such property, other assets or stock); *provided further*, that such Liens are limited to all or part of the same property, other assets or stock (plus improvements, accession, proceeds or dividends or distributions in connection with the original property, other assets or stock) that secured (or, under the written arrangements under which such Liens arose, could secure) the obligations to which such Liens relate;

(15) Liens on assets or property of the Parent or any Restricted Subsidiary securing Indebtedness or other obligations of such Restricted Subsidiary owing to the Parent or another Restricted Subsidiary, or Liens in favor of the Parent or any Restricted Subsidiary;

(16) Liens securing Refinancing Indebtedness Incurred to refinance Indebtedness that was previously so secured, and permitted to be secured under this Indenture; *provided* that any such Lien is limited to all or part of the same property or assets (plus improvements, accessions, proceeds or dividends or distributions in respect thereof) that secured (or, under the written arrangements under which the original Lien arose, could secure) the Indebtedness being refinanced or is in respect of property that is or could be the security for or subject to a Permitted Lien hereunder;

(17) any interest or title of a lessor under any Capitalized Lease Obligation or operating lease;

(18) (a) mortgages, liens, security interest, restrictions, encumbrances or any other matters of record that have been placed by any

government, statutory or regulatory authority, developer, landlord or other third party on property over which the Parent or any Restricted Subsidiary has easement rights or on any leased property and subordination or similar arrangements relating thereto and (b) any condemnation or eminent domain proceedings affecting any real property;

(19) any encumbrance or restriction (including put and call arrangements) with respect to Capital Stock of, or assets owned by, any joint venture or similar arrangement pursuant to any joint venture or similar agreement;

(20) Liens on property or assets under construction (and related rights) in favor of a contractor or developer or arising from progress or partial payments by a third party relating to such property or assets;

(21) Liens arising under general business conditions in the ordinary course of business, including without limitation the general business conditions of any bank or financial institution with whom the Parent or any of its Restricted Subsidiaries maintains a banking relationship in the ordinary course of business (including arising by reason of any treasury or cash management, cash pooling, netting or set-off arrangement or other trading activities);

(22) Liens arising out of conditional sale, title retention, hire purchase, consignment or similar arrangements for the sale of goods entered into in the ordinary course of business;

(23) Liens on Capital Stock or other securities or assets of any Unrestricted Subsidiary that secure Indebtedness of such Unrestricted Subsidiary;

(24) any security granted over the marketable securities portfolio described in clause (9) of the definition of "Cash Equivalents" in connection with the disposal thereof to a third party;

(25) (a) Liens created for the benefit of or to secure, directly or indirectly, the Notes and the Note Guarantees, (b) Liens securing Indebtedness Incurred under Section 4.01(b)(i) and (c) Liens in respect of property and assets securing Indebtedness if the recovery in respect of such Liens is subject to loss-sharing or sharing of recoveries as among the Holders of the Notes and the creditors of such Indebtedness;

(26) Liens provided that the maximum amount of Indebtedness secured in the aggregate at any one time pursuant to this clause (26) does

not exceed the greater of (i) $25.0 million and (ii) 1.5% of Consolidated Net Tangible Assets;

(27) Liens on (a) Escrowed Proceeds for the benefit of the related holders of debt securities or other Indebtedness (or the underwriters or arrangers thereof) or (b) on cash set aside at the time of the Incurrence of any Indebtedness or government securities purchased with such cash, in either case to the extent such cash or government securities prefund the payment of interest on such Indebtedness and are held in escrow accounts or similar arrangement to be applied for such purpose;

(28) limited recourse Liens in respect of the ownership interests in, or assets owned by the Permitted Joint Venture and any joint ventures which are not Restricted Subsidiaries securing obligations of such joint ventures; and

(29) Liens on Securitization Assets and related assets incurred in connection with any Qualified Securitization Financing.

"*Person*" means any individual, corporation, partnership, joint venture, association, joint-stock company, trust, unincorporated organization, limited liability company, government or any agency or political subdivision thereof or any other entity.

"*Preferred Stock*", as applied to the Capital Stock of any Person, means Capital Stock of any class or classes (however designated) which is preferred as to the payment of dividends or as to the distribution of assets upon any voluntary or involuntary liquidation or dissolution of such Person, over shares of Capital Stock of any other class of such Person.

"*Public Debt*" means any Indebtedness consisting of bonds, debentures, notes or other similar debt securities issued in (1) a public offering registered under the Securities Act or (2) a private placement to institutional investors that is underwritten for resale in accordance with Rule 144A or Regulation S under the Securities Act, whether or not it includes registration rights entitling the holders of such debt securities to registration thereof with the SEC for public resale.

"*Purchase Money Obligations*" means any Indebtedness Incurred to finance or refinance the acquisition, leasing, construction or improvement of property (real or personal) or assets (including Capital Stock), and whether acquired through the direct acquisition of such property or assets or the acquisition of the Capital Stock of any Person owning such property or assets, or otherwise.

"*Qualified Securitization Financing*" means any financing pursuant to which the Parent or any Restricted Subsidiary may sell, convey or otherwise transfer to any other Person or grant a security interest in any accounts receivable (and related assets) in an aggregate principal amount equivalent to the Fair Market Value of such

accounts receivable (and related assets) of the Parent or any Restricted Subsidiary; *provided* that (a) the financing terms, covenants, events of default and other provisions applicable to such financing shall be in the aggregate economically fair and reasonable to the Parent and its Restricted Subsidiaries and all sales of accounts receivable (and related assets) are made on market terms (each as determined in good faith by the board of directors or a member of senior management of the Parent) at the time such financing is entered into and (b) such financing shall be non-recourse to the Parent and the Restricted Subsidiaries, except to the extent of any Securitization Repurchase Obligation or to the limited extent customary for such transactions.

"*Rating Agencies*" means Moody's and Fitch or, in the event Moody's or Fitch no longer assigns a rating to the Notes, any other "nationally recognized statistical rating organization" within the meaning of Rule 15c3-1(c)(2)(vi)(F) under the Exchange Act selected by the Parent as a replacement agency.

"*refinance*" means refinance, refund, replace, renew, repay, modify, restate, defer, substitute, supplement, reissue, resell, extend or increase (including pursuant to any defeasance or discharge mechanism) and the terms "refinances", "refinanced" and "refinancing" as used for any purpose in this Indenture shall have a correlative meaning.

"*Refinancing*" shall have the meaning assigned to such term in the Offering Memorandum under the caption "Summary—The Refinancing".

"*Refinancing Indebtedness*" means Indebtedness that is Incurred to refund, refinance, replace, exchange, renew, repay or extend (including pursuant to any defeasance or discharge mechanism) any Indebtedness existing on the date of this Indenture or Incurred in compliance with this Indenture (including Indebtedness of the Issuers that refinances Indebtedness of any Restricted Subsidiary and Indebtedness of any Restricted Subsidiary that refinances Indebtedness of the Issuers or another Restricted Subsidiary) including Indebtedness that refinances Refinancing Indebtedness; *provided*, *however*, that:

(1) if the Indebtedness being refinanced constitutes Subordinated Indebtedness, the Refinancing Indebtedness has a final stated maturity at the time such Refinancing Indebtedness is Incurred that is the same as or later than the final stated maturity of the Indebtedness being refinanced or, if shorter, the Notes;

(2) such Refinancing Indebtedness is Incurred in an aggregate principal amount (or if issued with original issue discount, an aggregate issue price) that is equal to or less than the sum of the aggregate principal amount (or if issued with original issue discount, the aggregate accreted value) then outstanding of the Indebtedness being refinanced (plus, without duplication, any additional Indebtedness Incurred to pay interest or premiums

required by the instruments governing such existing Indebtedness and costs, expenses and fees Incurred in connection therewith);

(3) if the Indebtedness being refinanced is expressly subordinated to the Notes, such Refinancing Indebtedness is subordinated to the Notes on terms at least as favorable to the Holders as those contained in the documentation governing the Indebtedness being refinanced,

provided, however, that Refinancing Indebtedness shall not include Indebtedness of the Parent or a Restricted Subsidiary that refinances Indebtedness of an Unrestricted Subsidiary or Indebtedness of a Restricted Subsidiary that is not an Issuer or a Guarantor that refinances Indebtedness of an Issuer or a Guarantor.

Refinancing Indebtedness in respect of any Credit Facility or any other Indebtedness (excluding any Indebtedness repaid on the Issue Date or with the proceeds of the Hydro-electric Sale) may be Incurred from time to time after the termination, discharge or repayment of any such Credit Facility or other Indebtedness.

"*Related Person*" with respect to any Permitted Holder, means:

(1) any controlling equity holder, majority (or more) owned Subsidiary or partner or member of such Person; or

(2) in the case of an individual, any spouse, family member or relative of such individual, any trust or partnership for the benefit of one or more of such individual and any such spouse, family member or relative, or the estate, executor, administrator, committee or beneficiaries of any thereof; or

(3) any trust, corporation, partnership or other Person for which one or more of the Permitted Holders and other Related Persons of any thereof constitute the beneficiaries, stockholders, partners or owners thereof, or Persons beneficially holding in the aggregate a majority (or more) controlling interest therein; or

(4) any investment fund or vehicle managed, sponsored or advised by such Person or any successor thereto, or by any Affiliate of such Person or any such successor.

"*Related Taxes*" means:

any Taxes, including sales, use, transfer, rental, ad valorem, value added, stamp, property, consumption, franchise, license, capital, registration, business, customs, net worth, gross receipts, excise, occupancy, intangibles or similar Taxes (other than (x) Taxes measured by income and (y) withholding imposed on

payments made by any Parent Holdco), required to be paid (*provided* such Taxes are in fact paid) by any Parent Holdco by virtue of its:

(i) being incorporated or otherwise being established or having Capital Stock outstanding (but not by virtue of owning stock or other equity interests of any corporation or other entity other than, directly or indirectly, the Parent or any of the Parent's Subsidiaries);

(ii) being a holding company parent, directly or indirectly, of the Parent or any of the Parent's Subsidiaries;

(iii) receiving dividends from or other distributions in respect of the Capital Stock of, directly or indirectly, the Parent or any of the Parent's Subsidiaries; or

(iv) having made any payment with respect to any of the items for which the Parent is permitted to make payments to any Parent Holdco pursuant to Section 4.02.

"*Replacement Assets*" means non-current properties and assets that replace the properties and assets that were the subject of an Asset Disposition or non-current properties and assets that will be used in the Parent's business or in that of the Restricted Subsidiaries or any and all businesses that in the good faith judgment of the Board of Directors or any Officer of the Parent are reasonably related.

"*Representative*" means any trustee, agent or representative (if any) for an issue of Indebtedness or the provider of Indebtedness (if provided on a bilateral basis), as the case may be.

"*Responsible Officer*" means, when used with respect to the Trustee, any officer within the applicable corporate trust services department of the Trustee, including any director, assistant director, trust manager, deputy trust manager, assistant trust manager, senior trust officer, trust officer or any other officer of the Trustee who customarily performs functions similar to those performed by the Persons who at the time shall be such officers, respectively, or to whom any corporate trust matter is referred because of such Person's knowledge of and familiarity with the particular subject and who shall have direct responsibility for the administration of this Indenture.

"*Restricted Investment*" means any Investment other than a Permitted Investment.

"*Restricted Subsidiary*" means any Subsidiary of the Parent other than an Unrestricted Subsidiary.

"*S&P*" means S&P Global Ratings (formerly Standard & Poor's Ratings Services) or any of its successors or assigns that is a Nationally Recognized Statistical Rating Organization.

"*SEC*" means the U.S. Securities and Exchange Commission.

"*Secured Credit Facility*" means the $200 million revolving credit facility established pursuant to the credit agreement, dated as of August 20, 2013 and as last amended on or about the Issue Date, among the Parent, the US Co-Issuer, certain Subsidiaries of the Parent from time to time as guarantors or co-borrowers thereunder, the financial institutions from time to time party thereto as lenders, PNC Bank National Association and Wells Fargo Bank, National Association, as syndication agents for lenders, BBVA Compass Bank, as documentation agent, and Citizens Bank of Pennsylvania, as administrative agent for lenders, as amended, restated, modified, renewed, refunded, replaced, restructured, refinanced, repaid, increased or extended in whole or in part from time to time.

"*Securities Act*" means the U.S. Securities Act of 1933, as amended, and the rules and regulations of the SEC promulgated thereunder, as amended.

"*Securitization Assets*" means any accounts receivable that are or will be subject to a Qualified Securitization Financing.

"*Securitization Fees*" means distributions or payments made directly or by means of discounts with respect to any participation interest issued or sold in connection with, and other commissions, discounts, charges or fees paid to a Person that is not the Parent or a Restricted Subsidiary in connection with, any Qualified Securitization Financing.

"*Securitization Repurchase Obligation*" means any obligation of a seller of Securitization Assets in a Qualified Securitization Financing to repurchase Securitization Assets arising as a result of a breach of a representation, warranty or covenant or otherwise, including as a result of a receivable or a portion thereof becoming subject to any asserted defense, dispute, off-set or counterclaim of any kind as a result of any action taken by, any failure to take action by or any other event relating to the seller.

"*Significant Subsidiary*" means any Restricted Subsidiary that meets any of the following conditions:

(1) the Parent's and its Restricted Subsidiaries' investments in and advances to the Restricted Subsidiary exceed 10% of the total assets of the Parent and its Restricted Subsidiaries on a consolidated basis as of the end of the most recently completed fiscal year;

(2) the Parent's and its Restricted Subsidiaries' proportionate share of the total assets (after intercompany eliminations) of the Restricted

Subsidiary exceeds 10% of the total assets of the Parent and its Restricted Subsidiaries on a consolidated basis as of the end of the most recently completed fiscal year; or

(3) the Parent's and its Restricted Subsidiaries' proportionate share of the Consolidated EBITDA of the Restricted Subsidiary exceeds 10% of the Consolidated EBITDA of the Parent and its Restricted Subsidiaries on a consolidated basis for the most recently completed fiscal year.

"*Similar Business*" means (a) any businesses, services or activities engaged in by the Parent or any of its Subsidiaries or any Associates on the Issue Date and (b) any businesses, services and activities that are related, complementary, incidental, ancillary or similar to any of the foregoing or are extensions or developments of any thereof.

"*Spanish Hydro-electric Sale*" means the disposition by a Subsidiary of the Parent of certain hydro-power operations in Spain, as described in the Offering Memorandum.

"*Stated Maturity*" means, with respect to any security, the date specified in such security as the fixed date on which the payment of principal of such security is due and payable, including pursuant to any mandatory redemption provision, but shall not include any contingent obligations, including those described Section 4.14 and Section 4.05, to repay, redeem or repurchase any such principal prior to the date originally scheduled for the payment thereof.

"*Subordinated Indebtedness*" means, with respect to any person, any Indebtedness (whether outstanding on the Issue Date or thereafter Incurred) which is expressly subordinated in right of payment to the Notes or any Note Guarantee pursuant to a written agreement.

"*Subsidiary*" means, with respect to any Person:

(1) any corporation, association, or other business entity (other than a partnership, joint venture, limited liability company or similar entity) of which more than 50% of the total voting power of shares of Capital Stock entitled (without regard to the occurrence of any contingency) to vote in the election of directors, managers or trustees thereof is at the time of determination owned or controlled, directly or indirectly, by such Person or one or more of the other Subsidiaries of that Person or a combination thereof; or

(2) any partnership, joint venture, limited liability company or similar entity of which:

(i) more than 50% of the capital accounts, distribution rights, total equity and voting interests or general or limited partnership interests, as applicable, are owned or controlled, directly or indirectly, by such Person or one or more of the other Subsidiaries of that Person or a combination thereof whether in the form of membership, general, special or limited partnership interests or otherwise; and

(ii) such Person or any Subsidiary of such Person is a controlling general partner or otherwise controls such entity.

"*Successor Parent*" with respect to any Person means any other Person with more than 50% of the total voting power of the Voting Stock of which is, at the time the first Person becomes a Subsidiary of such other Person, "beneficially owned" (as defined below) by one or more Persons that "beneficially owned" (as defined below) more than 50% of the total voting power of the Voting Stock of the first Person immediately prior to the first Person becoming a Subsidiary of such other Person. For purposes hereof, "beneficially own" has the meaning correlative to the term "beneficial owner", as such term is defined in Rules 13d-3 and 13d-5 under the Exchange Act (as in effect on the Issue Date).

"*Tax Sharing Agreement*" means any tax sharing or profit and loss pooling or similar agreement with customary or arm's-length terms entered into with any Parent Holdco or its Subsidiary, as the same may be amended, supplemented, waived or otherwise modified from time to time in accordance with the terms thereof and of this Indenture.

"*Taxes*" means all present and future taxes, levies, imposts, deductions, charges, duties and withholdings and any similar charges in the nature of a tax (including interest and penalties with respect thereto) that are imposed by any government or other taxing authority.

"*Temporary Cash Investments*" means any of the following:

(1) any investment in:

(a) direct obligations of, or obligations Guaranteed by, (i) the United States of America or Canada, (ii) a Permissible Jurisdiction, (iii) Switzerland or Norway, (iv) any country in whose currency funds are being held specifically pending application in the making of an investment or capital expenditure by the Parent or a Restricted Subsidiary in that country with such funds or (v) any agency or instrumentality of any such country or member state; or

(b) direct obligations of any country recognized by the United States of America rated at least "A" by S&P or "A-2" by Moody's (or, in either case, the equivalent of such rating by such organization or, if no rating of S&P or Moody's then exists, the equivalent of such rating by any Nationally Recognized Statistical Rating Organization);

(2) overnight bank deposits, and investments in time deposit accounts, certificates of deposit, bankers' acceptances and money market deposits (or, with respect to foreign banks, similar instruments) maturing not more than one year after the date of acquisition thereof issued by:

(a) any lender under the Secured Credit Facility;

(b) any institution authorized to operate as a bank in any of the countries or member states referred to in sub-clause (1)(a) above; or

(c) any bank or trust company organized under the laws of any such country or member state or any political subdivision thereof,

in each case, having capital and surplus aggregating in excess of $250 million (or the foreign currency equivalent thereof) and whose long-term debt is rated at least "A" by S&P or "A-2" by Moody's (or, in either case, the equivalent of such rating by such organization or, if no rating of S&P or Moody's then exists, the equivalent of such rating by any Nationally Recognized Statistical Rating Organization) at the time such Investment is made;

(3) repurchase obligations with a term of not more than 30 days for underlying securities of the types described in clause (1) or (2) above entered into with a Person meeting the qualifications described in clause (2) above;

(4) Investments in commercial paper, maturing not more than 270 days after the date of acquisition, issued by a Person (other than the Parent or any of its Subsidiaries), with a rating at the time as of which any Investment therein is made of "P-2" (or higher) according to Moody's or "A-2" (or higher) according to S&P (or, in either case, the equivalent of such rating by such organization or, if no rating of S&P or Moody's then exists, the equivalent of such rating by any Nationally Recognized Statistical Rating Organization);

(5) Investments in securities maturing not more than one year after the date of acquisition issued or fully Guaranteed by any state, commonwealth or territory of the United States of America, Canada, a Permissible Jurisdiction or Switzerland, Norway or by any political subdivision or taxing authority of any such state, commonwealth, territory, country or member state, and rated at least "BBB-" by S&P or "Baa3" by Moody's (or, in either case, the equivalent of such rating by such organization or, if no rating of S&P or Moody's then exists, the equivalent of such rating by any Nationally Recognized Statistical Rating Organization);

(6) bills of exchange issued in the United States, Canada, a Permissible Jurisdiction, Switzerland, Norway or Japan eligible for rediscount at the relevant central bank and accepted by a bank (or any dematerialized equivalent);

(7) any money market deposit accounts issued or offered by a commercial bank organized under the laws of a country that is a member of the Organization for Economic Cooperation and Development, in each case, having capital and surplus in excess of $250 million (or the foreign currency equivalent thereof) or whose long term debt is rated at least "A" by S&P or "A2" by Moody's (or, in either case, the equivalent of such rating by such organization or, if no rating of S&P or Moody's then exists, the equivalent of such rating by any Nationally Recognized Statistical Rating Organization) at the time such Investment is made;

(8) investment funds investing 95% of their assets in securities of the type described in clauses (1) through (7) above (which funds may also hold reasonable amounts of cash pending investment or distribution); and

(9) investments in money market funds complying with the risk limiting conditions of Rule 2a-7 (or any successor rule) of the SEC under the U.S. Investment Company Act of 1940, as amended.

"*Treasury Rate*" means, as obtained by the Issuers, as of any date of redemption of Notes, the yield to maturity as of such date U.S. Treasury securities with a constant maturity (as compiled and published in the most recent Federal Reserve Statistical Release H.15 (519) that has become publicly available at least two Business Days prior to the date notice of the applicable redemption of Notes is sent in accordance with this Indenture (or, if such Statistical Release is no longer published, any publicly available source of similar market data)) most nearly equal to the period from such date to March 1, 2019; *provided*, *however*, that if the period from such date to March 1, 2019, is less than one year, the weekly average yield on actively traded U.S. Treasury securities adjusted to a constant maturity of one year will be used.

"*US Co-Issuer*" means Globe Specialty Metals, Inc. or any other Successor Company in accordance with this Indenture.

"*Unrestricted Subsidiary*" means:

(1) any Subsidiary of the Parent that at the time of determination is an Unrestricted Subsidiary (as designated by the Board of Directors of the Parent in the manner provided below); and

(2) any Subsidiary of an Unrestricted Subsidiary.

The Board of Directors of the Parent may designate any Subsidiary of the Parent (including any newly acquired or newly formed Subsidiary or a Person becoming a Subsidiary through merger, consolidation or other business combination transaction, or Investment therein) to be an Unrestricted Subsidiary only if:

(1) such Subsidiary or any of its Subsidiaries does not own any Capital Stock or Indebtedness of, or own or hold any Lien on any property of, the Parent or any other Subsidiary of the Parent which is not a Subsidiary of the Subsidiary to be so designated or otherwise an Unrestricted Subsidiary; and

(2) such designation and the Investment of the Parent in such Subsidiary complies with Section 4.02.

Any such designation by the Board of Directors of the Parent shall be evidenced to the Trustee by filing with the Trustee a copy of the resolution of the Board of Directors of the Parent giving effect to such designation and an Officer's Certificate certifying that such designation complies with the foregoing conditions.

The Board of Directors of the Parent may designate any Unrestricted Subsidiary to be a Restricted Subsidiary; *provided* that immediately after giving effect to such designation (1) no Default or Event of Default would result therefrom and (2)(x) the Parent could Incur at least $1.00 of additional Indebtedness under Section 4.01(a) or (y) the Fixed Charge Coverage Ratio would not be less than it was immediately prior to giving effect to such designation, in each case, on a *pro forma* basis taking into account such designation. Any such designation by the Board of Directors shall be evidenced to the Trustee by promptly filing with the Trustee a copy of the resolution of the Board of Directors giving effect to such designation or an Officer's Certificate certifying that such designation complied with the foregoing provisions.

"*Uniform Commercial Code*" means the New York Uniform Commercial Code.

"*Voting Stock*" of a Person means all classes of Capital Stock of such Person then outstanding and normally entitled to vote in the election of directors.

Section 1.02. Other Definitions.

Term	Defined in Section
“Additional Amounts”	4.13(a)
“Additional Notes”	Preamble
“Affiliate Transaction”	4.06(a)
“Agent Members”	Exhibit A
“Asset Disposition Offer”	4.05(d)
“Asset Disposition Offer Amount”	4.05(g)
“Asset Disposition Offer Period”	4.05(g)
“Asset Disposition Purchase Date”	4.05(g)
“Authenticating Agent”	2.03
“Authentication Order”	2.03
“Authorized Agent”	12.08
“Calculation Date”	1.01
“Change of Control Offer”	4.14(b)
“Change of Control Payment”	4.14(b)(i)
“Change of Control Payment Date”	4.14(b)(ii)
“Code”	4.13(a)(ii)
“covenant defeasance option”	8.01(b)
“cross acceleration provision”	6.01(d)(ii)
“defeasance trust”	8.02(i)
“Definitive Registered Note”	Exhibit A
“Depositary”	Exhibit A
“Directive”	2.04(i)
“Event of Default”	6.01
“Excess Proceeds”	4.05(c)
“Excluded Amounts”	4.02(b)
“Global Notes”	Exhibit A
“Global Notes Legend”	Exhibit A
“Initial Agreement”	4.04(b)(iii)
“Initial Default”	6.02
“Initial Lien”	4.03
“judgment default provision”	6.01(f)
“legal defeasance option”	8.01(b)
“Notes”	Preamble
“Notes Custodian”	Exhibit A
“payment default”	6.01(d)(i)
“Payor”	4.13(a)
“Permitted Debt”	4.01(b)
“Permitted Payments”	4.02(d)
“Paying Agent”	2.04(i)
“protected purchaser”	2.08
“QIB”	Exhibit A
“Registrar”	2.04(i)
“Regulation S”	Exhibit A
“Regulation S Global Notes”	Exhibit A
“Regulation S Notes”	Exhibit A

“Relevant Taxing Jurisdiction”	4.13(a)(ii)
“Restricted Notes Legend”	Exhibit A
“Restricted Payment”	4.02(a)
“Reversion Date”	4.10
“Rule 144A”	Exhibit A
“Rule 144A Global Notes”	Exhibit A
“Rule 144A Notes”	Exhibit A
“Securities Act”	Exhibit A
“Successor Company”	5.01(a)(i)
“Suspension Event”	4.10
“Transfer Agent”	2.04(i)
“Transfer Restricted Notes”	Exhibit A
“Trustee”	Preamble
“US GAAP”	1.01

Section 1.03. Rules of Construction. Unless the context otherwise requires:

(i) a term has the meaning assigned to it;

(ii) an accounting term not otherwise defined has the meaning assigned to it in accordance with IFRS as of the Issue Date;

(iii) “or” is not exclusive;

(iv) “including” means including without limitation; and

(v) words in the singular include the plural and words in the plural include the singular.

ARTICLE II

THE NOTES

Section 2.01. Issuable in Series.

(a) The Notes may be issued in one or more series. All Notes of any one series shall be substantially identical except as to denomination.

With respect to any Additional Notes issued after the Issue Date (except for Notes authenticated and delivered upon registration of, transfer of, or in exchange for, or in lieu of, other Notes pursuant to Section 2.08, Section 2.10, Section 2.11 or Section 3.06 or Exhibit A), there shall be (a) established in or pursuant to a resolution of the Board of Directors of the Issuers and (b) (i) set forth or determined in the manner provided in an Officer’s Certificate of the Issuers and (ii) established in one or more indentures supplemental hereto, prior to the issuance of such Additional Notes:

(1) whether such Additional Notes shall be issued as part of a new or existing series of Notes and the title of such Additional Notes (which shall distinguish the Additional Notes of the series from Notes of any other series);

(2) the aggregate principal amount of such Additional Notes which may be authenticated and delivered under this Indenture (except for Notes authenticated and delivered upon registration of, transfer of, or in exchange for, or in lieu of, other Notes of the same series pursuant to Section 2.08, Section 2.10, Section 2.11 or Section 3.06 or Exhibit A and except for Notes which, pursuant to Section 2.06, are deemed never to have been authenticated and delivered hereunder);

(3) the issue price and issuance date of such Additional Notes, including the date from which interest on such Additional Notes shall accrue; and

(4) if applicable, that such Additional Notes shall be issuable in whole or in part in the form of one or more Global Notes and, in such case, the relevant depositary for such Global Notes, the form of any legend or legends which shall be borne by such Global Notes in addition to or in lieu of those set forth in Exhibit A hereto and any circumstances in addition to or in lieu of those set forth in Section 2.3 of Exhibit A in which any such Global Note may be exchanged in whole or in part for Additional Notes registered, or any transfer of such Global Note in whole or in part may be registered, in the name or names of Persons other than the depositary for such Global Note or a nominee thereof.

(b) If any of the terms of any Additional Notes are established by action taken pursuant to a resolution of the Board of Directors, a copy of an appropriate record of such action shall be certified by an Officer's Certificate and delivered to the Trustee at or prior to the delivery of the Officer's Certificate of the Issuers or this Indenture supplemental hereto setting forth the terms of the Additional Notes.

(c) This Indenture is unlimited in aggregate principal amount. The Issuers may, subject to applicable law and this Indenture, issue an unlimited principal amount of Additional Notes; *provided*, that if the Additional Notes are not fungible with the Notes issued as of the date of this Indenture for U.S. federal income tax purposes, the Additional Notes will be issued with separate ISIN or CUSIP numbers from such series of Notes. The Notes and, if issued, any related Additional Notes will be treated as a single class for all purposes under this Indenture, including, without limitation, with respect to waivers, amendments, redemptions and offers to purchase, except with respect to right of payment and optional redemption, as the relevant amendment, waiver, consent, modification or similar action affects the rights of the Holders of the different series of Notes dissimilarly or as otherwise provided for herein. For the purposes of calculating the aggregate principal amount of Notes that have consented to or voted in favor of any amendment, waiver, consent, modification or other similar action, the Issuers (acting reasonably and in good faith) shall be entitled to select a record date as of which the Dollar Equivalent of the principal amount of any Notes shall be calculated in such consent or voting process.

Section 2.02. Form and Dating. Provisions relating to the Notes are set forth in Exhibit A, which is hereby incorporated in and expressly made a part of this Indenture. The (a) Notes and the Trustee's or the Authenticating Agent's certificate of authentication (as the case may be) and (b) any related Additional Notes (if issued as Transfer Restricted Notes) and the Trustee's or the Authenticating Agent's certificate of authentication (as the case may be) shall each be substantially in the form included in Exhibit A-1, which is hereby incorporated in and expressly made a part of this Indenture. Any Additional Notes issued other than as Transfer Restricted Notes and the Trustee's or the Authenticating Agent's certificate of authentication (as the case may be) shall each be substantially in the form of Exhibit A-1 (without the Restricted Notes Legend), which is hereby incorporated in and expressly made part of this Indenture. The Notes may have notations, legends or endorsements required by law, stock exchange rule, agreements to which the Issuers are subject, if any, or usage; *provided* that any such notation, legend or endorsement is in a form acceptable to the Issuers, the Paying Agent and the Trustee. Each Note shall be dated the date of its authentication. The Notes shall be issuable only in registered form without interest coupons and only in minimum denominations of $150,000 and whole multiples of $1,000 in excess thereof.

Section 2.03. Execution and Authentication. An Officer of each Issuer shall sign the Notes for the Issuers by manual or facsimile signature.

If an Officer whose signature is on a Note no longer holds that office at the time the Trustee authenticates the Note, the Note shall be valid nevertheless.

A Note shall not be valid until an authorized signatory of the Trustee or the Authenticating Agent (as the case may be) manually signs the certificate of authentication on the Note. The signature shall be conclusive evidence that the Note has been authenticated under this Indenture.

The Trustee or the Authenticating Agent (as the case may be) shall authenticate and make available for delivery Notes as set forth in Exhibit A following receipt of an authentication order signed by an Officer of each of the Issuers directing the Trustee or the Authenticating Agent to authenticate such Notes (the "*Authentication Order*").

The Trustee may appoint one or more authenticating agents (each, an "*Authenticating Agent*") to authenticate the Notes. Such an agent may authenticate Notes whenever the Trustee may do so. The term "*Authenticating Agent*" includes any successor of any Authenticating Agent appointed hereunder and any additional Authenticating Agent appointed hereunder. Unless limited by the terms of such appointment, the Authenticating Agent may authenticate Notes whenever the Trustee may do so. Each reference in this Indenture to authentication by the Trustee includes authentication by such agent. The Authenticating Agent has the same rights as any Registrar, Paying Agent or any other Agent for service of notices and demands.

Section 2.04. Registrar and Paying Agent. (i) The Issuers will maintain one or more Paying Agents for the Notes. The initial Paying Agent will be Wilmington Trust, National Association (the "*Paying Agent*").

The Issuers will also maintain one or more registrars (each, a "*Registrar*") and a transfer agent (the "*Transfer Agent*"). The initial Registrar and Transfer Agent will be Wilmington Trust, National Association. The Registrar shall keep a register reflecting ownership of the Notes outstanding from time to time and of their transfer and exchange. Wilmington Trust, National Association, in its capacity as Paying Agent, Registrar and Transfer Agent, hereby accepts such appointment.

(ii) The Issuers shall enter into an appropriate agency agreement with any Registrar or Paying Agent not a party to this Indenture. Such agreement shall implement the provisions of this Indenture that relate to such agent. The Issuers shall notify the Trustee of the name and address of any such agent. If the Issuers fail to maintain a Registrar or Paying Agent, the Trustee may act, or may arrange for appropriate parties to act, as such and shall be entitled to appropriate compensation therefor pursuant to Section 7.06. Each Issuer or any Restricted Subsidiary may act as Paying Agent or Registrar in respect of the Notes.

(iii) The Issuers may change any Registrar, Paying Agent or Transfer Agent upon written notice to such Registrar, Paying Agent or Transfer Agent and to the Trustee, without prior notice to the Holders; *provided, however*, that no such removal shall become effective until (i) acceptance of an appointment by a successor as evidenced by an appropriate agreement entered into by the Issuers and such successor Registrar, Paying Agent, or Transfer Agent, as the case may be, and delivered to the Trustee or (ii) notification to the Trustee that the Trustee shall, to the extent that the Trustee determines that it is able and agrees to, serve as Registrar or Paying Agent or Transfer Agent until the appointment of a successor in accordance with clause (i) above. The Registrar, any Paying Agent or the Transfer Agent may resign by providing 30 days' written notice to the Issuers and the Trustee. If a successor Paying Agent, Registrar or Transfer Agent does not take office within 30 days after the retiring Paying Agent, Registrar or Transfer Agent, as the case may be, resigns or is removed the retiring Paying Agent, Registrar or Transfer Agent, as the case may be, may (after consulting with the Issuers) appoint a successor Paying Agent, Registrar or Transfer Agent, as applicable, at any time prior to the date on which a successor Paying Agent, Registrar or Transfer Agent takes office; *provided* that such appointment is reasonably satisfactory to the Issuers. If the successor Agent does not deliver its written acceptance within 30 days after the retiring Agent resigns or is removed, the retiring Agent, the Issuers or the Holders of 10% in principal amount of the outstanding Notes under this Indenture may, at the expense of the Issuers, petition any court of competent jurisdiction for the appointment of a successor Agent. In addition, for so long as Notes are listed on the Irish Stock Exchange and the rules of the Irish Stock Exchange so require, the Issuers will publish notice of any change of Paying Agent, Registrar or Transfer Agent in a daily newspaper with general circulation in Ireland (which is expected to be *The Irish Times*). Such notice of the change in a Paying Agent, Registrar or Transfer Agent may also be published on the

official website of the Irish Stock Exchange (*www.ise.ie*) in lieu of publication in a daily newspaper, to the extent and in the manner permitted by the rules of the Irish Stock Exchange.

Section 2.05. Paying Agent. No later than 11:00 a.m. New York time on each Business Day prior to the due date of the principal of, interest and premium (if any) on any Note, the Issuers shall deposit with the Paying Agent (or if an Issuer or a Restricted Subsidiary is acting as Paying Agent, segregate and hold in trust for the benefit of the Persons entitled thereto) a sum sufficient to pay such principal, interest and premium (if any) when so becoming due and, subject to receipt of such monies, the Paying Agent shall make payment on the Notes in accordance with this Indenture. If an Issuer or a Restricted Subsidiary acts as Paying Agent, it shall segregate the money held by it as Paying Agent and hold it as a separate trust fund. The Issuers at any time may require a Paying Agent to pay all money held by it to the Trustee or such entity designated by the Trustee for this purpose and to account for any funds disbursed by the Paying Agent. Upon complying with this Section 2.05, the Paying Agent shall have no further liability for the money delivered to the Trustee. For the avoidance of doubt, the Paying Agent and the Trustee shall be held harmless and have no liability with respect to payments or disbursements to be made by the Paying Agent and Trustee (i) for which payment instructions are not made or that are not otherwise deposited by the respective times set forth in this Section 2.05, (ii) and until they have confirmed receipt of funds sufficient to make the relevant payment.

Section 2.06. Holder Lists. The Registrar shall preserve in as current a form as is reasonably practicable the most recent list available to it of the names and addresses of Holders. Following the exchange of beneficial interests in Global Notes for Definitive Registered Notes, the Issuers shall furnish, or cause the Registrar to furnish, to the Trustee, the Transfer Agent and the Paying Agent in writing at least five Business Days before each interest payment date, and at such other times as the Trustee may reasonably require, the names and addresses of Holders of such Definitive Registered Notes.

Section 2.07. Transfer and Exchange. The Notes shall be issued in registered form and shall be transferable only upon the surrender of a Note for registration of transfer and in compliance with Exhibit A. When a Note is presented to the Registrar or Transfer Agent, as the case may be, with a request to register a transfer, the Registrar or the Transfer Agent, as the case may be, shall register the transfer as requested if its requirements therefor are met. When Notes are presented to the Registrar or the Transfer Agent, as the case may be, with a request to exchange them for an equal principal amount of Notes of other denominations, the Registrar shall make the exchange as requested if the same requirements are met. To permit registration of transfers and exchanges, the Issuers shall execute and the Trustee or the Authenticating Agent, upon receipt of an authentication order, shall authenticate Notes at the request of the Registrar or the Transfer Agent, as the case may be. The Issuers, Registrar and Transfer Agent may require payment of a sum sufficient to pay all taxes, assessments or other governmental charges in connection with any transfer or exchange pursuant to this Section 2.07. The

Issuers are not required to register the transfer or exchange of any Notes (i) for a period of 15 days prior to any date fixed for the redemption of the Notes, (ii) for a period of 15 days immediately prior to the date fixed for selection of Notes to be redeemed in part (iii) for a period of 15 days prior to the record date with respect to any interest payment date, or (iv) which the Holder has tendered (and not withdrawn) for repurchase in connection with a Change of Control Offer or an Asset Disposition Offer.

Prior to the due presentation for registration of transfer of any Note, the Issuers, the Trustee, each Agent, the Paying Agent, the Transfer Agent and the Registrar may deem and treat the Person in whose name a Note is registered as the absolute owner of such Note for the purpose of receiving payment of principal of and (subject to Section 2 of the Notes) interest, if any, on such Note and for all other purposes whatsoever, whether or not such Note is overdue, and none of the Issuers, the Trustee, the Paying Agent, the Transfer Agent or the Registrar shall be affected by notice to the contrary.

Any Holder of a Global Note shall, by acceptance of such Global Note, agree that transfers of beneficial interest in such Global Note may be effected only through a book-entry system maintained by (a) the Holder of such Global Note (or its agent) or (b) any Holder of a beneficial interest in such Global Note, and that ownership of a beneficial interest in such Global Note shall be required to be reflected in a book-entry.

All Notes issued upon any transfer or exchange pursuant to the terms of this Indenture shall evidence the same debt and shall be entitled to the same benefits under this Indenture as the Notes surrendered upon such transfer or exchange.

Section 2.08. Replacement Notes. If a mutilated Note is surrendered to the Registrar or if the Holder of a Note claims that the Note has been lost, destroyed or wrongfully taken, the Issuers shall issue and the Trustee or the Authenticating Agent, upon receipt of an authentication order, shall authenticate a replacement Note, such that the Holder (a) notifies the Issuers or the Trustee within a reasonable time after such Holder has notice of such loss, destruction or wrongful taking and the Registrar does not register a transfer prior to receiving such notification, (b) makes such request to the Issuers or the Trustee prior to the Note being acquired by a protected purchaser as defined in Section 8-303 of the Uniform Commercial Code (a "*protected purchaser*") and (c) satisfies any other reasonable requirements of the Trustee. If required by the Trustee, each Agent or the Issuers, such Holder shall furnish an indemnity bond sufficient in the judgment of the Trustee and the Issuers to protect the Issuer, the Trustee, the Authenticating Agent, Paying Agent and the Registrar from any loss that any of them may suffer if a Note is replaced. The Issuers and the Trustee may charge the Holder for their expenses in replacing a Note including reasonable fees and expenses of counsel. In the event any such mutilated, lost, destroyed or wrongfully taken Note has become or is about to become due and payable, the Issuers in their discretion may pay such Note instead of issuing a new Note in replacement thereof.

Every replacement Note is an additional obligation of the Issuer.

The provisions of this Section 2.08 are exclusive and shall preclude (to the extent lawful) all other rights and remedies with respect to the replacement or payment of mutilated, lost, destroyed or wrongfully taken Notes.

Section 2.09. Outstanding Notes. Notes outstanding at any time are all Notes authenticated by the Trustee or the Authenticating Agent except for those canceled by either of them, those delivered to either of them for cancellation and those described in this Section 2.09 as not outstanding. Subject to Section 12.04, a Note does not cease to be outstanding because an Issuer or an Affiliate of an Issuer holds the Note.

If a Note is replaced pursuant to Section 2.08, it ceases to be outstanding unless the Trustee and the Issuers receive proof satisfactory to them that the replaced Note is held by a protected purchaser.

If the Paying Agent receives (or an Issuer or a Restricted Subsidiary is acting as Paying Agent and such Paying Agent segregates and holds in trust) in accordance with this Indenture, by 11:00 a.m. New York time on each redemption date or maturity date money sufficient to pay all principal and interest and premium, if any, payable on that date with respect to the Notes (or portions thereof) to be redeemed or maturing, as the case may be, and the Paying Agent is not prohibited from paying such amount to the Holders on that date pursuant to the terms of this Indenture then on and after that date such Notes (or portions thereof) cease to be outstanding and interest on them ceases to accrue.

Section 2.10. Temporary Notes. In the event that Definitive Registered Notes are to be issued under the terms of this Indenture, until such Definitive Registered Notes are ready for delivery, the Issuers may prepare and the Trustee or the Authenticating Agent, upon receipt of an authentication order, shall authenticate temporary Notes. Temporary Notes shall be substantially in the form of Definitive Registered Notes but may have variations that the Issuers consider appropriate for temporary Notes. Without unreasonable delay, the Issuers shall prepare and the Trustee or the Authenticating Agent, upon receipt of an authentication order, shall authenticate Definitive Registered Notes and deliver them in exchange for temporary Notes upon surrender of such temporary Notes at the office or agency of the Issuers, without charge to the Holder.

Section 2.11. Cancellation. The Issuers at any time may deliver Notes to the Registrar for cancellation. The Paying Agent, Transfer Agent and the Trustee shall forward to the Registrar any Notes surrendered to them for registration of transfer, exchange or payment. The Registrar or the Paying Agent (or an agent authorized by the Registrar) and no one else shall cancel all Notes surrendered for registration of transfer, exchange, payment or cancellation and shall dispose of canceled Notes in accordance with its customary procedures or deliver canceled Notes to the Issuers pursuant to written direction by an Officer of an Issuer. Certification of the destruction of all canceled Notes shall be delivered to the Issuers. The Issuers may not issue new Notes to replace Notes they redeemed or delivered to the Registrar for cancellation. If an Issuer shall acquire any of the Notes, such acquisition shall not operate as a redemption or

satisfaction of the Indebtedness represented by such Notes, unless and until the same are surrendered to the Registrar for cancellation pursuant to this Section 2.11. Neither the Trustee nor the Authenticating Agent shall authenticate Notes in place of canceled Notes other than pursuant to the terms of this Indenture.

Section 2.12. CUSIP or ISIN Numbers. The Issuers in issuing the Notes may use CUSIP or ISIN numbers (if then generally in use) and, if so, the Trustee and Agents shall use CUSIP or ISIN numbers in notices of redemption as a convenience to Holders; *provided*, *however*, that any such notice may state that no representation is made as to the correctness of such numbers either as printed on the Notes or as contained in any notice of a redemption and that reliance may be placed only on the other identification numbers printed on the Notes, and any such redemption shall not be affected by any defect in or omission of such numbers. The Issuers will promptly notify the Trustee and the Paying Agent of any change in the CUSIP or ISIN numbers.

Section 2.13. Defaulted Interest. If the Issuers default in a payment of interest on the Notes, they will pay the defaulted interest in any lawful manner plus, to the extent lawful, interest payable on the defaulted interest, to the Persons who are Holders on a subsequent special record date, in each case at the rate provided in the Notes and in Section 4.12 hereof. The Issuers will notify the Trustee as soon as practicable in writing of the amount of defaulted interest proposed to be paid on each Note and the date of the proposed payment. The Issuers will fix or cause to be fixed each such special record date and payment date; *provided* that no such special record date may be less than 10 days prior to the related payment date for such defaulted interest. At least 15 days before the special record date, the Issuers (or, upon the written request of the Issuers, the Trustee in the name and at the expense of the Issuers) will mail or deliver or cause to be mailed or delivered to the Holders in accordance with Section 12.01 a notice that states the special record date, the related payment date and the amount of such interest to be paid. The Issuers undertake to promptly inform the Irish Stock Exchange (for so long as the Notes are listed on the Irish Stock Exchange and admitted to trading on the Global Exchange Market thereof) of any such special record date.

Section 2.14. Currency. The U.S. dollar is the sole currency of account and payment for all sums payable by the Issuers and the Guarantors under or in connection with this Indenture, the Notes and the Note Guarantees, including damages. Any amount received or recovered in a currency other than the U.S. dollar, whether as a result of, or the enforcement of, a judgment or order of a court of any jurisdiction, in the winding-up or dissolution of an Issuer, any Guarantor or otherwise by any Holder or by the Trustee, in respect of any sum expressed to be due to it from the Issuers or a Guarantor will only constitute a discharge to the Issuers or such Guarantor, as applicable, to the extent of the U.S. dollar amount which the recipient is able to purchase with the amount so received or recovered in that other currency on the date of that receipt or recovery (or, if it is not practicable to make that purchase on that date, on the first date on which it is practicable to do so).

If that U.S. dollar amount is less than the U.S. dollar amount expressed to be due to the recipient or the Trustee under any Note, Note Guarantee, or this Indenture,

the Issuers and the Guarantors will indemnify them against any loss sustained by such recipient or the Trustee as a result. In any event, the Issuers and the Guarantors will indemnify the recipient or the Trustee on a joint and several basis against the cost of making any such purchase. For the purposes of this Section 2.14, it will be *prima facie* evidence of the matter stated therein for the Holder of a Note or the Trustee to certify in a manner reasonably satisfactory to the Issuers (indicating the sources of information used) the loss it Incurred in making any such purchase. These indemnities constitute a separate and independent obligation from the Issuers' and the Guarantors' other obligations, will give rise to a separate and independent cause of action, will apply irrespective of any waiver granted by any Holder of a Note or the Trustee (other than a waiver of the indemnities set out herein) and will continue in full force and effect despite any other judgment, order, claim or proof for a liquidated amount in respect of any sum due under any Note or any Note Guarantee, or to the Trustee.

Except as otherwise specifically set forth herein, for purposes of determining compliance with any U.S. dollar-denominated restriction herein, the Dollar Equivalent amount for purposes hereof that is denominated in a non-U.S. dollar currency shall be calculated based on the relevant currency exchange rate in effect on the date such non-U.S. dollar amount is Incurred or made, as the case may be.

ARTICLE III

REDEMPTION

Section 3.01. Notices to Trustee and Paying Agents. If the Issuers elect to redeem Notes pursuant to Section 5 or Section 6 of the Notes, it shall notify, at least three Business Days before the publication, mailing or delivery of the notice of such redemption, the Trustee, the Registrar and the Paying Agent of the redemption date and the principal amount of Notes to be redeemed and the section of the Note pursuant to which the redemption will occur.

The Issuers shall give each notice to the Trustee, Registrar and the Paying Agent provided for in this Article III at least 10 days, but not more than 60 days, before the redemption date. In the case of a redemption pursuant to Section 5 of the Notes, such notice shall be accompanied by an Officer's Certificate from the Issuers to the effect that such redemption will comply with the conditions herein.

In the case of a redemption pursuant to Section 6 of the Notes, at least three Business Days prior to the publication, mailing or delivery of any notice of redemption of Notes pursuant to the foregoing, the Issuers will deliver to the Trustee (a) an Officer's Certificate stating that they are entitled to effect such redemption and setting forth a statement of facts showing that the conditions precedent to their right so to redeem have been satisfied and (b) an opinion of an independent tax counsel of recognized standing to the effect that the Issuers have been or will become obligated to pay Additional Amounts as a result of a Change in Tax Law. The Trustee will accept and shall be entitled to rely on such Officer's Certificate and opinion as sufficient evidence of the satisfaction of the conditions precedent described above, without further inquiry, in

which event it will be conclusive and binding on the Holders. Any such notice may be canceled at any time prior to notice of such redemption being published, mailed or delivered to any Holder and shall thereby be void and of no effect.

Section 3.02. Selection of Notes To Be Redeemed or Repurchased. If less than all of the Notes are to be redeemed at any time, the Paying Agent or the Registrar will select Notes for redemption in compliance with the requirements of the principal securities exchange, if any, on which the Notes are listed, and in compliance with the applicable procedures of DTC, or if the Notes are not so listed or such exchange prescribes no method of selection and the Notes are not held through DTC, or DTC prescribes no method of selection, on a *pro rata* basis by lot or by such other method as the Trustee deems fair and appropriate; *provided, however*, that no Definitive Registered Note of $150,000 in aggregate principal amount or less shall be redeemed in part and only Notes in integral multiples of $1,000 will be redeemed. None of the Trustee, the Paying Agent nor the Registrar will be liable for any selections made in accordance with this Section 3.02.

Section 3.03. Notice of Redemption. Subject to Section 3.03(ii) below, not less than 10 days but not more than 60 days before a date for redemption of Notes, the Issuers shall transmit to each Holder (with a copy to the Trustee and Registrar) a notice of redemption in accordance with Section 12.01; *provided, however*, that any notice of redemption provided for by Section 6 of the Notes shall not be given (a) earlier than 60 days prior to the earliest date on which the Payor would be obligated to make a payment of Additional Amounts and (b) unless at the time such notice is given, the obligation to pay such Additional Amounts remains in effect. In addition, for so long as the Notes are listed on the Irish Stock Exchange and the rules of the Irish Stock Exchange so require, the Issuers shall publish notice of redemption in a daily newspaper with general circulation in Ireland (which is expected to be the *Irish Times*) and in addition to such publication, not less than 10 nor more than 60 days prior to the redemption date, mail such notice to Holders by first-class mail, postage prepaid, at their respective addresses as they appear on the registration books of the Registrar. While in global form, notices to Holders may be delivered via DTC in lieu of notice via registered mail. Such notice of redemption may also be published on the website of the Irish Stock Exchange (*www.ise.ie*) in lieu of publication in *The Irish Times* so long as the rules of the Irish Stock Exchange are complied with.

(i) The notice shall identify the Notes to be redeemed and shall state:

A. the redemption date and the record date;

B. the redemption price, and, if applicable, the appropriate calculation of such redemption price and the amount of accrued interest to the redemption date;

C. the name and address of the Paying Agent;

D. that Notes called for redemption must be surrendered to the Paying Agent to collect the redemption price;

E. if fewer than all the outstanding Notes are to be redeemed, the certificate numbers and principal amounts of the particular Notes to be redeemed;

F. that, unless the Issuers default in making such redemption payment or the Paying Agent is prohibited from making such payment pursuant to the terms of this Indenture, interest on Notes (or portion thereof) called for redemption ceases to accrue on and after the redemption date;

G. the CUSIP or ISIN numbers, as applicable, if any, printed on the Notes being redeemed;

H. the paragraph of the Notes or section of this Indenture pursuant to which the Notes are being redeemed; and

I. that no representation is made as to the correctness or accuracy of the CUSIP or ISIN numbers, as applicable, if any, listed in such notice or printed on the Notes.

(ii) At the Issuers' request, the Trustee or the Paying Agent shall give the notice of redemption in the Issuers' name and at the Issuers' expense. In such event, the Issuers shall deliver to the Trustee and the Paying Agent, with a copy to the Trustee, at least 5 Business Days prior to the date on which notice of redemption is to be delivered to the Holders (unless a shorter period is satisfactory to the Trustee), an Officer's Certificate requesting that the Trustee give such notice and the information required and within the time periods specified by this Section.

Section 3.04. Effect of Notice of Redemption. Once notice of redemption is delivered, Notes called for redemption cease to accrue interest, and become due and payable, on the redemption date and at the redemption price stated in the notice; *provided*, *however*, that any redemption notice given in respect of the redemption referred to in Section 5 of the Notes may, at the Issuer's discretion, be subject to the satisfaction of one or more conditions precedent. If such redemption or notice is subject to satisfaction of one or more conditions precedent, such notice shall state that, in the Issuers' discretion, the redemption date may be delayed until such time as any or all such conditions shall be satisfied, or such redemption may not occur and such notice may be rescinded in the event that any or all such conditions shall not have been satisfied by the redemption date, or by the redemption date so delayed; *provided* that in no case shall the notice have been delivered less than 10 days or more than 60 days prior to the date on which such redemption (if any) occurs. In addition, the Issuers may provide in such notice that payment of the redemption price and performance of the Issuers' obligations with respect to such redemption may be performed by another Person. Upon surrender to

the Paying Agent, the Notes shall be paid at the redemption price stated in the notice, plus accrued interest, if any, to, but not including, the redemption date; *provided*, *however*, that if the redemption date is after a regular record date and on or prior to the interest payment date, the accrued interest shall be payable to the Holder of the redeemed Notes registered on the relevant record date. Failure to give notice or any defect in the notice to any Holder shall not affect the validity of the notice to any other Holder.

Section 3.05. Deposit of Redemption Price. No later than 11:00 a.m. New York time on the Business Day prior to each redemption date, the Issuers shall deposit with the Paying Agent (or, if an Issuer or a Restricted Subsidiary is the Paying Agent, shall segregate and hold in trust) money in immediately available funds (denominated in U.S. dollars) sufficient to pay the redemption or purchase price of and accrued interest on all Notes or portions thereof to be redeemed on that date other than Notes or portions of Notes called for redemption that have been delivered by the Issuers to the Registrar for cancellation. On and after the redemption date, interest shall cease to accrue on Notes or portions thereof called for redemption so long as the Issuers have deposited with the Paying Agent funds sufficient to pay the redemption or purchase price of, plus accrued and unpaid interest and Additional Amounts, if any, on, the Notes to be redeemed pursuant to this Indenture, unless the Paying Agent is prohibited from making such payment pursuant to the terms of this Indenture. For the avoidance of doubt, the Paying Agent and the Trustee shall be held harmless and have no liability with respect to payments or disbursements to be made by the Paying Agent and Trustee (i) for which payment instructions are not made or that are not otherwise deposited by the respective times set forth in this Section 3.05, and (ii) until they have confirmed receipt of funds sufficient to make the relevant payment. If the Issuers elect to redeem the Notes or portions thereof and request the Trustee to distribute to the Holders of the Notes any amounts deposited in trust (which, for the avoidance of doubt, will include accrued and unpaid interest to but excluding the date fixed for redemption) prior to the date fixed for redemption in accordance with Section 8.01, the applicable redemption notice will state that Holders of the Notes will receive such amounts deposited in trust prior to the date fixed for redemption and the relevant payment date.

Section 3.06. Notes Redeemed in Part. Subject to the terms hereof, upon surrender of a Note that is redeemed in part, the Issuers shall execute and the Trustee or an Authenticating Agent shall, upon receipt of an Authentication Order from the Issuers, authenticate for the Holder (at the Issuers' expense) a new Note equal in principal amount to the unredeemed portion of the Note surrendered.

ARTICLE IV

COVENANTS

Section 4.01. Limitation on Indebtedness.

(a) The Parent will not, and will not permit any of its Restricted Subsidiaries to, Incur any Indebtedness (including Acquired Indebtedness); *provided*, *however*, that the Parent and any Restricted Subsidiary may Incur Indebtedness (including

Acquired Indebtedness) if on the date of such Incurrence and after giving *pro forma* effect thereto (including *pro forma* application of the proceeds thereof), the Fixed Charge Coverage Ratio for the Parent and its Restricted Subsidiaries would have been at least 2.0 to 1.0.

(b) Section 4.01(a) will not prohibit the Incurrence of the following Indebtedness ("*Permitted Debt*"):

(i) Indebtedness Incurred pursuant to any Credit Facility (including in respect of letters of credit or bankers' acceptances issued or created thereunder), and any Refinancing Indebtedness in respect thereof and Guarantees in respect of such Indebtedness in a maximum aggregate principal amount at any time outstanding not to exceed the greater of (A) $200.0 million and (B) an amount such that after giving *pro forma* effect to the Incurrence of such Indebtedness and the application of the use of proceeds therefrom on such date, the Consolidated Senior Secured Net Leverage Ratio of the Parent and its Restricted Subsidiaries would not exceed 1.00 to 1.00; *plus* in the case of any refinancing of any Indebtedness permitted under this Section 4.01(b)(i) or any portion thereof, the aggregate amount of fees, underwriting discounts, premiums and other costs and expenses incurred in connection with such refinancing; *provided* that for purposes of determining the amount of Indebtedness that may be Incurred under this Section 4.01(b)(i), all Indebtedness Incurred under this Section 4.01(b)(i) shall be included in the amount of Consolidated Senior Secured Net Leverage used in the calculation of the Consolidated Senior Secured Net Leverage Ratio;

(ii) A. Guarantees by the Parent or any Restricted Subsidiary of Indebtedness of the Parent or any Restricted Subsidiary, so long as the Incurrence of such Indebtedness is permitted under the terms of this Indenture; or

B. without limiting the provisions of Section 4.03, Indebtedness arising by reason of any Lien granted by or applicable to any Person securing Indebtedness of the Parent or any Restricted Subsidiary so long as the Incurrence of such Indebtedness is permitted under the terms of this Indenture;

(iii) Indebtedness of the Parent owing to and held by any Restricted Subsidiary or Indebtedness of a Restricted Subsidiary owing to and held by the Parent or any Restricted Subsidiary; *provided*, *however*, that:

A. in the case of Indebtedness of the Parent, the US Co-Issuer or a Guarantor owing to and held by any Restricted Subsidiary that is not a Guarantor (or the US Co-Issuer) (except in respect of intercompany current liabilities Incurred in the ordinary

course of business in connection with cash management positions of the Parent and its Restricted Subsidiaries), such Indebtedness shall be unsecured and expressly subordinated in right of payment to the prior payment in full in cash of all obligations with respect to the Notes, in the case of the Issuers, and the respective Note Guarantee, in the case of a Guarantor; and

B. (i) any subsequent issuance or transfer of Capital Stock or any other event which results in any such Indebtedness being beneficially held by a Person other than the Parent or a Restricted Subsidiary; and (ii) any sale or other transfer of any such Indebtedness to a Person other than the Parent or a Restricted Subsidiary, shall be deemed, in each case, to constitute an Incurrence of such Indebtedness not permitted by this Section 4.01(b)(iii) by the Parent or such Restricted Subsidiary, as the case may be;

(iv) (A) Indebtedness represented by the Notes (other than any Additional Notes) outstanding on the Issue Date and the related Note Guarantees, (B) any Indebtedness (other than Indebtedness Incurred under the Secured Credit Facility and Indebtedness described in Section 4.01(b)(iii)) outstanding on the Issue Date after giving effect to the Refinancing, (C) Refinancing Indebtedness Incurred in respect of any Indebtedness described in this Section 4.01(b)(iv) (other than clause (iv)(D)), Section 4.01(b)(v) or Incurred pursuant to Section 4.01(a), (D) Management Advances, (E) any loan or other instrument contributing the proceeds of the Notes and (F) any loan or other instrument contributing the proceeds of any Indebtedness Incurred in accordance with this Indenture;

(v) Indebtedness of any Person (i) outstanding on the date on which such Person becomes a Restricted Subsidiary or is merged, consolidated, amalgamated or otherwise combined with (including pursuant to any acquisition of assets and assumption of related liabilities) the Parent or any Restricted Subsidiary; or (ii) Incurred to provide all or a portion of the funds used to consummate the transaction or series of related transactions pursuant to which any Person became a Restricted Subsidiary or was otherwise acquired by the Parent or a Restricted Subsidiary; *provided*, *however*, with respect to this Section 4.01(b)(v), that at the time of such acquisition or other transaction either (x) the Parent would have been able to Incur $1.00 of additional Indebtedness pursuant to the Fixed Charge Coverage Ratio under Section 4.01(a) after giving *pro forma* effect to the relevant acquisition and the Incurrence of such Indebtedness pursuant to this Section 4.01(b)(v) or (y) the Fixed Charge Coverage Ratio for the Parent and its Restricted Subsidiaries would not be

less than it was immediately prior to giving effect to such acquisition or other transaction;

(vi) Indebtedness under Currency Agreements, Interest Rate Agreements and Commodity Hedging Agreements not for speculative purposes (as determined in good faith by the Board of Directors or an Officer of the Parent);

(vii) Indebtedness consisting of (A) Capitalized Lease Obligations, mortgage financings, Purchase Money Obligations or other financings, Incurred for the purpose of financing all or any part of the purchase price or cost of construction or improvement of property, plant or equipment used in a Similar Business or (B) Indebtedness otherwise Incurred to finance the purchase, lease, rental or cost of design, construction, installation or improvement of property (real or personal) or equipment that is used or useful in a Similar Business, whether through the direct purchase of assets or the Capital Stock of any Person owning such assets, and any Indebtedness which refinances, replaces or refunds such Indebtedness, in an aggregate outstanding principal amount which, when taken together with the principal amount of all other Indebtedness Incurred pursuant to this Section 4.01(b)(vii) and then outstanding, will not exceed at any time outstanding the greater of (i) $15.0 million and (ii) 1.0% of Consolidated Net Tangible Assets;

(viii) Indebtedness in respect of (A) workers' compensation claims, self-insurance obligations, performance, indemnity, surety, judgment, appeal, advance payment, customs, VAT or other tax or other guarantees or other similar bonds, instruments or obligations and completion guarantees and warranties provided by the Parent or a Restricted Subsidiary or relating to liabilities, obligations or guarantees Incurred in the ordinary course of business or in respect of any governmental requirement, (B) letters of credit, bankers' acceptances, guarantees or other similar instruments or obligations issued or relating to liabilities or obligations Incurred in the ordinary course of business or in respect of any governmental requirement; *provided*, *however*, that upon the drawing of such letters of credit or other similar instruments, the obligations are reimbursed within 30 days following such drawing, (C) the financing of insurance premiums in the ordinary course of business and (D) any customary treasury or cash management services, including treasury, depository, overdraft, credit card processing, credit or debit card, purchase card, electronic funds transfer, the collection of cheques and direct debits, cash pooling and other cash management arrangements, in each case, in the ordinary course of business;

(ix) Indebtedness arising from agreements providing for customary guarantees, indemnification, obligations in respect of earnouts or other adjustments of purchase price or, in each case, similar obligations,

in each case, Incurred or assumed in connection with the acquisition or disposition of any business or assets or Person or any Capital Stock of a Subsidiary (other than Guarantees of Indebtedness Incurred by any Person acquiring or disposing of such business or assets or such Subsidiary for the purpose of financing such acquisition or disposition); *provided* that, in the case of a disposition, the maximum liability of the Parent and its Restricted Subsidiaries in respect of all such Indebtedness shall at no time exceed the gross proceeds, including the fair market value of non-cash proceeds (measured at the time received and without giving effect to any subsequent changes in value), actually received by the Parent and its Restricted Subsidiaries in connection with such disposition;

(x) (A) Indebtedness arising from the honoring by a bank or other financial institution of a check, draft or similar instrument drawn against insufficient funds in the ordinary course of business; *provided*, however, that such Indebtedness is extinguished within 30 Business Days of Incurrence;

(B) customer deposits and advance payments received in the ordinary course of business from customers for goods or services purchased in the ordinary course of business;

(C) Indebtedness owed on a short-term basis of no longer than 30 days to banks and other financial institutions Incurred in the ordinary course of business of the Parent and its Restricted Subsidiaries with such banks or financial institutions that arises in connection with ordinary banking arrangements to manage cash balances of the Parent and its Restricted Subsidiaries; and

(D) Indebtedness Incurred by a Restricted Subsidiary in connection with bankers' acceptances, discounted bills of exchange or the discounting or factoring of receivables for credit management of bad debt purposes, in each case Incurred or undertaken in the ordinary course of business;

(xi) Indebtedness in an aggregate outstanding principal amount which, when taken together with any Refinancing Indebtedness in respect thereof and the principal amount of all other Indebtedness Incurred pursuant to this Section 4.01(b)(xi) and then outstanding, will not exceed the greater of (i) $25.0 million and (ii) 1.5% of Consolidated Net Tangible Assets;

(xii) Indebtedness under daylight borrowing facilities Incurred in connection with any refinancing of Indebtedness (including by way of set-off or exchange) so long as any such Indebtedness is repaid within three days of the date on which such Indebtedness is Incurred;

(xiii) Indebtedness Incurred under any Qualified Securitization Financing;

(xiv) Indebtedness in respect of any letters of credit, indemnities, guarantees or other undertakings in connection with environmental assurances, reclamation or rehabilitation operations; and

(xv) Indebtedness in an aggregate outstanding principal amount which, when taken together with any Refinancing Indebtedness in respect thereof and the principal amount of all other Indebtedness Incurred pursuant to this Section 4.01(b)(xv) and then outstanding, will not exceed $30.0 million; *provided* that all such Indebtedness Incurred pursuant to this Section 4.01(b)(xv) (A) is Incurred by the Permitted Joint Venture; (B) is not Guaranteed, in whole or in part, by the Parent or any Restricted Subsidiary of the Parent other than the Permitted Joint Venture; (C) is not recourse to, and does not obligate, the Parent or any Restricted Subsidiary of the Parent (other than the Permitted Joint Venture) in any way; and (D) does not subject any property or asset of the Parent or any Restricted Subsidiary of the Parent (other than the Permitted Joint Venture) to the satisfaction thereof, directly or indirectly, contingently or otherwise, except, with respect to the foregoing clauses (C) and (D), in connection with and for (i) Liens on the Capital Stock of the Permitted Joint Venture or (ii) the ability to be converted into or exchanged for Capital Stock of the Permitted Joint Venture.

(c) Notwithstanding the foregoing, the aggregate principal amount of Indebtedness Incurred by Restricted Subsidiaries that are not Guarantors or an Issuer pursuant to Section 4.01(a) and Section 4.01(b)(xi) at any time outstanding shall not exceed the greater of (i) $50.0 million and (ii) 3.0% of Consolidated Net Tangible Assets at any time.

(d) For purposes of determining compliance with, and the outstanding principal amount of any particular Indebtedness Incurred pursuant to and in compliance with, this Section 4.01:

(i) in the event that Indebtedness meets the criteria of more than one of the types of Indebtedness described in Section 4.01(a) and Section 4.01(b), the Parent, in its sole discretion, will classify, and may from time to time reclassify, such item of Indebtedness and only be required to include the amount and type of such Indebtedness in one of the clauses under Section 4.01(a) and Section 4.01(b);

(ii) all Indebtedness outstanding on the Issue Date under the Secured Credit Facility shall be deemed initially Incurred under Section 4.01(b)(i) and not Section 4.01(a) or Section 4.01(b)(iv)(B) and may not be reclassified;

(iii) Guarantees of, or obligations in respect of letters of credit, bankers' acceptances or other similar instruments or any similar "parallel debt" obligations relating to, or Liens securing, Indebtedness that is otherwise included in the determination of a particular amount of Indebtedness shall not be included;

(iv) if obligations in respect of letters of credit, bankers' acceptances or other similar instruments are Incurred pursuant to any Credit Facility and are being treated as Incurred pursuant to clause (i), (vii) or (xi) of Section 4.01(b) or Section 4.01(a) and the letters of credit, bankers' acceptances or other similar instruments relate to other Indebtedness, then such other Indebtedness shall not be included;

(v) the principal amount of any Disqualified Stock of the Parent or a Restricted Subsidiary, or Preferred Stock of a Restricted Subsidiary, will be equal to the greater of the maximum mandatory redemption or repurchase price (not including, in either case, any redemption or repurchase premium) or the liquidation preference thereof;

(vi) Indebtedness permitted by this Section 4.01 need not be permitted solely by reference to one provision permitting such Indebtedness but may be permitted in part by one such provision and in part by one or more other provisions of this Section 4.01 permitting such Indebtedness; and

(vii) the amount of Indebtedness issued at a price that is less than the principal amount thereof will be equal to the amount of the liability in respect thereof determined on the basis of IFRS.

(e) Accrual of interest, accrual of dividends, the accretion of accreted value, the accretion or amortization of original issue discount, the payment of interest in the form of additional Indebtedness, the payment of dividends in the form of additional shares of Preferred Stock or Disqualified Stock or the reclassification of commitments or obligations not treated as Indebtedness due to a change in IFRS will not be deemed to be an Incurrence of Indebtedness for purposes of this Section 4.01. Except as otherwise specified, the amount of any Indebtedness outstanding as of any date shall be (a) the accreted value thereof in the case of any Indebtedness issued with original issue discount and (b) the principal amount, or liquidation preference thereof, in the case of any other Indebtedness.

(f) If at any time an Unrestricted Subsidiary becomes a Restricted Subsidiary, any Indebtedness of such Subsidiary shall be deemed to be Incurred by a Restricted Subsidiary as of such date (and, if such Indebtedness is not permitted to be Incurred as of such date under this Section 4.01, the Issuers shall be in Default of this Section 4.01).

(g) For purposes of determining compliance with any U.S. dollar-denominated restriction on the Incurrence of Indebtedness, the Dollar Equivalent of the principal amount of Indebtedness denominated in another currency shall be calculated based on the relevant currency exchange rate in effect on the date such Indebtedness was Incurred, in the case of term Indebtedness, or, at the option of the Parent, first committed, in the case of Indebtedness Incurred under a revolving credit facility; *provided* that (a) if such Indebtedness is Incurred to refinance other Indebtedness denominated in a currency other than the U.S. dollar, and such refinancing would cause the applicable U.S. dollar-denominated restriction to be exceeded if calculated at the relevant currency exchange rate in effect on the date of such refinancing, such U.S. dollar-denominated restriction shall be deemed not to have been exceeded so long as the principal amount of such Refinancing Indebtedness does not exceed the amount set forth in clause (2) of the definition of Refinancing Indebtedness; (b) the Dollar Equivalent of the principal amount of any such Indebtedness outstanding on the Issue Date shall be calculated based on the relevant currency exchange rate in effect on the Issue Date; and (c) if any such Indebtedness that is denominated in a different currency is subject to a Currency Agreement (with respect to the U.S. dollar) covering principal amounts payable on such Indebtedness, the amount of such Indebtedness expressed in U.S. dollars will be adjusted to take into account the effect of such agreement.

(h) Notwithstanding any other provision of this Section 4.01, the maximum amount of Indebtedness that the Parent or a Restricted Subsidiary may Incur pursuant to this Section 4.01 shall not be deemed to be exceeded solely as a result of fluctuations in the exchange rate of currencies. The principal amount of any Indebtedness Incurred to refinance other Indebtedness, if Incurred in a different currency from the Indebtedness being refinanced, shall be calculated based on the currency exchange rate applicable to the currencies in which such Refinancing Indebtedness is denominated that is in effect on the date of such refinancing.

(i) Neither the Issuers nor any Guarantor will Incur any Indebtedness (including Permitted Debt) that is contractually subordinated in right of payment to any other Indebtedness of the Issuers or any Guarantor unless such Indebtedness is also contractually subordinated in right of payment to the Notes and the applicable Note Guarantee on substantially identical terms; *provided*, *however*, that no Indebtedness will be deemed to be contractually subordinated in right of payment to any other Indebtedness of the Issuers or any Guarantor solely by virtue of being unguaranteed or unsecured or by virtue of being secured with different collateral or by virtue of being secured on a junior priority basis or by virtue of the application of waterfall or other payment ordering provisions affecting different tranches of Indebtedness.

Section 4.02. Limitation on Restricted Payments.

(a) The Parent will not, and will not permit any of its Restricted Subsidiaries, directly or indirectly, to:

(i) declare or pay any dividend or make any other payment or distribution on or in respect of the Parent's or any Restricted Subsidiary's

Capital Stock (including any payment in connection with any merger or consolidation involving the Parent or any of its Restricted Subsidiaries) except:

A. dividends or distributions payable in Capital Stock of the Parent (other than Disqualified Stock) or in options, warrants or other rights to purchase such Capital Stock of the Parent; and

B. dividends or distributions payable to the Parent or a Restricted Subsidiary (and, in the case of any such Restricted Subsidiary making such dividend or distribution, to holders of its Capital Stock other than the Parent or another Restricted Subsidiary on no more than a *pro rata* basis, measured by value);

(ii) purchase, redeem, retire or otherwise acquire for value any Capital Stock of the Parent or any direct or indirect Parent Holdco held by Persons other than the Parent or a Restricted Subsidiary (other than in exchange for Capital Stock of the Parent (other than Disqualified Stock));

(iii) make any principal payment on, or purchase, repurchase, redeem, defease or otherwise acquire or retire for value, prior to scheduled maturity, scheduled repayment or scheduled sinking fund payment, any Subordinated Indebtedness (other than (a) any such payment, purchase, repurchase, redemption, defeasance or other acquisition or retirement or in anticipation of satisfying a sinking fund obligation, principal installment or final maturity, in each case, due within one year of the date of payment, purchase, repurchase, redemption, defeasance or other acquisition or retirement and (b) any Indebtedness Incurred pursuant to Section 4.01(b)(iii)); or

(iv) make any Restricted Investment in any Person,

(any such dividend, distribution, payment, purchase, redemption, repurchase, defeasance, other acquisition, retirement or Restricted Investment referred to in clauses (i) through (iv) of this Section 4.02(a) are referred to herein as a "*Restricted Payment*"), if at the time the Parent or such Restricted Subsidiary makes such Restricted Payment:

A. a Default shall have occurred and be continuing (or would result immediately thereafter therefrom);

B. the Parent is not able to Incur an additional $1.00 of Indebtedness pursuant to Section 4.01(a) after giving effect, on a *pro forma* basis, to such Restricted Payment; or

C. the aggregate amount of such Restricted Payment and all other Restricted Payments made subsequent to the Issue

Date (and not returned or rescinded) (including Permitted Payments permitted below by clauses (vi), (x) and (xiv) of Section 4.02(c), but excluding all other Restricted Payments permitted by Section 4.02(c)) would exceed the sum of (without duplication):

(1) 50% of Consolidated Net Income for the period (treated as one accounting period) from January 1, 2017 to the end of the most recent fiscal quarter ending prior to the date of such Restricted Payment for which internal consolidated financial statements of the Parent are available (or, in the case such Consolidated Net Income is a deficit, minus 100% of such deficit);

(2) 100% of the aggregate Net Cash Proceeds, and the fair market value (as determined in accordance with Section 4.02(b)) of property or assets or marketable securities, received by the Parent from the issue or sale of its Capital Stock (other than Disqualified Stock) subsequent to the Issue Date or otherwise contributed to the equity (other than through the issuance of Disqualified Stock) of the Parent subsequent to the Issue Date (other than (v) Capital Stock sold to a Subsidiary of the Parent, (w) Net Cash Proceeds or property or assets or marketable securities received from an issuance or sale of such Capital Stock to a Restricted Subsidiary or an employee stock ownership plan or trust established by the Parent or any Subsidiary of the Parent for the benefit of its employees to the extent funded by the Parent or any Restricted Subsidiary, (x) Net Cash Proceeds or property or assets or marketable securities to the extent that any Restricted Payment has been made from such proceeds in reliance on Section 4.02(c)(i) or Section 4.02(c)(vi) and (y) Excluded Contributions);

(3) 100% of the aggregate Net Cash Proceeds, and the fair market value (as determined in accordance with Section 4.02(b)) of property or assets or marketable securities, received by the Parent or any Restricted Subsidiary from the issuance or sale (other than to the Parent or a Restricted Subsidiary or an employee stock ownership plan or trust established by the Parent or any Subsidiary of the Parent for the benefit of its employees to the extent funded by the Parent or any Restricted Subsidiary) by the Parent or any Restricted Subsidiary subsequent to the Issue Date of any Indebtedness that has been converted into or exchanged for Capital Stock of the

Parent (other than Disqualified Stock) (plus the amount of any cash, and the fair market value (as determined in accordance with Section 4.02(b)) of property or assets or marketable securities, received by the Parent or any Restricted Subsidiary upon such conversion or exchange) but excluding (w) Disqualified Stock or Indebtedness issued or sold to a Subsidiary of the Parent, (x) Net Cash Proceeds to the extent that any Restricted Payment has been made from such proceeds in reliance on Section 4.02(c)(i) or Section 4.02(c)(vi), and (y) Excluded Contributions;

(4) 100% of the aggregate Net Available Cash, and the fair market value (as determined in accordance with Section 4.02(b)) of property or assets or marketable securities, received by the Parent or any Restricted Subsidiary (other than to the Parent or a Restricted Subsidiary or an employee stock ownership plan or trust established by the Parent or any Subsidiary of the Parent for the benefit of its employees to the extent funded by the Parent or any Restricted Subsidiary) from the disposition of any Unrestricted Subsidiary or the disposition or repayment of any Investment constituting a Restricted Payment made after the Issue Date;

(5) in the case of the designation of an Unrestricted Subsidiary as a Restricted Subsidiary or all of the assets of such Unrestricted Subsidiary are transferred to the Parent or a Restricted Subsidiary, or the Unrestricted Subsidiary is merged or consolidated into the Parent or a Restricted Subsidiary, 100% of such amount received in cash and the fair market value of any property or marketable securities received by the Parent or any Restricted Subsidiary in respect of such redesignation, merger, consolidation or transfer of assets, excluding the amount of any Investment in such Unrestricted Subsidiary that constituted a Permitted Investment made pursuant to clause (11) of the definition of "Permitted Investment"; and

(6) 100% of any dividends or distributions received by the Parent or a Restricted Subsidiary after the Issue Date from an Unrestricted Subsidiary,

provided, *however*, that no amount will be included in Consolidated Net Income for purposes of Section 4.02(a)(C)(1) to the extent that it is (at the Issuers' option) included in Sections 4.02(a)(C)(4), 4.02(a)(C)(5) or 4.02(a)(C)(6).

(b) The fair market value of property or assets other than cash covered by Section 4.02(a) shall be the fair market value thereof as determined in good faith by an Officer of the Parent, or, if such fair market value exceeds the greater of (i) $10.0 million and (ii) 1.0% of Consolidated Net Tangible Assets, by the Board of Directors.

(c) The foregoing provisions will not prohibit any of the following (collectively, "*Permitted Payments*"):

(i) any Restricted Payment made by exchange (including any such exchange pursuant to the exercise of a conversion right or privilege in connection with which cash is paid in lieu of the issuance of fractional shares) for, or out of the proceeds of the substantially concurrent sale (other than to a Subsidiary of the Parent) of, Capital Stock of the Parent (other than Disqualified Stock or an Excluded Contribution) or a substantially concurrent contribution to the equity (other than through the issuance of Disqualified Stock or through an Excluded Contribution) of the Parent; *provided*, *however*, that to the extent so applied, the Net Cash Proceeds, or fair market value (as determined in accordance with Section 4.02(b)) of property or assets or of marketable securities, from such sale of Capital Stock or such contribution will be excluded from Section 4.02(a)(C)(2);

(ii) any purchase, repurchase, redemption, defeasance or other acquisition or retirement of Subordinated Indebtedness made by exchange for, or out of the proceeds of the substantially concurrent sale of, Refinancing Indebtedness permitted to be Incurred pursuant to Section 4.01;

(iii) any purchase, repurchase, redemption, defeasance or other acquisition or retirement of Preferred Stock of the Parent or a Restricted Subsidiary made by exchange for or out of the proceeds of the substantially concurrent sale of Preferred Stock of the Parent or a Restricted Subsidiary, as the case may be, that, in each case, is permitted to be Incurred pursuant to Section 4.01, and that in each case, constitutes Refinancing Indebtedness;

(iv) any purchase, repurchase, redemption, defeasance or other acquisition or retirement of Subordinated Indebtedness:

A. (i) from Net Available Cash to the extent permitted pursuant to Section 4.05, but only if the Parent shall have first complied with Section 4.05 and purchased all Notes tendered pursuant to any offer to repurchase all the Notes required thereby, prior to purchasing, repurchasing, redeeming, defeasing or otherwise acquiring or retiring such Subordinated Indebtedness and (ii) at a purchase price not greater than 100% of the principal amount of such Subordinated Indebtedness plus accrued and

unpaid interest;

B. following the occurrence of a Change of Control (or other similar event described therein as a "change of control"), but only (i) if the Parent shall have first complied with Section 4.14 and purchased all Notes tendered pursuant to the offer to repurchase all the Notes required thereby, prior to purchasing, repurchasing, redeeming, defeasing or otherwise acquiring or retiring such Subordinated Indebtedness and (ii) at a purchase price not greater than 101% of the principal amount of such Subordinated Indebtedness plus accrued and unpaid interest; or

C. (i) consisting of Acquired Indebtedness (other than Indebtedness Incurred (A) to provide all or any portion of the funds utilized to consummate the transaction or series of related transactions pursuant to which such Person became a Restricted Subsidiary or was otherwise acquired by the Parent or a Restricted Subsidiary or (B) otherwise in connection with or contemplation of such acquisition) and (ii) at a purchase price not greater than 100% of the principal amount of such Subordinated Indebtedness plus accrued and unpaid interest and any premium required by the terms of any Acquired Indebtedness;

(v) any dividends paid within 60 days after the date of declaration if at such date of declaration such dividend would have complied with this Section 4.02;

(vi) the purchase, repurchase, redemption, defeasance or other acquisition, cancellation or retirement for value of Capital Stock of the Parent or any Restricted Subsidiary (including any options, warrants or other rights in respect thereof) and loans, advances, dividends or distributions by the Parent to any Parent Holdco to purchase, repurchase, redeem, defease or otherwise acquire, cancel or retire for value Capital Stock of the Parent or any Restricted Subsidiary (including any options, warrants or other rights in respect thereof), or payments to purchase, repurchase, redeem, defease or otherwise acquire, cancel or retire for value Capital Stock of the Parent, any Restricted Subsidiary or any Parent Holdco (including any options, warrants or other rights in respect thereof), in each case from Management Investors or directors of the Parent or its Subsidiaries; *provided* that such payments, loans, advances, dividends or distributions do not exceed an amount (net of repayments of any such loans or advances) equal to (1) $10.0 million plus $1.0 million multiplied by the number of calendar years that have commenced since the Issue Date plus (2) the Net Cash Proceeds received by the Parent or its Restricted Subsidiaries since the Issue Date (including through receipt of proceeds from the issuance or sale of its Capital Stock to a Parent Holdco) from, or as a contribution to the equity (in each case under this Section

4.02(c)(vi), other than through the issuance of Disqualified Stock) of the Parent from, the issuance or sale to Management Investors or directors of the Parent or its Subsidiaries of Capital Stock (including any options, warrants or other rights in respect thereof), to the extent such Net Cash Proceeds have not otherwise been designated as Excluded Contributions and are not included in any calculation under Section 4.02(a)(C)(2);

(vii) the declaration and payment of dividends to holders of any class or series of Disqualified Stock, or of any Preferred Stock of a Restricted Subsidiary, Incurred in accordance with the terms of Section 4.01;

(viii) purchases, repurchases, redemptions, defeasances or other acquisitions or retirements of Capital Stock deemed to occur upon the exercise of stock options, warrants or other rights in respect thereof if such Capital Stock represents a portion of the exercise price thereof;

(ix) dividends, loans, advances or distributions to any Parent Holdco or other payments by the Parent or any Restricted Subsidiary in amounts equal to (without duplication):

A. the amounts required for any Parent Holdco to pay any Related Taxes; or

B. the amounts constituting or to be used for purposes of making payments (i) of fees and expenses in connection with the Refinancing or disclosed in the Offering Memorandum or (ii) to the extent specified in Sections 4.06(b)(ii), 4.06(b)(iii), 4.06(b)(v) and 4.06(b)(vii);

(x) so long as no Default or Event of Default has occurred and is continuing (or would result therefrom), (a) Restricted Payments in an aggregate amount outstanding at any time not to exceed $15.0 million and (b) following completion of the Spanish Hydro-electric Sale and the occurrence of the first date as of which the Consolidated Leverage of the Parent and its Restricted Subsidiaries is at least $150.0 million less than the Consolidated Leverage of the Parent and its Restricted Subsidiaries as of the Issue Date after giving *pro forma* effect to the Refinancing, additional Restricted Payments in an aggregate amount outstanding at any time not to exceed $45.0 million;

(xi) payments by the Parent, or loans, advances, dividends or distributions to any Parent Holdco to make payments, to holders of Capital Stock of the Parent or any Parent Holdco in lieu of the issuance of fractional shares of such Capital Stock; *provided*, *however*, that any such payment, loan, advance, dividend or distribution shall not be for the purpose of evading any limitation of this Section 4.02 or otherwise to

facilitate any dividend or other return of capital to the holders of such Capital Stock (as determined in good faith by the Board of Directors of the Parent);

(xii) Restricted Payments in an aggregate amount outstanding at any time not to exceed the aggregate cash amount of Excluded Contributions, or consisting of non-cash Excluded Contributions, or Investments in exchange for or using as consideration Investments previously made under this Section 4.02(c)(xii);

(xiii) dividends or other distributions of Capital Stock, Indebtedness or other securities of Unrestricted Subsidiaries;

(xiv) so long as no Default or Event of Default has occurred and is continuing (or would result from), any Restricted Payment; *provided* that the Consolidated Net Leverage Ratio for the Parent and its Restricted Subsidiaries does not exceed 1.25 to 1.0 on a *pro forma* basis after giving effect to any such Restricted Payment;

(xv) the payment of any Securitization Fees and purchases of Securitization Assets and related assets pursuant to a Securitization Repurchase Obligation in connection with a Qualified Securitization Financing; and

(xvi) payments made in connection with the use of proceeds from the offering of the Notes as disclosed in the Offering Memorandum.

(d) The amount of all Restricted Payments (other than cash) shall be the fair market value on the date of such Restricted Payment of the asset(s) or securities proposed to be paid, transferred or issued by the Parent or such Restricted Subsidiary, as the case may be, pursuant to such Restricted Payment. The fair market value of any cash Restricted Payment shall be its face amount, and the fair market value of any non-cash Restricted Payment shall be determined conclusively by the Board of Directors of the Parent acting in good faith.

Section 4.03. Limitation on Liens. The Parent will not, and will not permit any Restricted Subsidiary to, directly or indirectly, create, Incur or suffer to exist any Lien upon any of its property or assets (including Capital Stock of a Restricted Subsidiary), whether owned on the Issue Date or acquired after that date, or any interest therein or any income or profits therefrom, which Lien is securing any Indebtedness (such Lien, the "*Initial Lien*"), except (1) Permitted Liens or (2) Liens on property or assets that are not Permitted Liens if the Notes and this Indenture (or a Note Guarantee in the case of Liens of a Guarantor) are directly secured equally and ratably with, or prior to, the Indebtedness secured by such Initial Lien for so long as such Indebtedness is so secured.

Any such Lien created in favor of the Notes will be automatically and unconditionally released and discharged upon the release and discharge of the Initial Lien to which it relates.

Section 4.04. Limitation on Restrictions on Distributions from Restricted Subsidiaries.

(a) The Issuers will not, and will not permit any Restricted Subsidiary to, create or otherwise cause or permit to exist or become effective any consensual encumbrance or consensual restriction on the ability of any Restricted Subsidiary to:

(i) pay dividends or make any other distributions in cash or otherwise on its Capital Stock or pay any Indebtedness or other obligations owed to the Issuers or any Restricted Subsidiary, or with respect to any other interest or participation in, or measured by, its profits;

(ii) make any loans or advances to the Issuers or any Restricted Subsidiary; or

(iii) sell, lease or transfer any of its property or assets to the Issuers or any Restricted Subsidiary,

provided that (x) the priority of any Preferred Stock in receiving dividends or liquidating distributions prior to dividends or liquidating distributions being paid on common stock and (y) the subordination of (including the application of any standstill requirements to) loans or advances made to the Parent or any Restricted Subsidiary to other Indebtedness Incurred by the Parent or any Restricted Subsidiary shall not be deemed to constitute such an encumbrance or restriction.

(b) The provisions of Section 4.04(a) will not prohibit:

(i) any encumbrance or restriction pursuant to (a) any Credit Facility (including the Secured Credit Facility) or (b) any other agreement or instrument, in each case, in effect at or entered into on the Issue Date;

(ii) any encumbrance or restriction pursuant to an agreement or instrument of a Person or relating to any Capital Stock or Indebtedness of a Person, entered into on or before the date on which such Person was acquired by or merged, consolidated or otherwise combined with or into the Parent or any Restricted Subsidiary, or on which such agreement or instrument is assumed by the Parent or any Restricted Subsidiary in connection with an acquisition of assets (other than Capital Stock or Indebtedness Incurred as consideration in, or to provide all or any portion of the funds utilized to consummate, the transaction or series of related transactions pursuant to which such Person became a Restricted Subsidiary or was acquired by the Parent or was merged, consolidated or otherwise combined with or into the Parent or any Restricted Subsidiary

entered into or in connection with such transaction) and outstanding on such date; *provided* that, for the purposes of this Section 4.04(b)(ii), if another Person is the Successor Company (as defined in Section 5.01(a)(i)), any Subsidiary thereof or agreement or instrument of such Person or any such Subsidiary shall be deemed acquired or assumed by the Parent or any Restricted Subsidiary when such Person becomes the Successor Company;

(iii) any encumbrance or restriction pursuant to an agreement or instrument effecting a refinancing of Indebtedness Incurred pursuant to, or that otherwise refinances, an agreement or instrument referred to in Section 4.04(b)(i), Section 4.04(b)(ii) or this Section 4.04(b)(iii) (an "*Initial Agreement*") or contained in any amendment, supplement or other modification to an agreement referred to in Section 4.04(b)(i), Section 4.04(b)(ii) or this Section 4.04(b)(iii); *provided*, *however*, that the encumbrances and restrictions with respect to such Restricted Subsidiary contained in any such agreement or instrument are no less favorable in any material respect to the Holders taken as a whole than the encumbrances and restrictions contained in the Initial Agreement or Initial Agreements to which such refinancing or amendment, supplement or other modification relates (as determined in good faith by the Board of Directors or an Officer of the Parent);

(iv) any encumbrance or restriction:

A. that restricts in a customary manner the subletting, assignment or transfer of any property or asset that is subject to a lease, license or similar contract, or the assignment or transfer of any lease, license or other contract;

B. contained in mortgages, charges, pledges or other security agreements permitted under this Indenture or securing Indebtedness of the Parent or a Restricted Subsidiary permitted under this Indenture to the extent such encumbrances or restrictions restrict the transfer of the property or assets subject to such mortgages, charges, pledges or other security agreements; or

C. pursuant to customary provisions restricting dispositions of real property interests set forth in any reciprocal easement agreements of the Parent or any Restricted Subsidiary;

(v) any encumbrance or restriction pursuant to Purchase Money Obligations and Capitalized Lease Obligations permitted under this Indenture, in each case, that impose encumbrances or restrictions on the property so acquired, or any encumbrance or restriction pursuant to a joint venture agreement that imposes restrictions on the distribution or transfer of the assets or Capital Stock of the joint venture;

(vi) any encumbrance or restriction with respect to a Restricted Subsidiary (or any of its property or assets) imposed pursuant to an agreement entered into for the direct or indirect sale or disposition to a Person of all or substantially all the Capital Stock or assets of such Restricted Subsidiary (or the property or assets that are subject to such restriction) pending the closing of such sale or disposition;

(vii) customary provisions in leases, licenses, joint venture agreements and other similar agreements and instruments entered into in the ordinary course of business;

(viii) encumbrances or restrictions arising or existing by reason of applicable law or any applicable rule, regulation or order, or required by any regulatory authority;

(ix) any encumbrance or restriction on cash or other deposits or net worth imposed by customers under agreements entered into in the ordinary course of business;

(x) any encumbrance or restriction pursuant to Currency Agreements, Interest Rate Agreements, Commodity Hedging Agreements or in connection with any Qualified Securitization Financing;

(xi) any encumbrance or restriction arising pursuant to an agreement or instrument relating to any Indebtedness permitted to be Incurred subsequent to the Issue Date pursuant to Section 4.01 if the encumbrances and restrictions contained in any such agreement or instrument taken as a whole are not materially less favorable to the Holders of the Notes than (i) the encumbrances and restrictions contained in the Secured Credit Facility, together with the security documents associated therewith, in each case, as in effect on the Issue Date or (ii) as is customary in comparable financings (as determined in good faith by the Board of Directors or an Officer of the Parent) or where the Parent determines that such encumbrance or restriction will not adversely affect, in any material respect, the Issuers' ability to make principal or interest payments on the Notes; or

(xii) any encumbrance or restriction existing by reason of any lien permitted under Section 4.03.

Section 4.05. Limitation on Sales of Assets and Subsidiary Stock

(a) The Parent will not, and will not permit any Restricted Subsidiary to, consummate any Asset Disposition unless:

(i) the consideration the Parent or such Restricted Subsidiary receives for such Asset Disposition is not less than the fair market value of the assets sold (as determined by the Parent's Board of Directors); and

(ii) at least 75% of the consideration the Parent or such Restricted Subsidiary receives in respect of such Asset Disposition consists of:

A. cash (including any Net Cash Proceeds received from the conversion within 180 days of such Asset Disposition of securities, notes or other obligations received in consideration of such Asset Disposition);

B. Cash Equivalents;

C. the assumption by the purchaser of (x) any liabilities recorded on the Parent's or such Restricted Subsidiary's balance sheet or the notes thereto (or, if Incurred since the date of the latest balance sheet, that would be recorded on the next balance sheet) (other than Subordinated Indebtedness), as a result of which neither the Parent nor any of the Restricted Subsidiaries remains obligated in respect of such liabilities or (y) Indebtedness of a Restricted Subsidiary that is no longer a Restricted Subsidiary as a result of such Asset Disposition, if the Parent and each other Restricted Subsidiary is released from any guarantee of such Indebtedness as a result of such Asset Disposition;

D. Replacement Assets;

E. any Capital Stock or assets of the kind referred to in clause (iv) or (vi) of Section 4.05(b);

F. consideration consisting of Indebtedness of the Issuers or any Guarantor received from Persons who are not the Parent or any Restricted Subsidiary, but only to the extent that such Indebtedness (i) has been extinguished by the Issuers or the applicable Guarantor and (ii) is not Subordinated Indebtedness of the Issuers or such Guarantor;

G. any Designated Non-Cash Consideration received by the Parent or any Restricted Subsidiary, having an aggregate fair market value, taken together with all other Designated Non-Cash Consideration received pursuant to this Section 4.05 that is at any one time outstanding, not to exceed the greater of (i) $25.0 million and (ii) 1.5% of Consolidated Net Tangible Assets (with the fair market value of each issue of Designated Non-Cash Consideration being measured at the time received and without giving effect to subsequent changes in value); or

H. a combination of the consideration specified in clauses (A)-(G) of this Section 4.05(a)(ii).

(b) If the Parent or any Restricted Subsidiary consummates an Asset Disposition, the Net Available Cash of the Asset Disposition, within 360 days (or 540 days in the circumstances described in Section 4.05(b)(viii)) of the later of (i) the date of the consummation of such Asset Disposition and (ii) the receipt of such Net Available Cash, may be used by the Parent or such Restricted Subsidiary to:

(i) (A) prepay, repay, purchase or redeem any Indebtedness Incurred under Section 4.01(b)(i) or any Refinancing Indebtedness in respect thereof; (B) unless included in clause (A) of this Section 4.05(b)(i), prepay, repay, purchase or redeem Pari Passu Indebtedness at a price of no more than 100% of the principal amount of such Indebtedness, plus accrued and unpaid interest to the date of such prepayment, repayment, purchase or redemption; *provided* that the Issuers shall prepay, repay, purchase or redeem Public Debt (other than the Notes) pursuant to clause (A) of this Section 4.05(b)(i) only if the Issuers make (at such time or in compliance with this Section 4.05) an offer to Holders to purchase their Notes in accordance with the provisions set forth below for an Asset Disposition Offer for an aggregate principal amount of Notes equal to the proportion that (x) the total aggregate principal amount of Notes outstanding bears to (y) the sum total aggregate principal amount of the Notes outstanding plus the total aggregate principal amount outstanding of such Public Debt (other than the Notes); (C) with respect to assets of a Restricted Subsidiary that is not an Issuer or Guarantor, prepay, repay, purchase or redeem any of its Indebtedness; or (D) prepay, repay, purchase or redeem any Indebtedness that is secured on assets that do not secure the Notes or Guarantees (and in each of clauses (A), (B), (C) and (D) of this Section 4.05(b)(i), other than Subordinated Indebtedness of the Issuers or a Guarantor or Indebtedness owed to the Parent or any Restricted Subsidiary);

(ii) purchase the Notes pursuant to an offer to all Holders of Notes at a purchase price in cash equal to at least 100% of the principal amount thereof, plus accrued and unpaid interest and Additional Amounts, if any, to, but not including, the date of purchase (subject to the right of Holders of record on the relevant record date to receive interest due on the relevant interest payment date) or redeem the Notes pursuant to the redemption provisions of this Indenture or by making an Asset Disposition Offer to all Holders of the Notes (in accordance with the procedures set out below);

(iii) invest in any Replacement Assets;

(iv) acquire all or substantially all of the assets of, or any Capital Stock of, another Similar Business, if, after giving effect to any such acquisition of Capital Stock, the Similar Business is or becomes a Restricted Subsidiary;

(v) make a capital expenditure;

(vi) acquire other assets (other than Capital Stock and cash or Cash Equivalents) that are used or useful in a Similar Business;

(vii) consummate any combination of the foregoing; or

(viii) enter into a binding commitment to apply the Net Available Cash pursuant to clause (i), (iii), (iv), (v) or (vi) of this Section 4.05(b) or a combination thereof; *provided* that, a binding commitment shall be treated as a permitted application of the Net Available Cash from the date of such commitment until the earlier of (x) the date on which such investment is consummated, (y) the 180th day following the expiration of the aforementioned 365 day period, if the investment has not been consummated by that date.

The amount of such Net Available Cash not so used as set forth in this Section 4.05(b) constitutes "*Excess Proceeds*". Pending the final application of any such Net Available Cash, the Parent and its Restricted Subsidiaries may temporarily reduce revolving credit borrowings or otherwise invest such Net Available Cash in any manner that is not prohibited by the terms of this Indenture.

(c) On the 361st day (or the 541st day if a binding commitment as described in Section 4.05(b)(viii) is entered into) after an Asset Disposition, or such earlier time if the Issuers elect, if the aggregate amount of Excess Proceeds exceeds $25.0 million, the Issuers will be required within 10 Business Days thereof to make an offer ("*Asset Disposition Offer*") to all Holders and, to the extent the Issuers elect, to all holders of other outstanding Pari Passu Indebtedness, to purchase the maximum principal amount of Notes and any such Pari Passu Indebtedness to which the Asset Disposition Offer applies that may be purchased out of the Excess Proceeds, at an offer price in respect of the Notes of no less than (and, in the case of any Pari Passu Indebtedness, an offer price of no more than) 100% of the principal amount of the Notes and 100% of the principal amount of Pari Passu Indebtedness, in each case, plus accrued and unpaid interest, if any, to, but not including, the date of purchase, in accordance with the procedures set forth in this Indenture or the agreements governing the Pari Passu Indebtedness, as applicable, in minimum denominations of $150,000 and in integral multiples of $1,000 in excess thereof in the case of the Notes.

(d) To the extent that the aggregate amount of Notes and Pari Passu Indebtedness so validly tendered and not properly withdrawn pursuant to an Asset Disposition Offer is less than the Excess Proceeds, the Parent and its Restricted Subsidiaries may use any remaining Excess Proceeds for general corporate purposes,

subject to other covenants contained in this Indenture. If the aggregate principal amount of the Notes surrendered in any Asset Disposition Offer by Holders and other Pari Passu Indebtedness surrendered by holders or lenders, collectively, exceeds the amount of Excess Proceeds, the Excess Proceeds shall be allocated among the Notes and Pari Passu Indebtedness to be repaid or purchased on a pro rata basis on the basis of the aggregate principal amount of tendered Notes and Pari Passu Indebtedness. For the purposes of calculating the principal amount of any such Indebtedness not denominated in U.S. dollars, such Indebtedness shall be calculated by converting any such principal amounts into their Dollar Equivalent determined as of a date selected by the Issuers that is within the Asset Disposition Offer Period (as defined below). Upon completion of any Asset Disposition Offer, the amount of Excess Proceeds shall be reset at zero.

(e) To the extent that any portion of Net Available Cash payable in respect of the Notes is denominated in a currency other than the currency in which the relevant Notes are denominated, the amount thereof payable in respect of such Notes shall not exceed the net amount of funds in the currency in which such Notes are denominated that is actually received by the Issuers upon converting such portion of the Net Available Cash into such currency.

(f) The Asset Disposition Offer, in so far as it relates to the Notes, will remain open for a period of not less than 20 Business Days following its commencement (the "*Asset Disposition Offer Period*"). No later than five Business Days after the termination of the Asset Disposition Offer Period (the "*Asset Disposition Purchase Date*"), the Issuers will purchase the principal amount of Notes and, to the extent they elect, Pari Passu Indebtedness required to be repaid or purchased by it pursuant to this Section 4.05 (the "*Asset Disposition Offer Amount*") or, if less than the Asset Disposition Offer Amount has been so validly tendered, all Notes and Pari Passu Indebtedness validly tendered in response to the Asset Disposition Offer.

(g) On or before the Asset Disposition Purchase Date, the Issuers will, to the extent lawful, accept for payment, on a pro rata basis to the extent necessary, the Asset Disposition Offer Amount of Notes and Pari Passu Indebtedness or portions of Notes and Pari Passu Indebtedness so validly tendered and not properly withdrawn pursuant to the Asset Disposition Offer, or if less than the Asset Disposition Offer Amount has been validly tendered and not properly withdrawn, all Notes and Pari Passu Indebtedness so validly tendered and not properly withdrawn and in minimum denominations of $150,000 and in integral multiples of $1,000 in excess thereof. The Issuers will deliver to the Trustee an Officer's Certificate stating that such Notes or portions thereof were accepted for payment by the Issuers in accordance with the terms of this Section 4.05. The Issuers or the Paying Agent, as the case may be, will promptly (but in any case not later than five Business Days after termination of the Asset Disposition Offer Period) mail or deliver to each tendering Holder an amount equal to the purchase price of the Notes so validly tendered and not properly withdrawn by such Holder, and accepted by the Issuers for purchase, and the Issuers will promptly issue a new Note (or amend the applicable Global Note), and the Trustee (or an authenticating agent), upon delivery of an Officer's Certificate from the Issuers, will authenticate and mail or deliver

(or cause to be transferred by book-entry) such new Note to such Holder, in a principal amount equal to any unpurchased portion of the Note surrendered; *provided* that each such new Note will be in a principal amount with a minimum denomination of $150,000. Any Note not so accepted will be promptly mailed or delivered (or transferred by book-entry) by the Issuers to the Holder thereof.

The Issuers will comply, to the extent applicable, with the requirements of Section 14(e) of the Exchange Act and any other securities laws or regulations in connection with the repurchase of Notes pursuant to this Indenture. To the extent that the provisions of any securities laws or regulations conflict with provisions of this Section 4.05, the Issuers will comply with the applicable securities laws and regulations and will not be deemed to have breached its obligations under this Indenture by virtue of such compliance.

Section 4.06. Limitation on Affiliate Transactions.

(a) The Parent will not, and will not permit any of its Restricted Subsidiaries to, directly or indirectly, enter into or conduct any transaction or series of related transactions (including the purchase, sale, lease or exchange of any property or the rendering of any service) with any Affiliate of the Parent (any such transaction or series of related transactions being an "*Affiliate Transaction*") involving aggregate value in excess of $5.0 million unless:

(i) the terms of such Affiliate Transaction taken as a whole are not materially less favorable to the Parent or such Restricted Subsidiary, as the case may be, than those that could be obtained in a comparable transaction at the time of such transaction or the execution of the agreement providing for such transaction in arm's-length dealings with a Person who is not such an Affiliate; and

(ii) in the event such Affiliate Transaction involves an aggregate value in excess of $25.0 million, the terms of such transaction or series of related transactions have been approved by a resolution of the majority of the disinterested members of the Board of Directors of the Parent resolving that such transaction complies with clause (i) of this Section 4.06(a).

(b) The provisions of Section 4.06(a) will not apply to:

(i) any Restricted Payment permitted to be made pursuant to Section 4.02, any Permitted Payments (other than pursuant to Section 4.02(c)(ix)(B)(ii)) or any Permitted Investment (other than Permitted Investments as defined in paragraphs (1)(b), (2), (11) and (15) of the definition thereof);

(ii) any purchase, issuance or sale of Capital Stock, options, other equity-related interests or other securities, or other payments, awards

or grants in cash, securities or otherwise pursuant to, or the funding of, or entering into, or maintenance of, any employment, consulting, collective bargaining or benefit plan, program, agreement or arrangement, related trust or other similar agreement and other compensation arrangements, options, warrants or other rights to purchase Capital Stock of the Parent, any Restricted Subsidiary or any Parent Holdco, restricted stock plans, long-term incentive plans, stock appreciation rights plans, participation plans or similar employee benefits or consultants' plans (including valuation, health, insurance, deferred compensation, severance, retirement, savings or similar plans, programs or arrangements) or indemnities provided on behalf of officers, employees, directors or consultants approved by the Board of Directors of the Parent, in each case in the ordinary course of business;

(iii) any Management Advances and any waiver or transaction with respect thereto;

(iv) any transaction between or among the Parent and any Restricted Subsidiary (or entity that becomes a Restricted Subsidiary as a result of such transaction), or between or among Restricted Subsidiaries;

(v) the payment of reasonable fees and reimbursement of expenses to, and customary indemnities (including under customary insurance policies) and employee benefit and pension expenses provided on behalf of, directors, officers, consultants or employees of the Parent, any Restricted Subsidiary or any Parent Holdco (whether directly or indirectly and including through any Person owned or controlled by any of such directors, officers or employees);

(vi) (a) the Refinancing, (b) the entry into and performance of obligations of the Parent or any of its Restricted Subsidiaries under the terms of any transaction pursuant to or contemplated by, and any payments pursuant to or for purposes of funding, any agreement or instrument in effect as of the Issue Date, as these agreements and instruments may be amended, modified, supplemented, extended, renewed, replaced or refinanced from time to time in accordance with the other terms of this Section 4.06 or to the extent not more disadvantageous to the Holders in any material respect, and (c) the entry into and performance of any registration rights or other listing agreement;

(vii) the execution, delivery and performance of, including any payment to be made under, any Tax Sharing Agreement or any arrangement pursuant to which the Parent or any of its Restricted Subsidiaries is required or permitted to file a consolidated tax return, or the formation and maintenance of any consolidated group for tax, accounting or cash pooling or management purposes in the ordinary course of business;

(viii) transactions with customers, clients, suppliers or purchasers or sellers of goods or services, in each case in the ordinary course of business, which are fair to the Parent or the relevant Restricted Subsidiary in the reasonable determination of the Board of Directors or an Officer of the Parent or the relevant Restricted Subsidiary, or are on terms no less favorable than those that could reasonably have been obtained at such time from an unaffiliated party;

(ix) any transaction in the ordinary course of business between or among the Parent or any Restricted Subsidiary and any Affiliate of the Parent or an Associate or similar entity that would constitute an Affiliate Transaction solely because the Parent or a Restricted Subsidiary or any Affiliate of the Parent or a Restricted Subsidiary or any Affiliate of any Permitted Holder owns an equity interest in or otherwise controls such Affiliate, Associate or similar entity;

(x) issuances or sales of Capital Stock (other than Disqualified Stock) of the Parent or options, warrants or other rights to acquire such Capital Stock;

(xi) payment of any Securitization Fees and purchases of Securitization Assets pursuant to a Securitization Repurchase Obligation as part of or in connection with a Qualified Securitization Financing; and

(xii) any participation in a public tender or exchange offers for securities or debt instruments issued by the Parent or any of its Subsidiaries that are conducted on arms' length terms and provide for the same price or exchange ratio, as the case may be, to all holders accepting such tender or exchange offer.

Section 4.07. [Reserved]

Section 4.08. Additional Note Guarantees.

(a) The Parent shall cause, as soon as is reasonably practicable after the Issue Date and in any event on or prior to the earlier of December 31, 2017 and the date falling 60 days after the earlier of (i) the date on which the Spanish Hydro-electric Sale is completed and (ii) the date on which the Spanish Hydro-electric Sale is terminated, either (x) NewCo (in the event that the Spanish Hydro-electric Sale is completed) or (y) FerroAtlántica, S.A. (in the event that the Spanish Hydro-electric Sale is terminated) to execute and deliver to the Trustee a supplemental indenture in the form attached to this Indenture pursuant to which such Restricted Subsidiary will provide a Note Guarantee, which Note Guarantee will be senior to or pari passu with all other Indebtedness of such Restricted Subsidiary.

(b) Notwithstanding anything to the contrary in this Section 4.08, no Restricted Subsidiary shall (x) Guarantee the Indebtedness outstanding under the Secured

Credit Facility, any Credit Facility replacing or refinancing the Secured Credit Facility or any other Public Debt, in each case of the Issuers or a Guarantor, or (y) Incur Indebtedness pursuant to Section 4.01(b)(i) or any Refinancing Indebtedness in respect thereof unless such Restricted Subsidiary is or becomes a Guarantor (or is the US Co-Issuer) on the date on which the Guarantee or such Indebtedness is Incurred and, if applicable, executes and delivers to the Trustee a supplemental indenture pursuant to which such Restricted Subsidiary will provide a Note Guarantee, which Note Guarantee will be senior to or pari passu with such Restricted Subsidiary's Guarantee or Indebtedness described in clauses (x) or (y) of this Section 4.08(b), respectively; *provided*, *however*, that such Restricted Subsidiary shall not be obligated to become a Guarantor to the extent and for so long as the Incurrence of such Note Guarantee could give rise to or result in: (1) any breach or violation of statutory limitations, corporate benefit, financial assistance, fraudulent preference, thin capitalization rules, capital maintenance rules, guidance and coordination rules or the laws rules or regulations (or analogous restriction) of any applicable jurisdiction; (2) any risk or liability for the officers, directors or (except in the case of a Restricted Subsidiary that is a partnership) shareholders of such Restricted Subsidiary (or, in the case of a Restricted Subsidiary that is a partnership, directors or shareholders of the partners of such partnership); or (3) any cost, expense, liability or obligation (including with respect to any Taxes) other than reasonable out of pocket expenses. At the option of the Parent, any Note Guarantee may contain limitations on Guarantor liability to the extent reasonably necessary.

(c) Note Guarantees shall be released as set forth under Section 10.06. In addition, a Note Guarantee of a future Guarantor may also be released at the option of the Parent if at the date of such release either (i) there is no Indebtedness of such Guarantor outstanding which was Incurred after the Issue Date and which could not have been Incurred in compliance with this Indenture if such Guarantor had not been designated as a Guarantor, or (ii) there is no Indebtedness of such Guarantor outstanding which was Incurred after the Issue Date and which could not have been Incurred in compliance with this Indenture as at the date of such release if such Guarantor were not designated as a Guarantor as at that date. The Trustee shall take all necessary actions requested by the Parent to effectuate any release of a Note Guarantee in accordance with these provisions, subject to customary protections and indemnifications.

Section 4.09. Reports.

(a) So long as any Notes are outstanding, the Parent will furnish to the Trustee the following reports (provided that, to the extent any reports are filed on the SEC's website, such reports shall be deemed to have been provided to the Trustee):

(i) within 120 days after the end of the Parent's fiscal year beginning with the fiscal year ended December 31, 2016, annual reports containing, to the extent applicable, the following information: (a) audited consolidated balance sheets of the Parent as of the end of the two most recent fiscal years and audited consolidated income statements and statements of cash flow of the Parent for the two most recent fiscal years, including complete footnotes to such financial statements and the report of

the independent auditors on the financial statements; (b) unaudited *pro forma* income statement information and balance sheet information of the Parent (which, for the avoidance of doubt, shall not include the provision of a full income statement or balance sheet to the extent not reasonably available), together with explanatory footnotes, for any material acquisitions, dispositions or recapitalizations that have occurred since the beginning of the most recently completed fiscal year; (c) an operating and financial review of the audited financial statements, including a discussion of the results of operations, financial condition, EBITDA, and liquidity and capital resources of the Parent (including a summary description of the Secured Credit Facility), and a discussion of material commitments and contingencies and critical accounting policies; (d) a summary description of the business and material affiliate transactions; (e) a description of material operational risk factors; and (f) a summary description of material recent developments;

(ii) within 60 days following the end of each fiscal quarter in each fiscal year of the Parent beginning with the fiscal quarter ending March 31, 2017, quarterly financial statements containing the following information: (a) an unaudited condensed consolidated balance sheet as of the end of such quarter and unaudited condensed statements of income and cash flow for the most recent quarter year-to-date period ending on the unaudited condensed balance sheet date, and the comparable prior year periods, together with condensed footnote disclosure; (b) unaudited *pro forma* income statement information and balance sheet information (which, for the avoidance of doubt, shall not include the provision of a full income statement or balance sheet to the extent not reasonably available), together with explanatory footnotes, for any material acquisitions, dispositions or recapitalizations that have occurred since the beginning of the relevant quarter; (c) an operating and financial review of the unaudited financial statements, including a discussion of the results of operations, financial condition, EBITDA and material changes in liquidity and capital resources, and a discussion of material changes not in the ordinary course of business in commitments and contingencies since the most recent report; and (d) material recent developments; and

(iii) promptly after the occurrence of any material acquisition, disposition or restructuring or any senior executive officer changes at the Company or change in auditors of the Company or any other material event that the Company or any of its Restricted Subsidiaries announces publicly, a report containing a description of such event.

In addition, the Parent shall furnish to the Holders and to prospective investors, upon the request of such parties, any information required to be delivered pursuant to Rule 144A(d)(4) under the Securities Act for so long as the Notes are not

freely transferable under the Exchange Act by persons who are not "affiliates" under the Securities Act.

The Parent shall also make available to Holders and prospective holders of the Notes copies of all reports furnished to the Trustee or the SEC on the Parent's website and if and so long as the Notes are listed on the Irish Stock Exchange and admitted to trading on the Global Exchange Market thereof and to the extent that the rules and regulations of the Irish Stock Exchange so require, by posting such reports on the official website of the Irish Stock Exchange (*www.ise.ie*).

All financial statement information shall be prepared in accordance with IFRS as in effect on the date of such report or financial statement (or otherwise on the basis of IFRS as then in effect) and on a consistent basis for the periods presented, except as may otherwise be described in such information; *provided*, *however*, that the reports set forth in clauses (i), (ii) and (iii) of this Section 4.09(a) may, in the event of a change in IFRS, present earlier periods on a basis that applied to such periods. No report need include separate financial statements for any Subsidiaries of the Parent or any disclosure with respect to the results of operations or any other financial or statistical disclosure not of a type included in the Offering Memorandum. In addition, the reports set forth above will not be required to contain any reconciliation to U.S. generally accepted accounting principles. For the purposes of this covenant, IFRS shall be deemed to be IFRS as in effect from time to time, without giving effect to the proviso in the definition thereof.

At any time that any of the Parent's subsidiaries are Unrestricted Subsidiaries and any such Unrestricted Subsidiary or a group of Unrestricted Subsidiaries, taken as a whole, constitutes a Significant Subsidiary of the Parent, then the annual financial information required pursuant to this Section 4.09(a) will include (i) a reasonably detailed presentation, either on the face of the financial statements or in the footnotes thereto, of the financial condition and results of operations of the Parent and its Restricted Subsidiaries separate from the financial condition and results of operations of the Unrestricted Subsidiaries of the Parent or (ii) stand-alone audited or unaudited financial statements, as the case may be, of such Unrestricted Subsidiary or Unrestricted Subsidiaries, together with an unaudited reconciliation to the financial information of the Parent and its Subsidiaries, which reconciliation shall include the following items: revenues, consolidated EBITDA, net income, cash, total assets, total debt, shareholder equity, capital expenditures and interest expense. At any time that any such Unrestricted Subsidiary or group of Unrestricted Subsidiaries, taken as a whole, constitutes a Materially Significant Subsidiary of the Parent, then the foregoing information shall also be included in the quarterly financial information required by this Section 4.09(a).

All reports provided pursuant to this Section 4.09 shall be made in the English language. So long as Notes are outstanding, the Parent will, in connection with delivery of the annual and quarterly reports required by clauses (i) and (ii) of this Section 4.09(a), hold a conference call to discuss such reports and the results of operations for the relevant reporting period.

While the Parent is subject to the reporting requirements of Section 13(a) or 15(d) of the Exchange Act, or elects to comply with such provisions on a voluntary basis, for so long as it continues to file with the SEC, within the time periods specified in clauses (i) and (ii) of this Section 4.09(a), annual reports required by Section 13(a) and quarterly reports containing information with a level of detail that is substantially comparable in all material respects to the reports on Form 6-K filed with the SEC on November 14, 2016, August 26, 2016 and May 19, 2016, the reporting requirements set forth in clauses (i) and (ii) of this Section 4.09(a) will be deemed satisfied. Upon complying with the foregoing requirement, the Parent will be deemed to have complied with this Section 4.09.

Delivery of any information, documents and reports to the Trustee pursuant to this Section 4.09 is for informational purposes only and the Trustee's receipt of such shall not constitute constructive notice of any information contained therein, including the Issuers' compliance with any of its covenants under this Indenture.

Section 4.10. Suspension of Covenants on Achievement of Investment Grade Status.

(a) If on any date following the Issue Date, the Notes have achieved Investment Grade Status and no Default or Event of Default has occurred and is continuing (a "*Suspension Event*"), then, beginning on that day and continuing until such time, if any, at which the Notes cease to have Investment Grade Status (the "*Reversion Date*"), Section 4.01, Section 4.02, Section 4.04, Section 4.05, Section 4.06, Section 4.08 and Section 5.01(a)(iii) of this Indenture and, in each case, any related default provision of this Indenture will cease to be effective and will not be applicable to the Parent and its Restricted Subsidiaries.

(b) Such sections and any related default provisions will again apply according to their terms from the first day on which a Suspension Event ceases to be in effect. Such sections will not, however, be of any effect with regard to actions of the Parent or any of its Restricted Subsidiaries properly taken during the continuance of the Suspension Event, and no action taken in respect of the suspended covenants prior to the Reversion Date will constitute a Default or Event of Default. Section 4.02 will be interpreted as if it has been in effect since the date of this Indenture but not during the continuance of the Suspension Event. On the Reversion Date, all Indebtedness Incurred during the continuance of the Suspension Event will be deemed to have been outstanding on the Issue Date, so that it is classified as permitted under Section 4.01(b)(iv)(B). In addition, the Parent or any of the Restricted Subsidiaries will be permitted, without causing a Default or Event of Default, to honor any contractual commitments or take actions in the future after any date on which the Notes cease to have an Investment Grade Status as long as the contractual commitments were entered into during the Suspension Event and not in anticipation of the Notes no longer having an Investment Grade Status. The Parent shall notify the Trustee that the conditions set forth in Section 4.10(a) have been satisfied or of any Reversion Date; *provided* that, no such notification shall be a condition for the suspension or reversion of the covenants described under this Section 4.10 to be effective and the Trustee shall not be obliged to notify the Holders of such event.

Section 4.11. [Reserved].

Section 4.12. Payment of Notes. The Issuers shall promptly pay the principal of and interest on the Notes on the dates and in the manner provided in the Notes and in this Indenture. Principal and interest shall be considered paid on the date due if on such date the Paying Agent holds in accordance with this Indenture money sufficient to pay all principal, premium, if any, and interest then due and the Paying Agent is not prohibited from paying such money to the Holders on that date pursuant to the terms of this Indenture.

Section 4.13. Withholding Taxes.

(a) All payments made by or on behalf of the Issuers or any Guarantor (each, including any successor entities of the Issuers or any Guarantor, as applicable, a "*Payor*") in respect of the Notes or with respect to any Guarantee, as applicable, will be made free and clear of and without withholding or deduction for, or on account of, any Taxes unless the withholding or deduction of such Taxes is then required by law. If any deduction or withholding for, or on account of, any Taxes imposed or levied by or on behalf of:

(i) any jurisdiction (other than the United States or any political subdivision or governmental authority thereof or therein having the power to tax) from or through which payment on any such Note is made, or any political subdivision or governmental authority thereof or therein having the power to tax; or

(ii) any other jurisdiction (other than the United States or any political subdivision or governmental authority thereof or therein having the power to tax) in which a Payor is incorporated, organized, engaged in business for tax purposes, or otherwise considered to be a resident for tax purposes, or any political subdivision or governmental authority thereof or therein having the power to tax (each of clause (i) and (ii), a "*Relevant Taxing Jurisdiction*"),

will at any time be required by law to be made from any payments made by or on behalf of the Payor or the Paying Agent with respect to any Note, including payments of principal, redemption price, interest or premium, if any, the Payor will pay (together with such payments) such additional amounts (the "*Additional Amounts*") as may be necessary in order that the net amounts received by each Holder in respect of such payments, after such withholding, or deduction (including any such deduction or withholding from such Additional Amounts), will not be less than the amounts which would have been received in respect of such payments on any such Note in the absence of such withholding or deduction; *provided*, *however*, that no such Additional Amounts will be payable for or on account of:

A. any Taxes that would not have been so imposed but for the existence of any present or former connection between the

relevant Holder (or between a fiduciary, settlor, beneficiary, partner, member or shareholder of, or possessor of power over the relevant Holder, if the relevant Holder is an estate, nominee, trust, partnership, limited liability company or corporation) and the Relevant Taxing Jurisdiction (including, without limitation, being resident for tax purposes, or being a citizen or resident or national of, or carrying on a business or maintaining a permanent establishment in, or being physically present in, the Relevant Taxing Jurisdiction) but excluding, in each case, any connection arising solely from the acquisition, ownership or holding of such Note or the receipt of any payment or the exercise or enforcement of rights under such Note, this Indenture or a Guarantee;

B. any Tax that is imposed or withheld by reason of the failure by the Holder or the beneficial owner of the Note to comply with a written request of the Payor addressed to the Holder, after reasonable notice (at least 30 days before any such withholding would be payable), to provide certification, information, documents or other evidence concerning the nationality, residence or identity of the Holder or such beneficial owner or to make any declaration or similar claim or satisfy any other reporting requirement relating to such matters, which is required by a statute, treaty, regulation or administrative practice of the Relevant Taxing Jurisdiction as a precondition to exemption from all or part of such Tax but, only to the extent the Holder or beneficial owner is legally entitled to provide such certification or documentation;

C. any Taxes, to the extent that such Taxes were imposed as a result of the presentation of the Note for payment (where presentation is required) more than 30 days after the relevant payment is first made available for payment to the Holder;

D. any Taxes that are payable otherwise than by withholding from a payment of the principal of, premium, if any, or interest, if any, on the Notes or with respect to any Guarantee;

E. any estate, inheritance, gift, sales, transfer, personal property or similar tax, assessment or other governmental charge;

F. any Taxes that are imposed or withheld pursuant to Sections 1471 through 1474 of the U.S. Internal Revenue Code of 1986, as amended (the "*Code*"), as of the Issue Date (or any amended or successor version of such sections that are substantively comparable), any regulations promulgated thereunder, any official interpretations thereof, any similar law or regulation adopted pursuant to an intergovernmental agreement

between a non-U.S. jurisdiction and the United States with respect to the foregoing or any agreements entered into pursuant to Section 1471(b)(1) of the Code; or

G. any combination of the items (A) through (F) above.

(b) In addition, no Additional Amounts shall be paid with respect to a Holder who is a fiduciary or a partnership or any person other than the beneficial owner of the Notes, to the extent that the beneficiary or settler with respect to such fiduciary, the member of such partnership or the beneficial owner would not have been entitled to Additional Amounts had such beneficiary, settler, member or beneficial owner held such Notes directly.

(c) The Payor will (i) make any required withholding or deduction and (ii) remit the full amount deducted or withheld to the Relevant Taxing Jurisdiction in accordance with applicable law. The Payor will use all reasonable efforts to obtain certified copies of tax receipts evidencing the payment of any Taxes so deducted or withheld from each Relevant Taxing Jurisdiction imposing such Taxes and will provide such certified copies, or if, notwithstanding the Payor's reasonable efforts to obtain such tax receipts, such tax receipts are not available, certified copies of other reasonable evidence of such payments as soon as reasonably practicable to the Trustee and the Paying Agent. Such copies shall be made available to the Holders upon request and will be made available at the offices of the Paying Agent.

(d) If any Payor is obligated to pay Additional Amounts under or with respect to any payment made on any Note or any Guarantee, at least 30 days prior to the date of such payment, the Payor will deliver to the Trustee and the Paying Agent an Officer's Certificate stating the fact that Additional Amounts will be payable and the amount to be so payable and such other information necessary to enable the Paying Agent to pay Additional Amounts to Holders on the relevant payment date (unless such obligation to pay Additional Amounts arises less than 45 days prior to the relevant payment date, in which case the Payor may deliver such Officer's Certificate as promptly as practicable thereafter). The Trustee and the Paying Agent shall be entitled to rely solely on such Officer's Certificate as conclusive proof that such payments are necessary.

(e) Wherever in this Indenture or the Notes there is mentioned, in any context:

(i) the payment of principal;

(ii) purchase prices in connection with a redemption of Notes;

(iii) interest; or

(iv) any other amount payable on or with respect to any of the Notes or any Guarantee,

such reference shall be deemed to include payment of Additional Amounts to the extent that, in such context, Additional Amounts are, were or would be payable in respect thereof.

The Payor will pay (and will indemnify the Holder for) any present or future stamp, issue, registration, court or documentary Taxes or any other excise, property or similar Taxes that arise in a Relevant Taxing Jurisdiction from the execution, delivery or registration of any Notes, any Guarantee, this Indenture, or any other document or instrument in relation thereto (other than in each case, in connection with a transfer of the Notes after this Offering) or any such Taxes imposed by any jurisdiction as a result of, or in connection with, the enforcement of the Notes or any Guarantee (limited, solely in the case of any such Taxes imposed in a Relevant Taxing Jurisdiction to any such Taxes that are not excluded under (A) through (D) and (F) of Section 4.13(a) or any combination thereof).

The foregoing obligations of this Section 4.13 will survive any termination, defeasance or discharge of this Indenture and will apply *mutatis mutandis* to any jurisdiction in which any successor to a Payor is organized, engaged in business for tax purposes or otherwise resident for tax purposes, or any jurisdiction from or through which any payment under, or with respect to the Notes is made by or on behalf of such Payor, or any political subdivision or taxing authority or agency thereof or therein.

Section 4.13A. Agreed Tax Treatment.

On the Issue Date, a portion of the proceeds of the Notes offering will be borrowed by the U.S. Co-Issuer and the remaining portion of the proceeds of the Notes offering will be borrowed by the Parent, and each Issuer intends to repay the interest and principal associated with the portion it will borrow on the Issue Date. Although the Notes are co-issued by the U.S. Co-Issuer and the Parent and, therefore, each Issuer is liable for repayment of the Notes in their entirety, for tax purposes the Issuers agree, and by acquiring an interest in the Notes each Holder of a Note agrees, to treat for U.S. federal income tax purposes the U.S. Co-Issuer and the Parent, respectively, as the issuer of only the portion of the debt borrowed by each such Issuer on the Issue Date. The amount of proceeds of the Notes offering received by the Parent and the amount of proceeds of the Notes offering received by the U.S. Co-Issuer shall be posted on the Parent's website, in the manner described under Section 4.09, in a notice setting forth such amounts.

Section 4.14. Change of Control.

(a) If a Change of Control occurs, subject to this Section 4.14, each Holder will have the right to require the Issuers to repurchase all or any part of such Holder's Notes at a purchase price in cash equal to 101% of the principal amount of the Notes, plus accrued and unpaid interest to the date of purchase (subject to the right of Holders of record on the relevant record date to receive interest due on the relevant interest payment date); *provided*, *however*, that the Issuers shall not be obligated to

repurchase the Notes under this Section 4.14 in the event and to the extent that they have unconditionally exercised their right to redeem all of the Notes under Section 5 of the Notes or all conditions to such redemption have been satisfied or waived.

(b) Unless the Issuers have unconditionally exercised their right to redeem all the Notes as described under Section 5 of the Notes or all conditions to such redemption have been satisfied or waived, no later than the date that is 60 days after any Change of Control, the Issuers will mail (or otherwise deliver) a notice (the "*Change of Control Offer*") to each Holder of any such Notes, with a copy to the Trustee:

(i) stating that a Change of Control has occurred or may occur and that such Holder has the right to require the Issuers to purchase all or any part of such Holder's Notes at a purchase price in cash equal to 101% of the principal amount of such Notes plus accrued and unpaid interest to, but not including, the date of purchase (subject to the right of Holders of record on a record date to receive interest on the relevant interest payment date) (the "*Change of Control Payment*");

(ii) stating the repurchase date (which shall be no earlier than 30 days nor later than 60 days from the date such notice is mailed) and the record date (the "*Change of Control Payment Date*");

(iii) stating that any Note accepted for payment pursuant to the Change of Control Offer will cease to accrue interest on the Change of Control Payment Date unless the Change of Control Payment is not paid, and that any Notes or part thereof not tendered will continue to accrue interest;

(iv) describing the circumstances and relevant facts regarding the transaction or transactions that constitute the Change of Control;

(v) describing the procedures determined by the Issuers, consistent with this Indenture, that a Holder must follow in order to have its Notes repurchased; and

(vi) if such notice is mailed prior to the occurrence of a Change of Control, stating that the Change of Control Offer is conditional on the occurrence of such Change of Control.

(c) On the Change of Control Payment Date, if the Change of Control shall have occurred, the Issuers will, to the extent lawful:

(i) accept for payment all Notes or portion thereof properly tendered pursuant to the Change of Control Offer;

(ii) deposit with the Paying Agent an amount equal to the Change of Control Payment in respect of all Notes so tendered;

(iii) deliver or cause to be delivered to the Trustee an Officer's Certificate stating the aggregate principal amount of Notes or portions of the Notes being purchased by the Issuers in the Change of Control Offer;

(iv) in the case of Global Notes, deliver, or cause to be delivered, to the Paying Agent the Global Notes in order to reflect thereon the portion of such Notes or portions thereof that have been tendered to and purchased by the Issuers; and

(v) in the case of Definitive Registered Notes, deliver, or cause to be delivered, to the relevant Registrar for cancellation all Definitive Registered Notes accepted for purchase by the Issuers.

(d) If any Definitive Registered Notes have been issued, the Paying Agent will promptly pay each Holder of Definitive Registered Notes so tendered the Change of Control Payment for such Notes, and the Trustee (or an authenticating agent) will, at the cost of the Issuers, promptly authenticate and mail to each Holder of Definitive Registered Notes a new Definitive Registered Note equal in principal amount to the unpurchased portion of the Notes surrendered, if any; *provided* that each such new Note will be in a principal amount that is at least $150,000 and integral multiples of $1,000 in excess thereof.

(e) For so long as the Notes are listed on the Irish Stock Exchange and the rules of such exchange so require, the Issuers will publish notices relating to the Change of Control Offer in a daily newspaper with general circulation in Ireland (which is expected to be *The Irish Times*) or to the extent and in the manner permitted by such rules, post such notices on the official website of the Irish Stock Exchange (*www.ise.ie*).

(f) The Issuers will not be required to make a Change of Control Offer upon a Change of Control if a third party makes the Change of Control Offer in the manner, at the times and otherwise in compliance with the requirements set forth in this Indenture applicable to a Change of Control Offer made by the Issuers and purchases all Notes validly tendered and not withdrawn under such Change of Control Offer. Notwithstanding anything to the contrary contained herein, a Change of Control Offer may be made in advance of a Change of Control, conditioned upon the consummation of such Change of Control, if a definitive agreement is in place providing for the Change of Control at the time the Change of Control Offer is made.

(g) The Issuers will comply, to the extent applicable, with the requirements of Section 14(e) of the Exchange Act and any other securities laws or regulations in connection with the repurchase of Notes pursuant to this Section 4.14. To the extent that the provisions of any securities laws or regulations conflict with provisions of this Indenture, the Issuers will comply with the applicable securities laws and regulations and will not be deemed to have breached its obligations under the Change of Control provisions of this Indenture by virtue of the conflict.

Section 4.15. [Reserved]

Section 4.16. Compliance Certificate. The Parent will deliver to the Trustee no later than the date on which the Parent is required to deliver annual reports pursuant to Section 4.09, an Officer's Certificate indicating whether the signers thereof know of any Default or Event of Default that occurred during the previous year.

Section 4.17. Listing.

The Issuers and the Guarantors will (i) use their commercially reasonable best efforts to cause the Notes, subject to notice of issuance, to be admitted to the official list of the Irish Stock Exchange and admitted to trading on the Global Exchange Market of the Irish Stock Exchange; and (ii) maintain such listing for as long as any of the Notes are outstanding. If the Notes cease to be listed on the Irish Stock Exchange, the Issuers and the Guarantors will use their commercially reasonable best efforts to promptly list the Notes on another "recognised stock exchange" (as defined in Section 1005 of the Income Tax Act 2007 of the United Kingdom).

Section 4.18. Financial Calculations for Limited Condition Acquisitions.

When calculating the availability under any basket or ratio under this Indenture, in each case in connection with a Limited Condition Acquisition (other than for purposes of making a Restricted Payment, a Permitted Payment or a Permitted Investment), the date of determination of such basket or ratio and of any Default or Event of Default shall, at the option of the Parent, be the date the definitive agreements for such Limited Condition Acquisition are entered into and such baskets or ratios shall be calculated on a *pro forma* basis after giving effect to such Limited Condition Acquisition and the other transactions to be entered into in connection therewith (including any Incurrence of Indebtedness and the use of proceeds thereof) as if they occurred at the beginning of the applicable reference period for purposes of determining the ability to consummate any such Limited Condition Acquisition (and not for purposes of any subsequent availability of any basket or ratio). For the avoidance of doubt, (x) if any of such baskets or ratios are exceeded as a result of fluctuations in such basket or ratio (including due to fluctuations in Consolidated EBITDA of the Parent or the target company) subsequent to such date of determination and at or prior to the consummation of the relevant Limited Condition Acquisition, such baskets or ratios will not be deemed to have been exceeded as a result of such fluctuations solely for purposes of determining whether the Limited Condition Acquisition and the related transactions are permitted hereunder and (y) such baskets or ratios shall not be tested at the time of consummation of such Limited Condition Acquisition or related transactions; *provided*, further, that if the Parent elects to have such determinations occur at the time of entry into such definitive agreement, any such transactions (including any Incurrence of Indebtedness and the use of proceeds thereof) shall be deemed to have occurred on the date the definitive agreements are entered and outstanding thereafter for purposes of calculating any baskets or ratios under this Indenture after the date of such agreement and before the consummation of such Limited Condition Acquisition.

Section 4.19. Stay, Extension and Usury Laws. Each Issuer and each of the Guarantors covenants (to the extent that it may lawfully do so) that it shall not at any time insist upon, plead, or in any manner whatsoever claim or take the benefit or advantage of, any stay, extension or usury law wherever enacted, now or at any time hereafter in force, that may affect the covenants or the performance of this Indenture; and each Issuer and each of the Guarantors (to the extent that it may lawfully do so) hereby expressly waive all benefit or advantage of any such law, and covenant that it will not, by resort to any such law, hinder, delay or impede the execution of any power herein granted to the Trustee, but shall suffer and permit the execution of every such power as though no such law has been enacted.

Section 4.20. Taxes. Each Issuer shall pay, and shall cause each of its Subsidiaries to pay, prior to delinquency, all material Taxes of such Issuer and its subsidiaries, except such as are contested in good faith and by appropriate proceedings or where the failure to effect such payment is not adverse in any material respect to the Holders of the Notes.

Section 4.21. Corporate Existence. Subject to Article V, the Issuers shall do or cause to be done all things necessary to preserve and keep in full force and effect:

(a) their corporate existence, and the corporate, partnership or other existence of each of their Subsidiaries (save for a solvent liquidation, merger or winding-up of any such Subsidiary that is not a Guarantor), in accordance with the respective organizational documents (as the same may be amended from time to time) of the Issuers or any such Subsidiary; and

(b) the rights (charter and statutory), licenses and franchises of the Issuers and their Subsidiaries; *provided*, however, that the Issuers shall not be required to preserve any such right, license or franchise, or the corporate, partnership or other existence of any of their Subsidiaries, if the Board of Directors of an Issuer shall determine that the preservation thereof is no longer desirable in the conduct of the business of the Issuers and their Subsidiaries, taken as a whole, and that the loss thereof is not adverse in any material respect to the Holders.

ARTICLE V

SUCCESSOR COMPANY

Section 5.01. Merger and Consolidation.

(a) The Issuers. Neither Issuer will consolidate with or merge with or into, or assign, convey, transfer, lease or otherwise dispose of all or substantially all of its assets, in one transaction or a series of related transactions to, any Person, unless:

(i) the resulting, surviving or transferee Person (the "*Successor Company*") will be a Person organized and existing under the laws of any

member state of the European Union, the United Kingdom or the United States of America, any State of the United States or the District of Columbia, Canada or any province of Canada, Norway or Switzerland and the Successor Company (if other than such Issuer) will expressly assume, by supplemental indenture, executed and delivered to the Trustee, in form reasonably satisfactory to the Trustee, all the obligations of such Issuer under the Notes and this Indenture;

(ii) immediately after giving effect to such transaction (and treating any Indebtedness that becomes an obligation of the Successor Company or any Subsidiary of the Successor Company as a result of such transaction as having been Incurred by the Successor Company or such Subsidiary at the time of such transaction), no Default or Event of Default shall have occurred and be continuing;

(iii) immediately after giving effect to such transaction, only to the extent it involves the Parent, either (1) the Successor Company would be able to Incur at least an additional $1.00 of Indebtedness pursuant to the Fixed Charge Coverage Ratio contained in Section 4.01(a) or (2) the Fixed Charge Coverage Ratio of the Successor Person and its consolidated Subsidiaries would not be less than the Fixed Charge Coverage Ratio of the Parent and its Restricted Subsidiaries immediately prior to giving effect to such transaction; and

(iv) such Issuer shall have delivered to the Trustee an Officer's Certificate and an Opinion of Counsel, each to the effect that such consolidation, merger or transfer and such supplemental indenture (if any) comply with this Indenture and an Opinion of Counsel to the effect that such supplemental indenture (if any) has been duly authorized, executed and delivered and is a legal, valid and binding agreement enforceable against the Successor Company (in each case, in form and substance reasonably satisfactory to the Trustee); *provided* that in giving an Opinion of Counsel, counsel may rely on an Officer's Certificate as to any matters of fact.

Any Indebtedness that becomes an obligation of the Parent or any Restricted Subsidiary (or that is deemed to be Incurred by any Restricted Subsidiary that becomes a Restricted Subsidiary) as a result of any such transaction undertaken in compliance with this Section 5.01, and any Refinancing Indebtedness with respect thereto, shall be deemed to have been Incurred in compliance with Section 4.01.

For purposes of this Section 5.01, the sale, lease, conveyance, assignment, transfer, or other disposition of all or substantially all of the properties and assets of one or more Subsidiaries of an Issuer, which properties and assets, if held by such Issuer instead of such Subsidiaries, would constitute all or substantially all of the properties and assets of such Issuer on a consolidated basis, shall be deemed to be the transfer of all or substantially all of the properties and assets of such Issuer.

The Successor Company will succeed to, and be substituted for, and may exercise every right and power of, such Issuer under this Indenture but in the case of a lease of all or substantially all its assets, the predecessor company will not be released from its obligations under this Indenture or the Notes.

The foregoing provisions of this Section 5.01(a) (other than Section 5.01(a)(ii)) shall not apply to (i) any transactions which constitute an Asset Disposition if the Issuers have complied with Section 4.05 or (ii) the creation of a new subsidiary as a Restricted Subsidiary.

(b) Guarantors. No Guarantor (other than a Guarantor whose guarantee is to be released in accordance with the terms of this Indenture) may: (i) consolidate with or merge with or into any Person (whether or not such Guarantor is the surviving corporation); (ii) sell, assign, convey, transfer, lease or otherwise dispose of, all or substantially all of the assets of such Guarantor and its Restricted Subsidiaries taken as a whole, in one transaction or a series of related transactions, to any Person; or (iii) permit any Person to merge with or into it unless:

A. the other Person is an Issuer or any other Restricted Subsidiary of the Parent that is a Guarantor or becomes a Guarantor;

B. (1) either (x) a Guarantor is the continuing Person or (y) the resulting, surviving or transferee Person expressly assumes all of the obligations of the Guarantor under its Guarantee and this Indenture (pursuant to a supplemental indenture executed and delivered in a form reasonably satisfactory to the Trustee); and (2) immediately after giving effect to the transaction, no Default or Event of Default shall have occurred and is continuing; or

C. the transaction constitutes a sale or other disposition (including by way of consolidation or merger) of a Guarantor or the sale or disposition of all or substantially all the assets of a Guarantor (in each case other than to the Parent or a Restricted Subsidiary) otherwise permitted by this Indenture,

provided however, that the prohibition in Section 5.01(b)(i), Section 5.01(b)(ii) and Section 5.01(b)(iii) shall not apply to the extent that compliance with clauses (A) or (B)(1) could give rise to or result in: (1) any breach or violation of statutory limitations, corporate benefit, financial assistance, fraudulent preference, thin capitalization rules, capital maintenance rules, guidance and coordination rules or the laws rules or regulations (or analogous restriction) of any applicable jurisdiction; (2) any risk or liability for the officers, directors or (except in the case of a Restricted Subsidiary that is a partnership) shareholders of such Restricted Subsidiary (or, in the case of a Restricted Subsidiary that is a partnership, directors or shareholders of the partners of such partnership); or (3)

any cost, expense, liability or obligation (including with respect to any Taxes) other than reasonable out of pocket expenses.

(c) The provisions set forth in this Section 5.01 shall not restrict (and shall not apply to): (i) any Restricted Subsidiary that is not a Guarantor (or the US Co-Issuer) from consolidating with, merging or liquidating into or transferring all or substantially all of its properties and assets to an Issuer, a Guarantor or any other Restricted Subsidiary that is not a Guarantor; (ii) a Guarantor from merging or liquidating into or transferring all or part of its properties and assets to an Issuer or another Guarantor; (iii) a Guarantor from transferring all or part of its properties and assets to a Restricted Subsidiary that is not a Guarantor (or the US Co-Issuer) in order to comply with any law, rule, regulation or order, recommendation or directions of, or agreement with, any regulatory authority having jurisdiction over the Parent or any of its Restricted Subsidiaries; (iv) any consolidation or merger of an Issuer into any Guarantor; *provided* that, if such Issuer is not the surviving entity of such merger or consolidation, the relevant Guarantor will assume the obligations of such Issuer under the Notes and this Indenture and Section 5.01(a)(i) and Section 5.01(a)(iv) shall apply to such transaction and (v) an Issuer or any Guarantor from consolidating into or merging or combining with an Affiliate incorporated or organized for the purpose of changing the legal domicile of such entity, reincorporating such entity in another jurisdiction, or changing the legal form of such entity; *provided*, *however*, that Section 5.01(a)(i), Section 5.01(a)(ii), Section 5.01(a)(iv) or Section 5.01(b)(iii)(A) and 5.01(b)(iii)(B), as the case may be, shall apply to any such transaction.

ARTICLE VI

DEFAULTS AND REMEDIES

Section 6.01. Events of Default. Each of the following is an "Event of Default" under this Indenture:

(a) default in any payment of interest on any Note issued under this Indenture when due and payable, continued for 30 days;

(b) default in the payment of the principal amount of or premium, if any, on any Note issued under this Indenture when due at its Stated Maturity, upon optional redemption, upon required repurchase, upon declaration or otherwise;

(c) failure by an Issuer or any Guarantor to comply with its obligations under Section 5.01;

(d) failure by an Issuer or any Guarantor to comply for 30 days after written notice by the Trustee or the Holders of at least 25% in principal amount of the outstanding Notes with its obligation to make a Change of Control Offer under Section 4.14;

(e) failure by the Parent or any of its Restricted Subsidiaries to comply for 60 days after notice by the Trustee or the Holders of at least 25% in principal amount of the outstanding Notes with its other agreements contained in this Indenture (in each case, other than a default in performance, or breach of, a covenant or agreement specifically addressed in clauses (a) to (d) of this Section 6.01);

(f) default under any mortgage, indenture or instrument under which there may be issued or by which there may be secured or evidenced any Indebtedness for money borrowed by the Parent or any of its Restricted Subsidiaries (or the payment of which is Guaranteed by the Parent or any of its Restricted Subsidiaries) other than Indebtedness owed to the Parent or a Restricted Subsidiary whether such Indebtedness or Guarantee now exists, or is created after the Issue Date, which default:

(i) is caused by a failure to pay principal at stated maturity on such Indebtedness, immediately upon the expiration of the grace period provided in such Indebtedness ("*payment default*"); or

(ii) results in the acceleration of such Indebtedness prior to its maturity (the "*cross acceleration provision*"),

and, in each case, the principal amount of any such Indebtedness, together with the principal amount of any other such Indebtedness under which there has been a payment default or the maturity of which has been so accelerated, aggregates $25.0 million or more;

(g) the Issuers or any Restricted Subsidiary that is a Significant Subsidiary or any group of Restricted Subsidiaries that, taken together, would constitute a Significant Subsidiary, pursuant to or within the meaning of any Bankruptcy Law:

(i) commences proceedings to be adjudicated bankrupt or insolvent;

(ii) consents to the institution of bankruptcy or insolvency proceedings against it, or the filing by it of a petition or answer or consent seeking reorganization or relief under applicable Bankruptcy Law;

(iii) consents to the appointment of a receiver, liquidator, assignee, trustee, sequestrator or other similar official of it or for all or substantially all of its property;

(iv) makes a general assignment for the benefit of its creditors; or

(v) admits in writing that it is unable to pay its debts as they become due;

(h) a court of competent jurisdiction enters an order or decree under any Bankruptcy Law that:

(i) is for relief against the Issuers or any Restricted Subsidiary that is a Significant Subsidiary or any group of Restricted Subsidiaries that, taken together, would constitute a Significant Subsidiary, in a proceeding in which the Issuers or any such Restricted Subsidiary, that is a Significant Subsidiary or any group of Restricted Subsidiaries that, taken together, would constitute a Significant Subsidiary, is to be adjudicated bankrupt or insolvent;

(ii) appoints a receiver, liquidator, assignee, trustee, sequestrator or other similar official of the Issuers or any Restricted Subsidiary that is a Significant Subsidiary or any group of Restricted Subsidiaries that, taken together, would constitute a Significant Subsidiary, or for all or substantially all of the property of the Issuers or any Restricted Subsidiary that is a Significant Subsidiary or any group of Restricted Subsidiaries that, taken together, would constitute a Significant Subsidiary; or

(iii) orders the winding up or liquidation of the Issuers or any Restricted Subsidiary that is a Significant Subsidiary or any group of Restricted Subsidiaries that, taken together, would constitute a Significant Subsidiary,

and, in the case of any of (i), (ii) or (iii) of this Section 6.01(h), the order or decree remains unstayed and in effect for 60 consecutive days;

(i) failure by an Issuer or any Significant Subsidiary or group of Restricted Subsidiaries that, taken together (as of the latest audited consolidated financial statements for the Parent and its Restricted Subsidiaries), would constitute a Significant Subsidiary to pay final judgments aggregating in excess of $25.0 million (exclusive of any amounts that a solvent insurance company has acknowledged liability for), which judgments are not paid, discharged or stayed for a period of 60 days after the judgment becomes final (the "*judgment default provision*"); and

(j) any Note Guarantee of a Significant Subsidiary ceases to be in full force and effect (other than in accordance with the terms of such Note Guarantee or this Indenture) or is declared invalid or unenforceable in a judicial proceeding or any Guarantor denies or disaffirms in writing its obligations under its Note Guarantee and any such Default continues for 10 days.

However, a default under Section 6.01(c), Section 6.01(d), Section 6.01(e), Section 6.01(f) or Section 6.01(i) will not constitute an Event of Default until the Trustee or the Holders of 25% in principal amount of the outstanding Notes under this Indenture notify the Parent of the default and, with respect to Section 6.01(d), Section 6.01(e) or Section 6.01(i), the Parent does not cure such default within the time specified in Section 6.01(d), Section 6.01(e) or Section 6.01(i), as applicable, after receipt of such notice.

The Issuers shall deliver to the Trustee, within 30 days after the occurrence thereof, written notice in the form of an Officers' Certificate of any Event of Default or any event which with the giving of notice or the lapse of time would become an Event of Default, its status and what action the Issuers are taking or propose to take with respect thereto.

Section 6.02. Remedies Upon Event of Default. Holders of the Notes may not enforce this Indenture or the Notes except as provided in this Indenture.

Notwithstanding anything to the contrary herein, (i) if a Default occurs for a failure to deliver a required certificate in connection with another default (an "*Initial Default*") then at the time such Initial Default is cured, such Default for a failure to report or deliver a required certificate in connection with the Initial Default will also be cured without any further action and (ii) any Default or Event of Default for the failure to comply with the time periods prescribed in Section 4.09, or otherwise to deliver any notice or certificate pursuant to any other provision of this Indenture shall be deemed to be cured upon the delivery of any such report required by such covenant or notice or certificate, as applicable, even though such delivery is not within the prescribed period specified in this Indenture.

Section 6.03. Acceleration. (a) If an Event of Default (other than an Event of Default described in Section 6.01(g) and Section 6.01(h)) occurs and is continuing, the Trustee or the Holders of at least 25% in aggregate principal amount of the outstanding Notes under this Indenture may declare all the Notes under this Indenture to be due and payable. Upon such a declaration, such principal, premium and accrued and unpaid interest will be due and payable immediately. In the event of a declaration of acceleration of the Notes because an Event of Default described in Section 6.01(f) has occurred and is continuing, the declaration of acceleration of the Notes shall be automatically annulled if the event of default or payment default triggering such Event of Default pursuant to Section 6.01(f) shall be remedied or cured, or waived by the holders of the Indebtedness, or the Indebtedness that gave rise to such Event of Default shall have been discharged in full, within 30 days after the declaration of acceleration with respect thereto and if (1) the annulment of the acceleration of the Notes would not conflict with any judgment or decree of a court of competent jurisdiction and (2) all existing Events of Default, except nonpayment of principal, premium or interest on the Notes that became due solely because of the acceleration of the Notes, have been cured or waived.

(b) If an Event of Default described in Section 6.01(g) or Section 6.01(h) occurs and is continuing, the principal of, premium, if any, and accrued and unpaid interest on all the Notes will become and be immediately due and payable without any declaration or other act on the part of the Trustee or any Holders.

Section 6.04. Other Remedies. Subject to Articles XI and XII and to the duties of the Trustee as provided for in Article VII, if an Event of Default occurs and is continuing, the Trustee may pursue any available remedy to collect the payment of principal of, premium, if any, or interest on the Notes or to enforce the performance of any provision of the Notes or this Indenture.

The Trustee may maintain a proceeding even if it does not possess any of the Notes or does not produce any of them in the proceeding. A delay or omission by the Trustee or any Holder in exercising any right or remedy accruing upon an Event of Default shall not impair the right or remedy or constitute a waiver of or acquiescence in the Event of Default. No remedy is exclusive of any other remedy. All available remedies are cumulative to the extent permitted by law.

Section 6.05. Waiver of Past Defaults. The Holders of a majority in principal amount of the outstanding Notes under this Indenture may waive all past or existing Defaults or Events of Default (except with respect to nonpayment of principal, premium, interest or Additional Amounts, if any) and rescind any such acceleration with respect to such Notes and its consequences if rescission would not conflict with any judgment or decree of a court of competent jurisdiction.

Section 6.06. Control by Majority. The Holders of a majority in principal amount of the Notes then outstanding may direct the time, method and place of conducting any proceeding for exercising any remedy available to the Trustee or of exercising any trust or power conferred on the Trustee. However, the Trustee may refuse to follow any direction that conflicts with law or this Indenture or, subject to Section 7.01, that the Trustee determines is unduly prejudicial to the rights of other Holders or would involve the Trustee in personal liability; *provided*, *however*, that the Trustee may take any other action deemed proper by the Trustee that is not inconsistent with such direction.

Section 6.07. Limitation on Suits. (i) Except to enforce the right to receive payment of principal, premium (if any) or interest when due, no Holder may pursue any remedy with respect to this Indenture or the Notes unless:

A. such Holder has previously given the Trustee notice that an Event of Default is continuing;

B. Holders of at least 25% in principal amount of the outstanding Notes have requested the Trustee to pursue the remedy;

C. such Holders have offered the Trustee security or indemnity satisfactory to it against any loss, liability or expense;

D. the Trustee has not complied with such request within 60 days after the receipt of the request and the offer of security or indemnity; and

E. the Holders of a majority in principal amount of the outstanding Notes have not given the Trustee a direction that, in the opinion of the Trustee, is inconsistent with such request within such 60-day period.

(ii) A Holder may not use this Indenture to prejudice the rights of another Holder or to obtain a preference or priority over another Holder.

Section 6.08. Rights of Holders to Receive Payment. Subject to Section 9.02, the right of any Holder to receive payment of principal of and interest on the Notes held by such Holder, on or after the respective due dates expressed or provided for in the Notes, or to bring suit for the enforcement of any such payment on or after such respective dates, shall not be impaired or affected without the consent of without the consent of each Holder of an outstanding Note affected.

Section 6.09. Collection Suit by Trustee. If an Event of Default specified in Section 6.01(a) or Section 6.01(b) occurs and is continuing, the Trustee may recover judgment in its own name and as trustee of an express trust against the Issuers or any other obligor on the Notes for the whole amount then due and owing (together with interest on any unpaid interest to the extent lawful) and the amounts provided for in Section 7.06.

Section 6.10. Trustee May File Proofs of Claim. The Trustee may file such proofs of claim and other papers or documents and take such actions as may be necessary or advisable (including any claim for the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel) in order to have the claims of the Trustee and the Holders allowed in any judicial proceedings relative to the Issuers (or any other obligor upon the Notes) or any Guarantor, their creditors or their property and, shall be entitled and empowered to collect, receive and distribute any money or other property payable or deliverable on any such claims and any custodian in any such judicial proceeding is hereby authorized by each Holder to make such payments to the Trustee and, in the event that the Trustee consents to the making of such payments directly to the Holders, to pay to the Trustee any amount due to it for the properly incurred compensation, expenses, disbursements and advances of the Trustee, its agents and counsel, and any other amounts due the Trustee under Section 7.06 hereof. To the extent that the payment of any such compensation, expenses, disbursements and advances of the Trustee, its agents and counsel, and any other amounts due the Trustee under Section 7.06 hereof out of the estate in any such proceeding, shall be denied for any reason, payment of the same shall be secured by a lien on, and shall be paid out of, any and all distributions, dividends, money, securities and other properties that the Holders may be entitled to receive in such proceeding whether in liquidation or under any plan of reorganization or arrangement or otherwise. Nothing herein contained shall be deemed to authorize the Trustee to authorize or consent to or accept or adopt on behalf of any Holder any plan of reorganization, arrangement, adjustment or composition affecting the Securities of any series or the rights of any Holder, or to authorize the Trustee to vote in respect of the claim of any Holder in any such proceeding.

Section 6.11. Priorities. If the Trustee collects any money pursuant to this Article VI, it shall pay out the money in the following order:

FIRST: to the Trustee and the Agents for amounts due under Section 7.02, Section 7.06 and Section 11.06;

SECOND: to Holders of Notes for amounts due and unpaid on the Notes for principal, premium, if any, interest and Additional Amounts, if any, ratably, without preference or priority of any kind, according to the amounts due and payable on the Notes for principal, premium, if any, interest and Additional Amounts, if any, respectively;

THIRD: to the Issuers, any Guarantor or to such party as a court of competent jurisdiction shall direct.

The Trustee may fix a record date and payment date for any payment to Holders pursuant to this Section 6.11. At least 15 days before such record date, the Trustee shall mail or deliver to each Holder and the Issuers a notice that states the record date, the payment date and amount to be paid.

Section 6.12. Undertaking for Costs. In any suit for the enforcement of any right or remedy under this Indenture or in any suit against the Trustee for any action taken or omitted by it as the Trustee, a court in its discretion may require the filing by any party litigant in the suit of an undertaking to pay the costs of the suit, and the court in its discretion may assess reasonable costs, including reasonable attorneys' fees, against any party litigant in the suit, having due regard to the merits and good faith of the claims or defenses made by the party litigant. This Section 6.12 does not apply to a suit by the Trustee or a Paying Agent, a suit by a Holder pursuant to Section 6.08 or a suit by Holders of more than 10% in principal amount of the Notes then outstanding.

Section 6.13. Waiver of Stay or Extension Laws. The Issuers (to the extent it may lawfully do so) shall not at any time insist upon, or plead, or in any manner whatsoever claim or take the benefit or advantage of, any stay or extension law wherever enacted, now or at any time hereafter in force, which may affect the covenants or the performance of this Indenture; and the Issuers (to the extent that it may lawfully do so) hereby expressly waive all benefit or advantage of any such law, and shall not hinder, delay or impede the execution of any power herein granted to the Trustee, but shall suffer and permit the execution of every such power as though no such law had been enacted.

Section 6.14. Restoration of Rights and Remedies. If the Trustee or any Holder has instituted any proceeding to enforce any right or remedy under this Indenture and such proceeding has been discontinued or abandoned for any reason, or has been determined adversely to the Trustee or to such Holder, then and in every such case, subject to any determination in such proceeding, the Issuers, the Guarantors, the Trustee and the Holders shall be restored severally and respectively to their former positions hereunder and thereafter all rights and remedies of the Trustee and the Holders shall continue as though no such proceeding had been instituted.

Section 6.15. Rights and Remedies Cumulative. Except as otherwise provided with respect to the replacement or payment of mutilated, destroyed, lost or stolen Notes in Section 2.11, no right or remedy herein conferred upon or reserved to the

Trustee or to the Holders is intended to be exclusive of any other right or remedy, and every right and remedy shall, to the extent permitted by law, be cumulative and in addition to every other right and remedy given hereunder or now or hereafter existing at law or in equity or otherwise. The assertion of any right or remedy hereunder, or otherwise, shall not prevent the concurrent assertion or employment of any other appropriate right or remedy.

Section 6.16. Delay or Omission Not Waiver. No delay or omission of the Trustee or of any Holder of any Note to exercise any right or remedy accruing upon any Event of Default shall impair any such right or remedy or constitute a waiver of any such Event of Default or an acquiescence therein. Every right and remedy given by this Article VI or by law to the Trustee or to the Holders, may be exercised from time to time, and as often as may be deemed expedient, by the Trustee or by the Holders, as the case may be.

Section 6.17. Indemnification of Trustee. Prior to taking any action under this Article VI, the Trustee shall be entitled to indemnification or other security satisfactory to it in its sole discretion against all losses, liabilities and expenses caused by taking or not taking such action.

ARTICLE VII

TRUSTEE

Section 7.01. Duties of Trustee. (i) If an Event of Default, of which a Responsible Officer of the Trustee has written notice or actual knowledge, has occurred and is continuing, the Trustee will exercise such of the rights and powers vested in it by this Indenture or an indenture supplement hereto and use the same degree of care and skill in its exercise as a prudent person would exercise or use under the circumstances in the conduct of such person's own affairs.

(ii) Except during the continuance of an Event of Default:

A. the Trustee undertakes to perform such duties and only such duties as are specifically set forth in this Indenture and no implied covenants or obligations shall be read into this Indenture against the Trustee; *provided* that to the extent the duties of the Trustee under this Indenture and the Notes may be qualified, limited or otherwise affected by the provisions of the Notes Documents, the Trustee shall be required to perform those duties only as so qualified, limited or affected, and shall be held harmless and shall not incur any liability of any kind for so acting; and

B. in the absence of bad faith on its part, the Trustee may conclusively rely, as to the truth of the statements and the correctness of the opinions expressed therein, upon certificates or opinions furnished to the Trustee and conforming to the

requirements of this Indenture. However, with respect to certificates or opinions specifically required to be furnished to it hereunder, the Trustee shall examine such certificates and opinions to determine whether or not they conform to the requirements of this Indenture (but need not confirm or investigate the accuracy of mathematical calculations or other facts stated therein) and shall be entitled to seek advice from legal counsel in relation thereto.

(iii) The Trustee may not be relieved from liability for its own grossly negligent action, its own grossly negligent failure to act or its own willful misconduct, except that:

A. this Section 7.01(iii) does not limit the effect of Section 7.01(ii);

B. the Trustee shall not be liable for any error of judgment made in good faith by a Responsible Officer unless it is proved that the Trustee was grossly negligent in ascertaining the pertinent facts; and

C. the Trustee shall not be liable with respect to any action it takes or omits to take in good faith in accordance with a direction received by it pursuant to Section 6.03, Section 6.05 or Section 6.06.

(iv) Every provision of this Indenture that in any way relates to the Trustee is subject to Section 7.01(i), Section 7.01(ii) and Section 7.01(iii).

(v) No provision of this Indenture or the other Notes Documents shall require the Trustee to expend or risk its own funds or otherwise incur liability in the performance of any of its duties hereunder or under the other Notes Documents or to take or omit to take any action under this Indenture or under the other Notes Documents or take any action at the request or direction of Holders if it has grounds for believing that repayment of such funds is not assured to it or it does not receive indemnity or security satisfactory to it in its sole discretion against any loss, liability or expense which might be incurred by it in compliance with such request or direction nor shall the Trustee be required to do anything which is illegal or contrary to applicable laws. The Trustee will not be liable to the Holders if prevented or delayed in performing any of its obligations or discretionary functions under this Indenture by reason of any present or future law applicable to it, by any governmental or regulatory authority or by any circumstances beyond its control.

(vi) The Trustee shall not be liable for interest or investment income on any money received by it except as the Trustee may agree in writing with the Issuers.

(vii) Money held in trust by the Trustee need not be segregated from other funds except to the extent required by law.

(viii) Each Holder, by its acceptance of any Notes and the Note Guarantees consents and agrees to the terms of the Notes Documents as the same may be in effect or as may be amended from time to time in accordance with their terms and authorizes and directs the Trustee to enter into and perform its obligations and exercise its rights under the Notes Documents in accordance therewith, to bind the Holders on the terms set forth in the Notes Documents and to execute any and all documents, amendments, waivers, consents, releases or other instruments authorized or required to be executed by it pursuant to the terms thereof.

(ix) The Trustee shall not be deemed to have notice of any matter (including, without limitation, Events of Default) unless a Responsible Officer has written notice or actual knowledge.

Section 7.02. Rights of Trustee.

(i) The Trustee may refrain from taking any action in any jurisdiction if the taking of such action in that jurisdiction would, in its opinion, based upon legal advice in the relevant jurisdiction, be contrary to any law of that jurisdiction or, to the extent applicable, the State of New York. Furthermore, the Trustee may also refrain from taking such action if it would otherwise render it liable to any person in that jurisdiction, the State of New York or if, in its opinion based upon such legal advice, it would not have the power to take such action in that jurisdiction by virtue of any applicable law in that jurisdiction, in the State of New York or if it is determined by any court or other competent authority in that jurisdiction, in the State of New York that it does not have such power.

(ii) The Trustee may conclusively rely and shall be fully protected in relying on any document believed by it to be genuine and to have been signed or presented by the proper Person. The Trustee need not investigate any fact or matter stated in the document.

(iii) Before the Trustee acts or refrains from acting, it may require an Officer’s Certificate or an Opinion of Counsel or both. The Trustee shall not be liable for any action it takes or omits to take in good faith in reliance on such Officer’s Certificate or Opinion of Counsel.

(iv) The Trustee may act through attorneys and agents and shall not be responsible for the misconduct or negligence of any agent appointed with due care.

(v) The Trustee shall not be liable for any action it takes or omits to take in good faith which it believes to be authorized or within its rights or powers conferred upon it by this Indenture or any other Notes Document, subject to Section 7.01(iii).

(vi) The Trustee may retain professional advisers to assist it in performing its duties under this Indenture or any Notes Document. The Trustee may consult with counsel, and the advice or opinion of counsel with respect to legal matters relating to this Indenture and the Notes shall be full and complete authorization and protection from liability in respect of any action taken, omitted or suffered by it hereunder in good faith and in accordance with the advice or opinion of such counsel.

(vii) The Trustee shall not be bound to make any investigation into the facts or matters stated in any Officer's Certificate, Opinion of Counsel, or any resolution, certificate, statement, instrument, opinion, report, notice, request, direction, consent, order, approval, bond, debenture, note, other evidence of indebtedness or other paper or document, but the Trustee, in its discretion, may make such further inquiry or investigation into such facts or matters as it may see fit, and, if the Trustee shall determine to make such further inquiry or investigation, it shall be entitled to examine the books, records and premises of the Issuers, personally or by agent or attorney at the sole cost of the Issuers.

(viii) The Trustee shall be under no obligation to exercise any of the rights or powers vested in it by this Indenture at the request, order or direction of any of the Holders pursuant to the provisions of this Indenture, unless such Holders shall have offered to the Trustee indemnity or other security satisfactory to the Trustee against the costs, expenses and liabilities which may be incurred by it in compliance with such request, order or direction.

(ix) In the event the Trustee receives inconsistent or conflicting requests and indemnity from two or more groups of Holders, each representing less than the majority in aggregate principal amount of the Notes then outstanding, pursuant to the provisions of this Indenture, the Trustee, in its sole discretion, may determine what action, if any, shall be taken and shall be held harmless and shall not incur any liability for its failure to act until such inconsistency or conflict is, in its reasonable opinion, resolved.

(x) The Trustee shall have no duty to inquire as to the performance of the Issuers with respect to the covenants contained in

Article IV. Delivery of reports, information and documents to the Trustee under Section 4.09 is for informational purposes only and the Trustee's receipt of the foregoing shall not constitute actual or constructive notice of any information contained therein or determinable from information contained therein, including the Issuers' compliance with any of their covenants hereunder (as to which the Trustee is entitled to rely exclusively on Officer's Certificates).

(xi) The Trustee shall not have any obligation or duty to monitor, determine or inquire as to compliance, and shall not be responsible or liable for compliance with restrictions on transfer, exchange, redemption, purchase or repurchase, as applicable, of minimum denominations imposed under this Indenture or under applicable law or regulation with respect to any transfer, exchange, redemption, purchase or repurchase, as applicable, of any interest in any Notes.

(xii) If any Guarantor is substituted to make payments on behalf of the Issuers pursuant to Article X, the Issuers shall promptly notify the Trustee of such substitution.

(xiii) The rights, privileges, protections, immunities and benefits given to the Trustee, including its right to be indemnified or secured to its satisfaction, are extended to, and shall be enforceable by the Trustee in each of its capacities hereunder and under the other Notes Documents, by each Agent in their various capacities hereunder, custodian and other Person employed to act as agent hereunder. Each of the Trustee and each Agent shall not be liable for acting in good faith on instructions believed by it to be genuine and from the proper party.

(xiv) The Trustee shall not be required to give any bond or surety with respect to the performance of its duties or the exercise of its powers under this Indenture.

(xv) The permissive rights of the Trustee to take the actions permitted by this Indenture will not be construed as an obligation or duty to do so.

(xvi) Anything in this Indenture to the contrary notwithstanding, in no event shall the Trustee be liable for special, indirect or consequential loss or damage of any kind whatsoever (including but not limited to lost profits, loss of business, goodwill or opportunity of any kind), even if foreseeable and even if the Trustee has been advised of the likelihood of such loss or damage and regardless of the form of action.

(xvii) In no event shall the Trustee be responsible or liable for any failure or delay in the performance of its obligations hereunder arising out of, or caused by, directly or indirectly, forces beyond its control,

including, without limitation, acts of war or terrorism, civil or military disturbances, nuclear or natural catastrophes or acts of God; it being understood that the Trustee shall use reasonable efforts that are consistent with accepted practices in the banking industry to resume performance as soon as practicable under the circumstances;.

(xviii) The Trustee may request that the Issuers deliver an Officer's Certificate setting forth the names of the individuals or titles of officers authorized at such time to take specified actions pursuant to this Indenture or the Notes Documents, which Officer's Certificate may be signed by any person authorized to sign an Officer's Certificate, including any person specified as so authorized in any such certificate previously delivered and not superseded.

(xix) No provision of this Indenture shall require the Trustee to do anything which, in its opinion, may be illegal or contrary to applicable law or regulation.

(xx) The Trustee shall not be required to take notice or be deemed to have notice of any Default or Event of Default hereunder unless a Responsible Officer has actual knowledge thereof or is specifically notified in writing of such Default or Event of Default by the Issuers or by the Holders of at least 25% of the aggregate principal amount of Notes then outstanding, at the Corporate Trust Office of the Trustee, and such notice references the Notes and this Indenture.

(xxi) The Trustee and the Paying Agent shall be entitled to make payments net of any taxes or other sums required by any applicable law to be withheld or deducted.

Section 7.03. Individual Rights of Trustee. The Trustee in its individual or any other capacity may become the owner or pledgee of Notes and may otherwise deal with the Issuers or their Affiliates with the same rights it would have if it were not Trustee. For the avoidance of doubt, any Agent, Paying Agent, Transfer Agent, Authenticating Agent or Registrar may do the same with like rights.

Section 7.04. Trustee's Disclaimer. The Trustee shall not be responsible for and makes no representation as to the validity or adequacy of this Indenture or the Notes or the Note Guarantees or any other Notes Document, it shall not be accountable for the Issuers' use of the proceeds from the Notes or any money paid to the Issuers or upon the Issuers' direction under any provision of this Indenture, and it shall not be responsible for any statement of the Issuers in this Indenture, the Offering Memorandum or any document issued in connection with the sale of the Notes or in the Notes other than the Trustee's certificate of authentication if signed by the Trustee.

Section 7.05. Notice of Defaults. If a Default or Event of Default occurs and is continuing and a Responsible Officer of the Trustee is informed of such

occurrence by the Issuers, the Trustee must give notice of the Default to the Holders within 60 days after being notified by the Issuer. Except in the case of a Default in payment of principal of or interest or premium, if any, on any Note, the Trustee may withhold the notice if and so long as the Trustee determines that withholding the notice is in the interests of Holders.

Section 7.06. Compensation and Indemnity. The Issuers, or, upon the failure of the Issuers to pay, each Guarantor, jointly and severally, shall pay to the Trustee from time to time such compensation as the Issuers and Trustee may from time to time agree for its acceptance of this Indenture and services hereunder and under the Notes Documents. The Trustee's compensation shall not be limited by any law on compensation of a trustee of an express trust.

In the event of the occurrence of an Event of Default or the Trustee considering it expedient or necessary or being requested by the Issuers to undertake duties which the Trustee reasonably determines to be of an exceptional nature or otherwise outside the scope of the normal duties of the Trustee, the Issuers shall pay to the Trustee such additional remuneration for such duties as may be agreed.

The Issuers and each Guarantor, jointly and severally, shall reimburse the Trustee promptly upon request for all properly incurred disbursements, advances and expenses incurred or made by it (as evidenced in an invoice from the Trustee), including costs of collection, in addition to the compensation for its services. Such expenses shall include the properly incurred compensation and expenses, disbursements and advances of the Trustee's agents, counsel, accountants and experts. The Issuers and each Guarantor, jointly and severally, shall indemnify the Trustee, the Agents and their respective officers, directors, agents and employers against any and all loss, liability or expenses (including properly incurred attorneys' fees, disbursements and expenses) incurred by or in connection with the acceptance or administration of its duties under this Indenture and the Notes Documents, including the costs and expenses of enforcing this Indenture against the Issuers (including this Section 7.06) and defending itself against any claim (whether asserted by the Issuers or any Holder or any other person) or liability in connection with the exercise or performance of any of its powers or duties hereunder or under the Notes Documents, as the case may be.

The Trustee shall notify the Issuers of any claim for which it may seek indemnity promptly upon obtaining actual knowledge thereof; *provided, however*, that any failure so to notify the Issuers shall not relieve the Issuers or any Guarantor of their indemnity obligations hereunder or under any other Notes Documents, as the case may be. Except in cases where the interests of the Issuers and the Trustee may be adverse, the Issuers shall defend the claim and the indemnified party shall provide reasonable cooperation at the Issuers' and any Guarantor's expense in the defense. Notwithstanding the foregoing, such indemnified party may, in its sole discretion, assume the defense of the claim against it and the Issuers and any Guarantor shall, jointly and severally, pay the properly incurred fees and expenses of the indemnified party's defense (as evidenced in an invoice from the Trustee). Such indemnified parties may have separate counsel of their choosing and the Issuers and any Guarantor, jointly and severally, shall pay the properly

incurred fees and expenses of such counsel (as evidenced in an invoice from the Trustee). The Issuers need not pay for any settlement made without their consent, which consent shall not be unreasonably withheld. The Issuers need not reimburse any expense or indemnify against any loss, liability or expense incurred by an indemnified party through such party's own willful misconduct, gross negligence or fraud.

To secure the Issuers' and any Guarantor's payment obligations in this Section 7.06, the Trustee and the Agents have a lien prior to the Notes on all money or property held or collected by the Trustee or Paying Agent other than money or property held in trust to pay principal of and interest on particular Notes.

The Issuers' and any Guarantor's payment obligations pursuant to this Section 7.06 and any lien arising thereunder shall survive the satisfaction or discharge of this Indenture, payment of the Notes in full, any rejection or termination of this Indenture under any Bankruptcy Law or the resignation or removal of the Trustee and the Agents. Without prejudice to any other rights available to the Trustee and the Agents under applicable law, when the Trustee and the Paying Agents incur expenses after the occurrence of a Default specified in Section 6.01(e) and Section 6.01(f) with respect to the Issuers, the expenses are intended to constitute expenses of administration under the Bankruptcy Law.

For the avoidance of doubt, the rights, privileges, protections, immunities and benefits given to the Trustee in this Section 7.06, including its right to be indemnified, are extended to, and shall be enforceable by the Trustee in each of its capacities hereunder and by each Agent, custodian and other Person employed with due care to act as agent hereunder. For purposes of this Section 7.06, "Trustee" shall include any predecessor Trustee; *provided*, *however*, that the gross negligence or willful misconduct of any Trustee shall not affect the rights of any other Trustee hereunder.

Section 7.07. Replacement of Trustee. (i) The Trustee may resign at any time by so notifying the Issuers. The Holders of a majority in principal amount of the Notes then outstanding may remove the Trustee by so notifying the Trustee and may appoint a successor Trustee. The Issuers shall be entitled to remove the Trustee or any Holder who has been a *bona fide* Holder for not less than six months may petition any court for removal of the Trustee and appointment of a successor Trustee, if:

A. the Trustee fails to comply with Section 7.11;

B. the Trustee has or acquires a conflict of interest in its capacity as Trustee that is not eliminated;

C. the Trustee is adjudged bankrupt or insolvent;

D. a receiver or other public officer takes charge of the Trustee or its property; or

E. the Trustee otherwise becomes incapable of acting

as Trustee hereunder.

(ii) If the Trustee resigns, is removed pursuant to Section 7.07(i) or if a vacancy exists in the office of Trustee for any reason (the Trustee in such event being referred to herein as the retiring Trustee), the Issuers shall promptly appoint a successor Trustee.

(iii) A successor Trustee shall deliver a written acceptance of its appointment to the retiring Trustee and to the Issuers. Thereupon the resignation or removal of the retiring Trustee shall become effective, and the successor Trustee shall have all the rights, powers and duties of the Trustee under this Indenture and the Notes Documents. The successor Trustee shall deliver a notice of its succession to Holders. The retiring Trustee shall promptly transfer all property held by it as Trustee to the successor Trustee; *provided* that all sums owing to the Trustee hereunder have been paid and subject to the lien provided for in Section 7.06.

(iv) If a successor Trustee does not take office within 30 days after the retiring Trustee resigns or is removed, (i) the retiring Trustee or the Holders of 10% in principal amount of the Notes may petition any court of competent jurisdiction for the appointment of a successor Trustee, or (ii) the retiring Trustee may appoint a successor Trustee at any time prior to the date on which a successor Trustee takes office; *provided* that such appointment is reasonably satisfactory to the Issuers.

(v) Notwithstanding the replacement of the Trustee pursuant to this Section 7.07, the Issuers' obligations under Section 7.06 shall continue for the benefit of the retiring Trustee.

(vi) For the avoidance of doubt, the rights, privileges, protections, immunities and benefits given to the Trustee in this Article VII, including its right to be indemnified, are extended to, and shall be enforceable by each Agent employed to act hereunder.

Section 7.08. Successor Trustee by Merger. If the Trustee consolidates with, merges or converts into, or transfers all or substantially all its corporate trust business or assets to, another corporation or banking association, the resulting, surviving or transferee corporation without any further act shall be the successor Trustee.

In case at the time such successor or successors by merger, conversion or consolidation to the Trustee shall succeed to the trusts created by this Indenture, any of the Notes shall have been authenticated but not delivered, any such successor to the Trustee may adopt the certificate of authentication of any predecessor trustee, and deliver such Notes so authenticated; and in case at that time any of the Notes shall not have been authenticated, any successor to the Trustee may authenticate such Notes either in the name of any predecessor hereunder or in the name of the successor to the Trustee; and in

all such cases such certificates shall have the full force which it is anywhere in the Notes or in this Indenture provided that the certificate of the Trustee shall have.

Section 7.09. Certain Provisions. Each Holder by accepting a Note authorizes and directs on his or her behalf the Trustee to enter into and to take such actions and to make such acknowledgements as are set forth in this Indenture or other documents entered into in connection therewith.

Section 7.10. Agents; General Provisions.

(i) The rights, powers, duties and obligations and actions of each Agent under this Indenture are several and not (i) joint or (ii) joint and several.

(ii) In the event that instructions given to any Agent are not reasonably clear, then such Agent shall be entitled to seek clarification from the Issuers or other party entitled to give the Agents instructions under this Indenture by written request promptly and in any event within one Business Day of receipt by such Agent of such instructions. If an Agent has sought clarification in accordance with this Section 7.10, then such Agent shall be entitled to take no action until such clarification is provided, and shall not incur any liability for not taking any action pending receipt of such clarification.

(iii) No Agent shall be under any duty or other obligation towards, or have any relationship of agency or trust for or with, any person other than the Issuers.

(iv) The Issuers shall notify each Agent in the event that they determine that any payment to be made by an Agent under the Notes is a payment which could be subject to FATCA Withholding if such payment were made to a recipient that is generally unable to receive payments free from FATCA Withholding, and the extent to which the relevant payment is so treated, provided, however, that the Issuers' obligation under this Section 7.10(iv) shall apply only to the extent that such payments are so treated by virtue of characteristics of the Issuers, the Notes, or both. The Issuers hereby notify each Agent that (1) interest paid by the US Co-Issuer to a foreign financial institution and (2) on or after January 1, 2019, all of the gross proceeds from the sale or other disposition of the Notes, will be subject to FATCA Withholding unless the payee satisfies conditions for exemption.

A. For the purposes of this Section 7.10(iv), "FATCA Withholding" means any withholding or deduction required pursuant to an agreement described in section 1471(b) of the Code, or otherwise imposed pursuant to sections 1471 through 1474 of the Code, any regulations or agreements thereunder, any official

interpretations thereof, or any law implementing an intergovernmental approach thereto.

(v) The US Co-Issuer shall deliver to each Agent, at least 5 Business Days preceding the first Interest Payment Date, which shall be September 1, 2017, an Officer's Certificate of the US Co-Issuer certifying the proportion of interest for which the US Co-Issuer is liable to pay to Holders on each Interest Payment Date ("Proportion of Interest"). Following any amendment to the Proportion of Interest, the US Co-Issuer shall deliver to each Agent, at least 5 Business Days preceding the first Interest Payment Date following such amendment to the Proportion of Interest, an Officer's Certificate of the US Co-Issuer certifying the amended Proportion of Interest. Each Agent will accept and shall be entitled to rely, without further inquiry, on such notice as sufficient evidence of the contents described therein.

(vi) The Issuers and the Agents acknowledge and agree that in the event of a Default or Event of Default, the Trustee may, by notice in writing to the Issuers and the Agents, require that the Agents act as agents of, and take instructions exclusively from, the Trustee. Until they have received such written notice from the Trustee, the Agents shall act solely as agents of the Issuers and shall have no fiduciary duty, or owe any obligation, towards any person other than the Issuers.

(vii) Moneys held by Agents need not be segregated from other funds except to the extent required by law. Subject to Article VIII, the Agents hold all funds as banker subject to the terms of this Indenture and shall not be liable for any interest earned thereon.

(viii) each Agent shall only perform those acts and duties as specifically set out in this Indenture and no other acts, covenants, obligations or duties shall be implied or read into this Indenture against any of the Agents.

Section 7.11. Eligibility; Disqualification. There will at all times be a Trustee hereunder that is a corporation organized and doing business within the European Union or the United States of America that is authorized to exercise corporate trustee power; and that is a corporation which is generally recognized as a corporation which customarily performs such corporate trustee roles and provides such corporate trustee services in transactions similar in nature to the offering of the Notes as described in the Offering Memorandum.

ARTICLE VIII

DISCHARGE OF INDENTURE; DEFEASANCE

Section 8.01. Discharge of Liability on Notes; Defeasance. (a) This Indenture will be discharged and cease to be of further effect (except as to surviving rights of conversion or transfer or exchange of the Notes, as expressly provided for in this Indenture) as to all outstanding Notes when (1) either (a) all the Notes previously authenticated and delivered (other than certain lost, stolen or destroyed Notes and certain Notes for which provision for payment was previously made and thereafter the funds have been released to the Issuers) have been delivered to the Paying Agent for cancellation; or (b) all Notes not previously delivered to the Paying Agent for cancellation (i) have become due and payable, (ii) will become due and payable at their Stated Maturity within one year or (iii) are to be called for redemption within one year under arrangements reasonably satisfactory to the Trustee for the giving of notice of redemption by the Trustee or Paying Agent in the name, and at the expense, of the Issuers; (2) the Issuers have deposited or caused to be deposited with the Trustee (or another entity designated by the Trustee for this purpose) U.S. dollars or U.S. dollar-denominated Government Obligations, or a combination thereof, as applicable, in an amount sufficient, without consideration of reinvestment, to pay and discharge the entire indebtedness on the Notes not previously delivered to the Paying Agent for cancellation, for principal, premium, if any, and interest to the date of deposit (in the case of Notes that have become due and payable), or to the Stated Maturity or redemption date, as the case may be; (3) the Issuers have paid or caused to be paid all other sums payable under this Indenture; (4) the Issuers have delivered irrevocable instructions to the Trustee to apply the funds deposited towards the payment of the Notes at maturity or on the redemption date, as the case may be; and (5) the Issuers have delivered to the Trustee an Officer's Certificate and an Opinion of Counsel each to the effect that all conditions precedent under this Section 8.01 relating to the satisfaction and discharge of this Indenture have been complied with; *provided* that any such counsel may rely on any Officer's Certificate as to matters of fact (including as to compliance with clauses (1), (2) and (3) of this Section 8.01). If requested in writing by the Issuers, the Trustee or Paying Agent may distribute any amounts deposited to the Holders prior to maturity or the redemption date, as the case may be, subject to DTC's applicable procedures. In such case, the payment to each Holder will equal the amount such Holder would have been entitled to receive at maturity or the relevant redemption date, as the case may be. For the avoidance of doubt, the distribution and payment to Holders prior to the maturity or redemption date as set forth above will not include any negative interest, present value adjustment, break cost or any further premium on such amounts.

(b) Subject to Section 8.01(c) and Section 8.02, the Parent at any time may terminate (i) all obligations of the Issuers and the Guarantors under the Notes, the Note Guarantees and this Indenture ("*legal defeasance option*"), and thereafter any omission to comply with such obligations shall not constitute a Default or Event of Default with respect to the Notes or (ii) their obligations under Article IV (other than Section 4.14) and under Section 5.01 (other than Section 5.01(a)(i) and Section

5.01(a)(ii)), and thereafter any omission to comply with such obligations shall not constitute a Default or an Event of Default with respect to the Notes and the events set forth in Section 6.01(d), Section 6.01(e) (other than with respect to Section 5.01(a)(i) and Section 5.01(a)(ii)), Section 6.01(f), Section 6.01(g) (other than with respect to the Issuer and Significant Subsidiaries) Section 6.01(h) (other than with respect to the Issuers), Section 6.01(i) and Section 6.01(j) shall not constitute Events of Default ("*covenant defeasance option*"). The Issuers at their option at any time may exercise their legal defeasance option notwithstanding their prior exercise of their covenant defeasance option.

If the Issuers exercise their legal defeasance option or their covenant defeasance option, each Guarantor will be released from all its obligations under its Guarantee.

Upon satisfaction of the conditions set forth herein and upon request of the Issuers, the Trustee shall acknowledge in writing the discharge of those obligations that the Issuers terminate.

(c) Notwithstanding Section 8.01(a) and Section 8.01(b) above, the Issuers' and the Guarantors' obligations in Section 2.07, Section 2.08, Section 2.09, Section 2.10, Section 2.11, Section 2.12, Section 2.13, Section 2.14, Section 7.01, Section 7.02, Section 7.03, Section 7.06, Section 7.07 and this Article VIII, as applicable, shall survive until the Notes have been paid in full. Thereafter, the Issuers' and any Guarantors' obligations in Section 7.06, Section 8.05 and Section 8.06, as applicable, shall survive.

Section 8.02. Conditions to Defeasance. (i) The Issuers may exercise their legal defeasance option or their covenant defeasance option only if:

A. the Issuers have irrevocably deposited in trust (the "*defeasance trust*") with the Trustee (or another entity designated by the Trustee for this purpose) cash in U.S. dollars or U.S. dollar-denominated Government Obligations or a combination thereof, as applicable in an amount sufficient, without consideration of reinvestment, for the payment of principal, premium, if any, and interest on the Notes to redemption or maturity, as the case may be;

B. an Opinion of Counsel in the United States to the effect that Holders of the relevant Notes will not recognize income, gain or loss for U.S. federal income tax purposes as a result of such deposit and defeasance and will be subject to U.S. federal income tax on the same amount and in the same manner and at the same times as would have been the case if such deposit and defeasance had not occurred (and in the case of legal defeasance only, such Opinion of Counsel in the United States must be based on a ruling of the U.S. Internal Revenue Service or other change in applicable U.S. federal income tax law);

C. an Officer's Certificate stating that the deposit was not made by the Issuers with the intent of defeating, hindering, delaying, defrauding or preferring any creditors of the Issuers;

D. an Officer's Certificate and an Opinion of Counsel (which opinion of counsel may be subject to customary assumptions and exclusions), each stating that all conditions precedent provided for or relating to legal defeasance or covenant defeasance, as the case may be, have been complied with;

E. an Opinion of Counsel to the effect that the trust resulting from the deposit does not constitute, or is qualified as, a regulated investment company under the U.S. Investment Company Act of 1940; and

F. the Issuers deliver to the Trustee all other documents or other information that the Trustee may reasonably require in connection with either defeasance option.

(ii) Before or after a deposit, the Issuers may make arrangements satisfactory to the Trustee for the redemption of Notes at a future date in accordance with Article III.

Section 8.03. Deposited Money and U.S. dollar-denominated Government Obligations To Be Held in Trust. Subject to Section 8.04 hereof, all money and U.S. dollar-denominated Government Obligations (including the proceeds thereof) deposited with the Trustee (or such other entity designated or appointed as agent by the Trustee for this purpose, or other qualifying trustee, collectively for purposes of this Section 8.03, the "Trustee") pursuant to Section 8.01 hereof in respect of the outstanding Notes will be held in trust and applied by the Trustee, in accordance with the provisions of such Notes and this Indenture, to the payment, either directly or through any Paying Agent as the Trustee may determine, to the Holders of such Notes of all sums due and to become due thereon in respect of principal, premium, if any, and interest, but such money need not be segregated from other funds except to the extent required by law.

Section 8.04. Repayment to Issuers. The Trustee and the Paying Agent shall promptly turn over to the Issuers upon request any money or U.S. dollar-denominated Government Obligations held by it as provided in this Article VIII which, in the written opinion of an internationally recognized firm of independent public accountants delivered to the Trustee (which delivery shall only be required if U.S. dollar-denominated Obligations have been so deposited), are in excess of the amount thereof which would then be required to be deposited to effect an equivalent discharge or defeasance in accordance with this Article VIII.

Subject to any applicable abandoned property law, the Trustee shall pay to the Issuers upon written request any money held by them for the payment of principal or interest that remains unclaimed for two years, and, thereafter, Holders entitled to the

money must look to the Issuers for payment as general creditors, and the Trustee and the Paying Agent shall have no further liability with respect to such monies.

Section 8.05. Indemnity for Government Obligations. The Issuers and the Guarantors, jointly and severally, shall pay and shall indemnify the Trustee against any tax, fee or other charge imposed on or assessed against deposited U.S. dollar-denominated Government Obligations or the principal and interest received on such U.S. dollar-denominated Government Obligations.

Section 8.06. Reinstatement. If the Trustee is unable to apply any money or U.S. dollar-denominated Government Obligations in accordance with this Article VIII by reason of any legal proceeding or by reason of any order or judgment of any court or governmental authority enjoining, restraining or otherwise prohibiting such application, the Issuers' and the Guarantors' obligations under this Indenture and the Notes shall be revived and reinstated as though no deposit had occurred pursuant to this Article VIII until such time as the Trustee is permitted to apply all such money or U.S. dollar-denominated Government Obligations in accordance with this Article VIII; *provided*, *however*, that if the Issuers have made any payment of principal of or interest on any Notes because of the reinstatement of their obligations, the Issuers shall be subrogated to the rights of the Holders of such Notes to receive such payment from the money or U.S. dollar-denominated Government Obligations held by the Trustee.

ARTICLE IX

AMENDMENTS AND WAIVERS

Section 9.01. Without Consent of Holders. Without the consent of any Holder, the Issuers, the Trustee and the other parties thereto, as applicable, may amend or supplement any Notes Documents to:

A. cure any ambiguity, omission, defect, error or inconsistency;

B. provide for the assumption by a successor Person of the obligations of an Issuer or any Restricted Subsidiary under any Notes Document;

C. add to the covenants or provide for a Note Guarantee for the benefit of the Holders or surrender any right or power conferred upon the Parent or any Restricted Subsidiary;

D. make any change that would provide additional rights or benefits to the Trustee or the Holders or that does not adversely affect the rights or benefits to the Trustee or any of the Holders in any material respect under the Notes Documents;

E. make such provisions as necessary (as determined

in good faith by the Board of Directors or an Officer of the Parent) for the issuance of Additional Notes;

F. to provide for any Restricted Subsidiary to provide a Note Guarantee in accordance with Section 4.01 or Section 4.08, to add Note Guarantees with respect to the Notes, to add security to or for the benefit of the Notes, or to confirm and evidence the release, termination, discharge or retaking of any Guarantee or Lien or any amendment in respect thereof with respect to the Notes when such release, termination, discharge or retaking or amendment is provided for under this Indenture;

G. to conform the text of this Indenture, the Note Guarantees or the Notes to any provision within the "Description of Notes" in the Offering Memorandum to the extent that such provision within the "Description of Notes" in the Offering Memorandum was intended to be a verbatim recitation of a provision of this Indenture, the Note Guarantees or the Notes; or

H. to evidence and provide for the acceptance and appointment under this Indenture of a successor Trustee pursuant to the requirements thereof or to provide for the accession by the Trustee to any Notes Document;

Section 9.02. With Consent of Holders. The Issuers, the Trustee and the other parties thereto, as applicable, may amend, supplement or otherwise modify the Notes Documents with the consent of Holders of at least a majority in principal amount of the Notes then outstanding (including consents obtained in connection with a purchase of, or tender offer or exchange offer for, Notes) and, except as otherwise stated herein, any default or compliance with any provisions thereof may be waived with the consent of the Holders of at least a majority in principal amount of the Notes then outstanding (including consents obtained in connection with a purchase of, or tender offer or exchange offer for, Notes). However, without the consent of each Holder of an outstanding Note affected, an amendment or waiver may not:

A. reduce the percentage of principal amount of Notes whose Holders must consent to an amendment, waiver or modification;

B. reduce the stated rate of or extend the stated time for payment of interest on any Note;

C. reduce the principal of or extend the Stated Maturity of any Note;

D. reduce the premium payable upon the redemption of any Note or change the time at which any Note may be redeemed,

in each case as described in Section 5 of the Notes;

E. make any Note payable in money other than that stated in the Note;

F. impair the right to institute suit for the enforcement of any Holder to receive payment of principal of and interest or Additional Amounts, if any, on such Holder's Notes on or after the due dates therefor or to institute suit for the enforcement of any such payment on or with respect to such Holder's Notes;

G. make any change to Section 4.13 that adversely affects the right of any Holder of such Notes in any material respect or amends the terms of such Notes in a way that would result in a loss of an exemption from any of the Taxes described thereunder or an exemption from any obligation to withhold or deduct Taxes so described thereunder unless the Parent or the applicable Payor agrees to pay Additional Amounts, if any, in respect thereof;

H. release any security interests granted for the benefit of the Holders of Notes other than in accordance with the terms of this Indenture or the applicable security documents;

I. waive a Default or Event of Default with respect to the nonpayment of principal, premium or interest or Additional Amounts, if any, on the Notes (except pursuant to a rescission of acceleration of the Notes by the Holders of at least a majority in aggregate principal amount of such Notes and a waiver of the payment default that resulted from such acceleration);

J. release any Guarantor from any of its obligations under its Guarantee or this Indenture, except in accordance with the terms of this Indenture; or

K. make any change in the amendment or waiver provisions which require the Holders' consent described in this sentence.

In respect of such matters described in Section 9.01 and this Section 9.02, the Trustee shall be entitled to require and rely absolutely on such evidence as it deems necessary, including Officer's Certificates and Opinions of Counsel.

For the avoidance of doubt, no amendment to or deletion of, or actions taken in compliance with, the covenants contained in this Indenture shall be deemed to impair or affect any rights of Holders of the Notes to receive payment of principal of, or premium, if any, or interest, on the Notes.

For so long as the Notes are listed on the Irish Stock Exchange and the rules of such exchange so require, the Parent will publish notice of any amendment, supplement and waiver in a daily newspaper with general circulation in Ireland (which is expected to be *The Irish Times*). Such notice of any amendment, supplement and waiver may also be published on the website of the Irish Stock Exchange (*www.ise.ie*) in lieu of a daily newspaper to the extent and in the manner permitted by the rules of the Irish Stock Exchange.

It shall not be necessary for the consent of the Holders under this Section 9.02 to approve the particular form of any proposed amendment of the Notes Documents, but it shall be sufficient if such consent approves the substance thereof. A consent to any amendment or waiver under this Indenture by any Holder of Notes given in connection with a tender of such Holder's Notes will not be rendered invalid by such tender.

After an amendment under this Section 9.02 becomes effective, in case of Holders of Definitive Notes, the Issuers shall mail or deliver to the Holders a notice briefly describing such amendment. The failure to give such notice to all Holders, or any defect therein, shall not impair or affect the validity of an amendment under this Section 9.02.

Except as set forth in this Section 9.02, the Notes issued on the Issue Date and any Additional Notes part of the same series will be treated as a single class for all purposes under this Indenture, including with respect to waivers and amendments. For the purposes of calculating the aggregate principal amount of Notes that have consented to or voted in favor of any amendment, waiver, consent, modifications or other similar action, the Issuers (acting reasonably and in good faith) shall be entitled to select a record date as of which the Dollar Equivalent of the principal amount of any Notes shall be calculated in such consent or voting process.

Section 9.03. Revocation and Effect of Consents and Waivers.

(i) A written consent to an amendment or a waiver by a Holder shall bind the Holder and every subsequent Holder of that Note or portion of the Notes that evidences the same debt as the consenting Holder's Note, even if notation of the consent or waiver is not made on the Note. However, any such Holder or subsequent Holder may revoke the written consent or waiver as to such Holder's Note or portion of the Note if the Trustee receives the notice of revocation before the date on which the Trustee receives an Officer's Certificate from the Issuers certifying that the requisite number of consents have been received. After an amendment or waiver becomes effective, it shall bind every Holder. An amendment or waiver becomes effective upon the (a) receipt by the Issuers or the Trustee of the requisite number of consents, (b) satisfaction of conditions to effectiveness as set forth in this Indenture and any indenture supplemental hereto containing such amendment or waiver and (c) execution of such amendment or waiver (or supplemental indenture) by the Issuers and the Trustee.

(ii) The Issuers may, but shall not be obligated to, fix a record date for the purpose of determining the Holders entitled to give their written consent or take any other action described above or required or permitted to be taken pursuant to this Indenture. If a record date is fixed, then notwithstanding Section 9.03(i), those Persons who were Holders at such record date (or their duly designated proxies), and only those Persons, shall be entitled to give such consent or to revoke any consent previously given or to take any such action, whether or not such Persons continue to be Holders after such record date. No such consent shall be valid or effective for more than 120 days after such record date.

Section 9.04. Notation on or Exchange of Notes. If an amendment changes the terms of a Note, the Trustee may require the Holder of the Note to deliver it to the Trustee. The Trustee may place an appropriate notation on the Note regarding the changed terms and return it to the Holder. Alternatively, if the Issuers or the Trustee so determine, the Issuers in exchange for the Note shall issue and the Trustee or an Authenticating Agent shall authenticate a new Note that reflects the changed terms. Failure to make the appropriate notation or to issue a new Note shall not affect the validity of such amendment.

Section 9.05. Trustee to Sign Amendments. The Trustee and the Issuers shall sign any amendment or supplement authorized pursuant to this Article IX if the amendment or supplement does not impose any personal obligations on the Trustee or adversely affect the rights, duties, liabilities or immunities of the Trustee under this Indenture, as applicable. If it does, the Trustee may, but need not, sign it. In signing such amendment or supplement the Trustee shall be entitled to receive an indemnity or security satisfactory to it and to receive, and (subject to Section 7.01) shall be fully protected in relying upon, an Officer's Certificate and an Opinion of Counsel stating that such amendment or supplement complies with this Indenture, the other Notes Documents and that such amendment or supplement has been duly authorized, executed and delivered and is the legally valid and binding obligation of the Issuers and the Guarantors enforceable against them in accordance with its terms, subject to customary exceptions.

ARTICLE X

NOTE GUARANTEES

Section 10.01. Note Guarantees.

(i) Subject to this Article X, each Guarantor, as primary obligor and not merely as a surety, jointly and severally, unconditionally, on a senior basis and subject to any limitations set out in any supplemental indenture, guarantees to each Holder of a Note authenticated and delivered by the Trustee (or the Authenticating Agent), to the Trustee and its successors and assigns, irrespective of the validity and enforceability of this Indenture, the Notes or the obligations of the Issuers hereunder or thereunder, that:

A. the principal of, Additional Amounts and premium, if any, and interest on, the Notes will be promptly paid in full when due, whether at maturity, by acceleration, redemption or otherwise, and interest on the overdue principal of and interest, Additional Amounts and premium, if any, on the Notes (to the extent permitted by law) and all other obligations of the Issuers to the Holders or the Trustee hereunder or thereunder will be promptly paid in full or performed, all in accordance with the terms hereof and thereof; and

B. in case of any extension of time of payment or renewal of any Notes or any of such other obligations, that same will be promptly paid in full when due or performed in accordance with the terms of the extension or renewal, whether at stated maturity, by acceleration or otherwise.

Failing payment when due of any amount so guaranteed or any performance so guaranteed for whatever reason, the Guarantors will be jointly and severally obligated to pay the same immediately. Each Guarantor agrees that this is a guarantee of payment and not a guarantee of collection.

(ii) To the extent permitted by the applicable law, each Guarantor hereby agrees that its obligations hereunder are unconditional, irrespective of the validity, regularity or enforceability of the Notes or this Indenture, the absence of any action or any delay or omission to assert any claim or to demand or enforce any remedy hereunder or thereunder, any waiver, surrender, release or consent by any Holder of the Notes with respect to any provisions hereof or thereof, the recovery of any judgment against the Issuers, any action to enforce the same or any other circumstance which might otherwise constitute a legal or equitable discharge or defense of a guarantor. Each Guarantor hereby waives diligence, presentment, demand of payment, filing of claims with a court in the event of insolvency or bankruptcy of the Issuers, any right to require a proceeding first against the Issuers, protest, notice and all demands whatsoever and covenant that this Note Guarantee will not be discharged except by complete performance of the obligations contained in the Notes and this Indenture.

(iii) If any Holder or the Trustee is required by any court or otherwise to return to or for the benefit of the Issuers, the Guarantors or any custodian, trustee, liquidator or other similar official acting in relation to either the Issuers or the Guarantors, any amount paid by either the Issuers or the Guarantors to the Trustee or such Holder, this Note Guarantee, to the extent theretofore discharged, will be reinstated in full force and effect.

(iv) Each Guarantor agrees that it will not be entitled to any right of subrogation in relation to the Holders in respect of any obligations guaranteed hereby until payment in full of all obligations guaranteed hereby. Each Guarantor further agrees that, as between the Guarantors, on the one hand, and the Holders and the Trustee, on the other hand,

A. the maturity of the obligations guaranteed hereby may be accelerated as provided in Article VI hereof for the purposes of this Note Guarantee, notwithstanding any stay, injunction or other prohibition preventing such acceleration in respect of the obligations guaranteed hereby, and

B. in the event of any declaration of acceleration of such obligations as provided in Article VI, such obligations (whether or not due and payable) will forthwith become due and payable by the Guarantors for the purpose of this Note Guarantee. The Guarantors will have the right to seek contribution from any non-paying Guarantor so long as the exercise of such right does not impair the rights of the Holders under the Note Guarantee.

(v) Each Guarantor also agrees to pay any and all costs and expenses (including properly incurred attorneys' fees, disbursements and expenses) incurred by the Trustee in enforcing any rights under this Section.

Section 10.02. Successors and Assigns. This Article X shall be binding upon each Guarantor and its successors and assigns and shall inure to the benefit of the successors and assigns of the Trustee and the Holders and, in the event of any transfer or assignment of rights by any Holder or the Trustee, the rights and privileges conferred upon that party in this Indenture and in the Notes shall automatically extend to and be vested in such transferee or assignee, all subject to the terms and conditions of this Indenture.

Each party to this Indenture hereby agrees and undertakes to execute and deliver all such documents and do all such acts and things which are legally required to fully and effectively give effect to this Section 10.02.

Section 10.03. No Waiver. Neither a failure nor a delay on the part of the Trustee or the Holders in exercising any right, power or privilege under this Article X shall operate as a waiver thereof, nor shall a single or partial exercise thereof preclude any other or further exercise of any right, power or privilege. The rights, remedies and benefits of the Trustee and the Holders herein expressly specified are cumulative and not exclusive of any other rights, remedies or benefits which either may have under this Article X at law, in equity, by statute or otherwise.

Section 10.04. Modification. No modification, amendment or waiver of any provision of this Article X, nor the consent to any departure by any Guarantor

therefrom, shall in any event be effective unless the same shall be in writing and signed by the Trustee, and then such waiver or consent shall be effective only in the specific instance and for the purpose for which given. No notice to or demand on any Guarantor in any case shall entitle such Guarantor to any other or further notice or demand in the same, similar or other circumstances.

Section 10.05. Execution of Supplemental Indenture for Guarantors. Each Subsidiary which is required to become a Guarantor pursuant to this Indenture shall promptly execute and deliver to the Trustee a supplemental indenture in the form attached to this Indenture as Exhibit B pursuant to which such Subsidiary shall become a Guarantor under this Article X. Concurrently with the execution and delivery of such supplemental indenture, the Issuers shall deliver to the Trustee an Opinion of Counsel and an Officer's Certificate in each case, prepared in accordance with Section 12.02. The obligations of a Guarantor executing and delivering a supplemental indenture to this Indenture providing for a Note Guarantee of the Notes under this Article X shall be subject to such limitations as are mandated under applicable laws in addition to the limitations set forth in Section 10.07 and set out in the relevant supplemental indenture.

Section 10.06. Release of the Note Guarantees. (a) The Note Guarantee of a Guarantor will terminate and release:

(1) upon a sale or other disposition (including by way of consolidation or merger) of the Capital Stock of the relevant Guarantor (whether by direct sale or sale of a holding company) or the sale or disposition of all or substantially all the assets of the Guarantor (other than to the Parent or a Restricted Subsidiary) otherwise permitted by this Indenture;

(2) upon the designation in accordance with this Indenture of the Guarantor as an Unrestricted Subsidiary;

(3) upon defeasance or discharge of the Notes, as provided in Article VIII;

(4) as described under Article IX;

(5) as described under Section 4.08(b);

(6) as a result of a transaction permitted by Section 5.01(b); or

(7) to the extent reasonably required to consummate the French Hydro-electric Sale; *provided* that, on or prior to the date falling 60 days after the completion of the French Hydro-electric Sale, either (i) FerroPem, S.A.S. or (ii) an entity acquired or formed by the Parent or one of its Subsidiaries for purposes of consummating the French Hydro-electric Sale (whichever of (i) and (ii) is the entity that will hold the assets held by FerroPem, S.A.S. prior to the French Hydro-electric Sale other than the assets disposed of in the French Hydro-electric Sale) will provide a Note Guarantee by entering into a supplemental indenture that shall include customary guarantee limitation

language appropriate for the circumstances in which such Note Guarantee is provided so that such Person shall, after giving effect to the consummation of the French Hydro-electric Sale and any related transactions, be liable for an amount equal to the aggregate of the proceeds of the Notes directly or indirectly on-lent by the Issuers to FerroPem, S.A.S. or any of its Subsidiaries outstanding immediately prior to the consummation of the French Hydro-electric Sale under intercompany loans or similar arrangements.

Upon the request of the Parent, the Trustee shall take all necessary actions to effectuate any release of a Note Guarantee in accordance with these provisions, subject to customary protections and indemnifications. Each of the releases set forth above shall be effected by the Trustee without the consent of the Holders or any other action or consent on the part of the Trustee.

Section 10.07. Limitations on Obligations of Guarantors.

Any term or provision of this Indenture to the contrary notwithstanding, the maximum aggregate amount of the obligations guaranteed hereunder by any Guarantor shall not exceed the maximum amount that can be hereby guaranteed by the applicable Guarantor without rendering the Note Guarantee, as it relates to such Guarantor, voidable under applicable laws relating to fraudulent conveyance, fraudulent transfer, improper corporate benefit, financial assistance or similar laws affecting the rights of creditors generally; *provided* that, with respect to each relevant jurisdiction, such obligations shall be limited in the manner described in any supplemental indenture.

Section 10.08. Local Law Limitations.

(a) Limitations on Liability of French Guarantors.

(1) In the case of any Guarantor incorporated under the laws of France (a "*French Guarantor*") its obligations under this Indenture shall apply only insofar as required to:

A) guarantee the payment obligations under this Indenture and the Notes of its direct or indirect Subsidiaries which are or become Guarantors from time to time under this Indenture and incurred by those Subsidiaries in their capacity as Guarantor (without double counting) *provided* that where such Subsidiary itself guarantees the obligations of a member of the Group which is not a direct or indirect Subsidiary of the relevant French Guarantor, the amounts payable under this Section 10.8(a)(1)(A) in respect of the obligations of this Subsidiary as a Guarantor, shall be limited as set out in Section 10.8(a)(1)(B) below; and

(B) guarantee the payment obligations of (i) the Issuers or (ii) other Guarantors which are not direct or indirect Subsidiaries of that French Guarantor, provided that in such cases such guarantee shall be limited: (x) to the payment obligations of (i) the Issuers under this Indenture and the Notes or (ii) such other Guarantors under this Indenture but in each case (y) not exceeding an amount equal to the aggregate of all amounts made available (directly or indirectly) to the Issuers or such other Guarantors under this Indenture and

the Notes/and received out of the proceeds of the Notes and on-lent (directly or indirectly by way of intercompany loans) to that French Guarantor and outstanding at the time a call is made under its Guarantee (the "*French Maximum Guaranteed Amount*"); it being specified that any payment made by such French Guarantor under this Indenture in respect of the obligations of any Issuer or any other Guarantor shall reduce *pro tanto* the outstanding amount of the intercompany loans (if any) due by such French Guarantor under the relevant intercompany loan arrangements referred to above.

(2) For the avoidance of doubt, any payment made by a French Guarantor under Section 10.8(a)(1)(B) pursuant to the guarantees granted under this Indenture shall reduce *pro tanto* the French Maximum Guaranteed Amount.

(3) Notwithstanding any other provision of this Indenture, no French Guarantor shall secure liabilities under this Indenture and the Notes which would result in such French Guarantor not complying with French financial assistance rules as set out in Article L. 225-216 of the French Commercial Code (*Code de commerce*) or would constitute a misuse of corporate assets within the meaning of article L. 241-3, L. 242-6 or L. 244-1 of the French Commercial Code (*Code de commerce*) or any other applicable law or regulations having the same effect, as interpreted by French courts.

(4) It is acknowledged that no French Guarantor is acting jointly and severally with the Issuer or other Guarantors as to its obligations arising under or in connection with this Indenture.

(5) Notwithstanding any other provision of this Indenture, (i) the representations, undertakings and warranties made in this Indenture by any French Guarantor (or by the Issuer) shall be made, in each case, in respect of itself and its Subsidiaries only and for the avoidance of any doubt will not apply in relation to matters pertaining exclusively to its shareholders or its holding companies; and (ii) the indemnities granted in this Indenture by each French Guarantor shall be, in each case, in respect of its own breach or that of (i) any Issuer (if such Issuer is a direct or indirect Subsidiary of that French Guarantor) or (ii) its Subsidiaries which are French Guarantors.

(b) Limitations on Liability of Spanish Guarantors. Any obligations or liabilities incurred or assumed under this Indenture by any Spanish Guarantor shall not include any obligations or liabilities which, if incurred, would constitute a breach of the financial assistance limitations set out under Articles 143 and 150 of Spanish Royal Legislative Decree 1/2010, of 2 July, approving the consolidated text of the Spanish Capital Companies Act, as interpreted by Spanish courts.

Section 10.09. Non-Impairment.

The failure to endorse a Note Guarantee on any Note shall not affect or impair the validity thereof.

ARTICLE XI

[RESERVED]

ARTICLE XII

MISCELLANEOUS

Section 12.01. Notices. Any notice or communication shall be in writing, in the English language, and delivered in person or mailed by first-class mail addressed as follows:

if to the Parent or US Co-Issuer:

Ferroglobe PLC
2nd Floor West Wing,
Lansdowne House, 57 Berkeley Square,
London W1J 5ER,
United Kingdom
Attention: Joe Ragan

with copy to:

Cravath, Swaine & Moore LLP
CityPoint, One Ropemaker Street
London EC2Y 9HR
United Kingdom
Fax no: +44 207 860 1150
Attention: Philip Boeckman

if to the Trustee, Registrar, Transfer Agent or Paying Agent

Wilmington Trust, National Association
1100 North Market Street
Wilmington, DE 19890
United States of America
Fax no: +1 302-636-4149
Attention: Ferroglobe Trust Administrator

Each of the Issuers or the Trustee by notice to the others may designate additional or different addresses for subsequent notices or communications.

Any notice or communication sent to a Holder of Definitive Registered Notes shall be in writing and shall be made by first-class mail, postage prepaid, or by

hand delivery to the Holder at the Holder's address as it appears on the registration books of the Registrar, with a copy to the Trustee.

For so long as any of the Notes are listed on the Irish Stock Exchange and the rules of the Irish Stock Exchange so require, notices of the Issuers with respect to the Notes will be published in a daily newspaper with general circulation in Ireland (which is expected to be *The Irish Times*) or if, in the opinion of the Issuers such publication is not practicable, in an English language newspaper having general circulation in Europe. Notices may also be published on the website of the Irish Stock Exchange (*www.ise.ie*) in lieu of publication in a daily newspaper so long as the rules of the Irish Stock Exchange are complied with.

If and so long as any Notes are represented by one or more Global Notes and ownership of book-entry interests therein are shown on the records of DTC or any successor securities clearing agency appointed at the request of the Issuers, notices will be delivered in accordance with the applicable procedures of DTC or such successor clearing agency to such securities clearing agency for communication to the owners of such book-entry interests and such notices shall be deemed to have been given on the date delivered to such securities clearing agency.

Notices given by first-class mail, postage prepaid, will be deemed given five calendar days after mailing. Notices given by publication will be deemed to have been given on the date of such publication or, if published more than once on different dates, on the first date on which publication is made; *provided* that, if notices are mailed, such notice shall be deemed to have been given on the later of such publication and the seventh day after being so mailed. Any notice or communication mailed to a Holder shall be mailed to such Person by first-class mail or other equivalent means and shall be sufficiently given to such Holder if so mailed within the time prescribed. Failure to mail a notice or communication to a Holder or any defect in it shall not affect its sufficiency with respect to other Holders. If a notice or communication is mailed in the manner provided above, it is duly given, whether or not the addressee receives it.

Any notices provided by the Issuers to the Trustee or to an Agent shall be in the English language or a certified translation.

Section 12.02. Certificate and Opinion as to Conditions Precedent. Upon any request or application by the Issuers to the Trustee to take or refrain from taking any action under this Indenture, the Issuers shall furnish to the Trustee:

(i) an Officer's Certificate in form and substance reasonably satisfactory to the Trustee stating that, in the opinion of the signers, all conditions precedent, if any, provided for in this Indenture relating to the proposed action have been complied with and any other matters that the Trustee may reasonably request; and

(ii) if requested by the Trustee, an Opinion of Counsel in form and substance reasonably satisfactory to the Trustee stating that, in the

opinion of such counsel, all such conditions precedent have been complied with and any other matters that the Trustee may reasonably request.

Section 12.03. Statements Required in Certificate or Opinion. Each certificate or opinion with respect to compliance with a covenant or condition provided for in this Indenture shall include:

(i) a statement that the Person making such certificate or opinion has read such covenant or condition;

(ii) a brief statement as to the nature and scope of the examination or investigation upon which the statements or opinions contained in such certificate or opinion are based;

(iii) a statement that, in the opinion of such Person, such Person has made such examination or investigation as is necessary to enable that Person to express an informed opinion as to whether or not such covenant or condition has been complied with; and

(iv) a statement as to whether or not, in the opinion of such Person, such covenant or condition has been complied with.

Section 12.04. When Notes are to be Disregarded. In determining whether the Holders of the required principal amount of the Notes have concurred in any direction, waiver or consent, the Notes owned by the Issuers or by any Person directly or indirectly controlling or controlled by or under direct or indirect common control with the Issuers will be disregarded and deemed not to be outstanding, except that, for the purpose of determining whether the Trustee shall be protected in relying on any such direction, waiver or consent, only Notes so owned about which a Responsible Officer of the Trustee has been notified in accordance with this Indenture shall be so disregarded. Subject to the foregoing, only Notes outstanding at the time shall be considered in any such determination.

Section 12.05. Rules by Trustee, Paying Agent and Registrar. The Trustee may make reasonable rules for action by or a meeting of Holders. The Registrar and the Paying Agent may make reasonable rules for their functions.

Section 12.06. Legal Holidays. If a payment date is not a Clearing System Business Day, payment shall be made on the next succeeding day that is a Clearing System Business Day and no interest shall accrue for the intervening period. If a regular record date is not a Clearing System Business Day, the record date shall not be affected.

Section 12.07. Governing Law. THIS INDENTURE, THE NOTES AND THE NOTE GUARANTEES, AND THE RIGHTS AND DUTIES OF THE PARTIES THEREUNDER, SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.

Section 12.08. Consent to Jurisdiction and Service. Each of the parties hereto irrevocably agrees that any suit, action or proceeding arising out of, related to, or in connection with this Indenture, the Notes and the Note Guarantees or the transactions contemplated hereby, and any action arising under U.S. Federal or state securities laws, may be instituted in any U.S. federal or state court located in the State and City of New York, Borough of Manhattan; irrevocably waives, to the fullest extent it may effectively do so, any objection which it may now or hereafter have to the laying of venue of any such proceeding; and irrevocably submits to the jurisdiction of such courts in any such suit, action or proceeding. The Parent and each of the Guarantors hereby appoints the US Co-Issuer as its authorized agent (the "*Authorized Agent*") upon whom process may be served in any such suit, action or proceeding which may be instituted in any Federal or state court located in the State of New York, Borough of Manhattan arising out of or based upon this Indenture, the Notes or the transactions contemplated hereby or thereby, and any action brought under U.S. Federal or state securities laws. The Issuers and each of the Guarantors expressly consents to the jurisdiction of any such court in respect of any such action and waives any other requirements of or objections to personal jurisdiction with respect thereto and waives any right to trial by jury. Such appointment shall be irrevocable unless and until replaced by an agent reasonably acceptable to the Trustee. The Issuers and each of the Guarantors represents and warrants that the Authorized Agent has agreed to act as said agent for service of process, and the Issuers agree to take any and all action, including the filing of any and all documents and instruments, that may be necessary to continue such appointment in full force and effect as aforesaid. Service of process upon the Authorized Agent and written notice of such service to the Parent shall be deemed, in every respect, effective service of process upon the Issuers and any Guarantor.

Section 12.09. No Recourse Against Others. No director, officer, employee, incorporator or shareholder of the Parent or any of their respective Subsidiaries or Affiliates as such, shall have any liability for any obligations of the Issuers or any Guarantor under this Indenture or any Notes Documents, or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes.

Section 12.10. Successors. All agreements of the Issuers and each Guarantor in this Indenture and the Notes shall bind its successors. All agreements of the Trustee in this Indenture shall bind its successors.

Section 12.11. Multiple Originals. The parties may sign any number of copies of this Indenture. Each signed copy shall be an original, but all of them together represent the same agreement. One signed copy is enough to prove this Indenture.

Section 12.12. Table of Contents; Headings. The table of contents, cross-reference sheet and headings of the Articles and Sections of this Indenture have been inserted for convenience of reference only, are not intended to be considered a part hereof and shall not modify or restrict any of the terms or provisions hereof.

Section 12.13. Prescription. Claims against the Issuers and the Guarantors for the payment of principal, or premium, if any, on the Notes will be prescribed 10 years after the applicable due date for payment thereof. Claims against the Issuers and the Guarantors for the payment of interest on the Notes will be prescribed five years after the applicable due date for payment of interest.

Section 12.14. Patriot Act.

In order to comply with the laws, rules, regulations and executive orders in effect from time to time applicable to banking institutions, including, without limitation, those relating to the funding of terrorist activities and money laundering, including Section 326 of the USA Patriot Act of the United States ("Applicable Law"), the Trustee and Agents are required to obtain, verify, record and update certain information relating to individuals and entities which maintain a business relationship with the Trustee and Agents. Accordingly, each of the parties agree to provide to the Trustee and Agents, upon their request from time to time such identifying information and documentation as may be available for such party in order to enable the Trustee and Agents to comply with Applicable Law.

IN WITNESS WHEREOF, the parties have caused this Indenture to be duly executed as of the date first written above.

Ferroglobe PLC,
as Issuer

By: /s/ Javier López Madrid
Name: Javier López Madrid
Title: Executive Chairman

Globe Specialty Metals, Inc.,
as Issuer

By: /s/ Pedro Larrea Paguaga
Name: Pedro Larrea Paguaga
Title: Director

Grupo FerroAtlántica S.A.U.,
as Guarantor

By: /s/ Pedro Larrea Paguaga
Name: Pedro Larrea Paguaga
Title: CEO

FerroPem, S.A.S.,
as Guarantor

By: /s/ Pedro Larrea Paguaga
Name: Pedro Larrea Paguaga
Title: President

Globe Metallurgical, Inc.,
as Guarantor

By: /s/ Joe Ragan
Name: Joe Ragan
Title: Director

Alden Resources LLC,
as Guarantor

By: /s/ Joe Ragan
Name: Joe Ragan
Title: Manager

ARL Resources, LLC,
as Guarantor

By: Alden Resources LLC,
as sole member

By: /s/ Joe Ragan
Name: Joe Ragan
Title: Manager

ARL Services, LLC,

By: Alden Resources LLC,
as sole member

By: /s/ Joe Ragan
Name: Joe Ragan
Title: Manager

Alden Sales Corp, LLC,
as Guarantor

By: /s/ Joe Ragan
Name: Joe Ragan
Title: Director

Core Metals Group Holdings LLC,
as Guarantor

By: /s/ Joe Ragan
Name: Joe Ragan
Title: Director

Core Metals Group LLC,
as Guarantor

By: /s/ Joe Ragan
Name: Joe Ragan
Title: Director

Metallurgical Process Materials, LLC,
as Guarantor

By: /s/ Joe Ragan
Name: Joe Ragan
Title: Director

Tennessee Alloys Company, LLC,
as Guarantor

By: /s/ Joe Ragan
Name: Joe Ragan
Title: Manager

Alabama Sand and Gravel, Inc.,
as Guarantor

By: /s/ Joe Ragan
Name: Joe Ragan
Title: Director

GSM Sales, Inc.,
as Guarantor

By: /s/ Joe Ragan
Name: Joe Ragan
Title: Director

Gatliff Services, LLC,
as Guarantor

By: /s/ Joe Ragan
Name: Joe Ragan
Title: Manager

Norchem, Inc.,
as Guarantor

By: /s/ Joe Ragan
Name: Joe Ragan
Title: Director

Wilmington Trust, National Association,
as Trustee, Registrar, Transfer Agent and Paying Agent

By: /s/ John T. Needham, Jr.
Name: John T. Needham, Jr.
Title: Vice President

EXHIBIT A

PROVISIONS RELATING

TO THE NOTES

These provisions relating to the Notes are in addition to and not in lieu of the provisions relating to the Notes found in Articles II and III of the Indenture. In the event any inconsistency between the language in this Exhibit A and corresponding language in the Indenture, the language in the Indenture shall control.

1. Definitions.

Capitalized terms used but not otherwise defined in this Exhibit A shall have the meanings assigned to them in the Indenture. For the purposes of this Exhibit A the following terms shall have the meanings indicated below:

"*Definitive Registered Note*" means a certificated Note that does not include the Global Notes Legend.

"*Depositary*" means, with respect to the Notes issuable or issued in whole or in part in global form, DTC, including any and all successors thereto appointed as Depositary hereunder and having become such pursuant to the applicable provision(s) of the Indenture.

"*DTC*" means The Depository Trust Company, a limited-purpose trust company under New York law, or any successor thereto.

"*Global Notes*" has the meaning given to it in Section 2.1(a)(iv) of this Exhibit A.

"*Global Notes Legend*" means the legend set forth under that caption in Exhibit A-1.

"*Notes Custodian*" means the custodian with respect to a Global Note (as appointed by the applicable Depositary) or any successor person thereto.

"*QIB*" means a "qualified institutional buyer" as defined in Rule 144A.

"*Regulation S*" means Regulation S under the Securities Act.

"*Regulation S Global Notes*" has the meaning given to it in Section 2.1(a)(ii) of this Exhibit A.

"*Regulation S Notes*" means all Notes offered and sold outside the United States in reliance on Regulation S.

"*Restricted Notes Legend*" means the legend set forth under that caption in this Exhibit A-1.

"*Rule 144A*" means Rule 144A under the Securities Act.

"*Rule 144A Global Notes*" has the meaning given to it in Section 2.1(a)(i) of this Exhibit A.

"*Rule 144A Notes*" means all Notes offered and sold to QIBs in reliance on Rule 144A.

"*Securities Act*" means the U.S. Securities Act of 1933, as amended, and the rules and regulations of the SEC promulgated thereunder, as amended.

"*Transfer Restricted Notes*" means Definitive Registered Notes and any other Notes that bear or are required to bear the Restricted Notes Legend.

2. The Notes.

2.1 Form and Dating.

(a) Global Notes.

(i) Notes offered and sold within the United States to QIBs in reliance on Rule 144A shall be issued initially in the form of one or more permanent global notes in fully registered form without interest coupons (collectively, the "*Rule 144A Global Notes*").

(ii) Notes offered and sold outside the United States in reliance on Regulation S and denominated in U.S. dollars shall be issued initially in the form of one or more permanent global notes in fully registered form without interest coupons (collectively, the "*Regulation S Global Notes*").

(iii) The Rule 144A Global Notes and the Regulation S Global Notes shall bear the Global Notes Legend. The Rule 144A Global Notes shall bear the Restricted Notes Legend. The Rule 144A Global Notes and the Regulation S Global Notes shall be deposited on behalf of the purchasers of the Notes represented thereby with the applicable Notes Custodian, and registered in the name of Cede & Co. as nominee of DTC, duly executed by the Issuers and authenticated by the Trustee or the Authenticating Agent as provided in the Indenture.

(iv) The Rule 144A Global Notes and the Regulation S Global Notes are each referred to herein as a "*Global Note*" and are collectively referred to herein as "*Global Notes*". The aggregate principal amount of the Global Notes may from time to time be increased or decreased by adjustments made on the records of the Trustee or Registrar and the Depositary or its nominee and on the schedules thereto as hereinafter provided, in connection with transfers, exchanges, redemptions and repurchases of beneficial interests therein.

(b) Book-Entry Provisions. This Section 2.1(b) shall apply only to a Global Note deposited with or on behalf of the Depositary.

The Issuers shall execute and the Trustee or the Authenticating Agent, as the case may be, shall, in accordance with this Section 2.1(b) and Section 2.2 and pursuant to an Authentication Order of the Issuers signed by an Officer of the Issuers, authenticate and deliver initially one or more Global Notes that (i) shall be registered in the name Cede & Co., as nominee of DTC, for such Global Note or Global Notes and (ii) shall be delivered by the Trustee or Authenticating Agent, as the case may be, to such Depositary or pursuant to such Depositary's instructions or held by the Notes Custodian.

Members of, or participants in, DTC ("*Agent Members*") shall have no rights under the Indenture with respect to any Global Note held on their behalf by the Depositary or by the Notes Custodian or under such Global Note, and the Depositary may be treated by the Issuers, the Trustee and any agent of the Issuers or the Trustee as the absolute owner of such Global Note for all purposes whatsoever. Notwithstanding the foregoing, nothing herein shall prevent the Issuers, the Trustee or any agent of the Issuers or the Trustee from giving effect to any written certification, proxy or other authorization furnished by DTC or impair, as between DTC and their respective Agent Members, the operation of customary practices thereof governing the exercise of the rights of a holder of a beneficial interest in any Global Note.

(c) Definitive Registered Notes. Except as provided in Section 2.3 or 2.4 of this Exhibit A, owners of beneficial interests in Global Notes will not be entitled to receive physical delivery of certificated Notes.

2.2 Authentication. The Trustee or the Authenticating Agent, as the case may be, shall authenticate and make available for delivery the Notes upon a written Authentication Order of the Issuers signed by an Officer of the Issuers. Such Authentication Order shall (a) specify the amount of the Notes to be authenticated, the date on which the original issue of Notes is to be authenticated, (b) direct the Trustee or the Authenticating Agent to authenticate such Notes and (c) certify that all conditions precedent to the issuance of such Notes have been complied with in accordance with the terms hereof.

2.3 Transfer and Exchange.

(a) Transfer and Exchange of Definitive Registered Notes. When Definitive Registered Notes are presented to the Registrar or Transfer Agent, as the case may be, with a request:

(i) to register the transfer of such Definitive Registered Notes; or

(ii) to exchange such Definitive Registered Notes for an equal principal amount of Definitive Registered Notes of other authorized denominations,

the Registrar or the Transfer Agent, as the case may be, shall register the transfer or make the exchange as requested if its reasonable requirements for such transaction are met,

provided, however, that the Definitive Registered Notes surrendered for transfer or exchange:

(1) shall be duly endorsed or accompanied by a written instrument of transfer in form reasonably satisfactory to the Issuers and the Registrar or the Transfer Agent, as the case may be, duly executed by the Holder thereof or its attorney duly authorized in writing; and

(2) in the case of Transfer Restricted Notes, are accompanied by the following additional information and documents, as applicable:

(i) if such Definitive Registered Notes are being delivered to the Registrar or the Transfer Agent, as the case may be, by a Holder for registration in the name of such Holder, without transfer, a certification from such Holder to that effect (in the form set forth on the reverse side of the Note);

(ii) if such Definitive Registered Notes are being transferred to the Issuers, a certification to that effect (in the form set forth on the reverse side of the Note); or

(iii) if such Definitive Registered Notes are being transferred pursuant to an exemption from registration in accordance with Rule 144A, Regulation S or Rule 144 under the Securities Act or in reliance upon another exemption from the registration requirements of the Securities Act, (x) a certification to that effect (in the form set forth on the reverse side of the Note) and (y) if the Issuers or Registrar or Transfer Agent, as the case may be, so requests, an opinion of counsel or other evidence reasonably satisfactory to it as to the compliance with the restrictions set forth in the legend set forth in Section 2.3(e)(i) of this Exhibit A.

(b) Restrictions on Transfer of a Definitive Registered Note for a Beneficial Interest in a Global Note. A Definitive Registered Note may not be exchanged for a beneficial interest in a Global Note except upon satisfaction of the requirements set forth below. Upon receipt by the Registrar of a Definitive Registered Note, duly endorsed or accompanied by a written instrument of transfer in form reasonably satisfactory to the Issuer, the Registrar and the Transfer Agent, together with:

(i) certification (in the form set forth on the reverse side of the Note) that such Definitive Registered Note is being transferred to a QIB in accordance with Rule 144A; and

(ii) written instructions directing the Registrar to make, or to direct the Notes Custodian to make, an adjustment on its books and records with respect to such Global Note to reflect an increase in the aggregate principal amount of the Notes represented by the Global Note, such instructions to contain information regarding the account to be credited with such increase,

then the Trustee or the Authenticating Agent shall cancel such Definitive Registered Note and cause, or direct the Notes Custodian to cause, in accordance with the standing

instructions and procedures existing between the Depositary and the Notes Custodian, the aggregate principal amount of Notes represented by the Global Note to be increased by the aggregate principal amount of the Definitive Registered Note to be exchanged and shall credit or cause to be credited to the account of the Person specified in such instructions a beneficial interest in the Global Note equal to the principal amount of the Definitive Registered Note so cancelled. If no Global Notes are then outstanding and the Global Note has not been previously exchanged for certificated securities pursuant to Section 2.4 of this Exhibit A, the Issuers shall issue and the Trustee or the Authenticating Agent shall authenticate, upon written order of the Issuers in the form of an Authentication Order, a new Global Note in the appropriate principal amount.

(c) Transfer and Exchange of Global Notes.

(i) The transfer and exchange of Global Notes or beneficial interests therein shall be effected through the Depositary, in accordance with the Indenture (including applicable restrictions on transfer set forth herein, if any) and the procedures of the Depositary therefor. A transferor of a beneficial interest in a Global Note shall deliver a written order given in accordance with the Depositary's procedures containing information regarding the participant account of the Depositary to be credited with a beneficial interest in such Global Note or another Global Note and such account shall be credited in accordance with such order with a beneficial interest in the applicable Global Note and the account of the Person making the transfer shall be debited by an amount equal to the beneficial interest in the Global Note being transferred. Transfers and exchanges of book-entry interests in a Global Note to Persons who take delivery thereof in the form of a book-entry interest in a Global Note shall be made in accordance with the transfer restrictions set forth in the Global Notes Legend. Transfers by an owner of a beneficial interest in a Rule 144A Global Note to a transferee who takes delivery of such interest through a Regulation S Global Note shall be made only upon receipt by the Registrar of a certification in the form provided in Exhibit B from the transferor to the effect that such transfer is being made in accordance with Regulation S or pursuant to an exemption from registration under the Securities Act provided by Rule 144 (if applicable) under the Securities Act.

(ii) Notwithstanding any other provisions of this Exhibit A (other than the provisions set forth in Section 2.4 of this Exhibit A), a Global Note may not be transferred as a whole except by the Depositary to a successor Depositary or a nominee of such successor Depositary.

(d) Legend.

(i) Except as permitted by the following paragraph (ii) or (iii), each Note certificate evidencing the Rule 144A Global Notes or any Definitive Registered Notes held pursuant to Rule 144A (and all Notes issued in exchange therefor or in substitution thereof) shall bear a legend in substantially the following form (each defined term in the legend being defined as such for purposes of the legend only):

"THIS NOTE HAS NOT BEEN REGISTERED UNDER THE UNITED STATES SECURITIES ACT OF 1933, AS AMENDED (THE "U.S. SECURITIES ACT"), AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD, EXCEPT AS SET FORTH IN THE FOLLOWING SENTENCE. BY ITS ACQUISITION HEREOF, THE HOLDER FOR THE BENEFIT OF THE ISSUERS AND THE GUARANTORS AND ANY OF THEIR SUCCESSORS IN INTEREST (1) REPRESENTS THAT IT IS A "QUALIFIED INSTITUTIONAL BUYER" (AS DEFINED IN RULE 144A UNDER THE U.S. SECURITIES ACT), (2) AGREES THAT IT WILL NOT PRIOR TO THE DATE WHICH IS ONE YEAR (OR SUCH SHORTER PERIOD OF TIME AS PERMITTED BY RULE 144 UNDER THE U.S. SECURITIES ACT OR ANY SUCCESSOR PROVISION THEREUNDER) AFTER THE LATER OF THE DATE OF ORIGINAL ISSUE AND THE LAST DATE ON WHICH THE ISSUERS OR ANY AFFILIATE OF THE ISSUERS WAS THE OWNER OF THE NOTES (OR ANY PREDECESSOR THERETO) (THE "RESALE RESTRICTION TERMINATION DATE") RESELL, PLEDGE OR OTHERWISE TRANSFER THIS NOTE OR A BENEFICIAL INTEREST IN THIS NOTE EXCEPT (A) TO THE ISSUERS, THE GUARANTORS OR ANY SUBSIDIARY THEREOF, (B) TO A PERSON THAT THE SELLER, AND ANY PERSON ACTING ON ITS BEHALF, REASONABLY BELIEVES IS A QUALIFIED INSTITUTIONAL BUYER IN A TRANSACTION COMPLYING WITH RULE 144A UNDER THE U.S. SECURITIES ACT, (C) PURSUANT TO OFFERS AND SALES THAT OCCUR OUTSIDE THE UNITED STATES IN AN OFFSHORE TRANSACTION IN COMPLIANCE WITH REGULATION S UNDER THE U.S. SECURITIES ACT, (D) PURSUANT TO ANY OTHER AVAILABLE EXEMPTION FROM REGISTRATION UNDER THE U.S. SECURITIES ACT OR (E) PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE U.S. SECURITIES ACT, AND IN EACH OF SUCH CASES IN COMPLIANCE WITH ANY APPLICABLE SECURITIES LAW OF ANY STATE OF THE UNITED STATES AND (3) AGREES THAT IT WILL DELIVER TO EACH PERSON TO WHOM THIS NOTE IS TRANSFERRED A NOTICE SUBSTANTIALLY TO THE EFFECT OF THIS LEGEND. PROVIDED THAT THE ISSUERS, THE TRUSTEE AND THE REGISTRAR SHALL HAVE THE RIGHT PRIOR TO ANY SUCH OFFER, SALE OR TRANSFER PURSUANT TO CLAUSE (C) OR PURSUANT TO CLAUSE (D) PRIOR TO THE RESALE RESTRICTION TERMINATION DATE TO REQUIRE THAT AN OPINION OF COUNSEL, CERTIFICATIONS OR OTHER INFORMATION SATISFACTORY TO THE ISSUERS, THE TRUSTEE AND THE REGISTRAR IS COMPLETED AND DELIVERED BY THE TRANSFEROR. THIS LEGEND WILL BE REMOVED UPON THE REQUEST OF THE ISSUERS AFTER THE RESALE RESTRICTION TERMINATION DATE. AS USED HEREIN, THE TERMS "OFFSHORE TRANSACTION", AND "UNITED STATES" HAVE THE MEANING GIVEN TO THEM BY REGULATION S UNDER THE U.S. SECURITIES ACT"

Each Definitive Registered Note held pursuant to Rule 144A shall bear the following additional legend:

"IN CONNECTION WITH ANY TRANSFER, THE HOLDER WILL DELIVER TO THE REGISTRAR AND TRANSFER AGENT SUCH CERTIFICATES

AND OTHER INFORMATION AS THE ISSUERS MAY REASONABLY REQUIRE TO CONFIRM THAT THE TRANSFER COMPLIES WITH THE FOREGOING RESTRICTIONS".

(ii) Upon any sale or transfer of a Transfer Restricted Note that is a Definitive Registered Note, the Holder thereof shall be permitted to exchange such Transfer Restricted Note for a Definitive Registered Note that does not bear the legends set forth above and rescind any restriction on the transfer of such Transfer Restricted Note if the Holder certifies in writing to the Transfer Agent and Registrar that its request for such exchange was made in reliance on Rule 144 (such certification to be in the form set forth on the reverse of the Note).

(iii) Any additional Notes sold in a registered offering under the Securities Act shall not be required to bear the Restricted Notes Legend.

(e) Cancellation or Adjustment of Global Note. At such time as all beneficial interests in a Global Note have either been exchanged for Definitive Registered Notes, transferred, redeemed, repurchased or cancelled, such Global Note shall be returned by the Depositary to Trustee or the Authenticating Agent for cancellation or retained and cancelled by the Trustee or the Authenticating Agent. At any time prior to such cancellation, if any beneficial interest in a Global Note is exchanged for Definitive Registered Notes, transferred in exchange for an interest in another Global Note, redeemed, repurchased or cancelled, the principal amount of Notes represented by such Global Note shall be reduced and an adjustment shall be made on the books and records of the Registrar (if it is then the Notes Custodian for such Global Note) with respect to such Global Note, by the Trustee or the Notes Custodian, to reflect such reduction.

(f) Obligations with Respect to Transfers and Exchanges.

(i) To permit registrations of transfers and exchanges, the Issuers shall execute and the Trustee or an Authenticating Agent shall authenticate, Definitive Registered Notes and Global Notes at the Registrar's request.

(ii) No service charge shall be made for any registration of transfer or exchange, but the Issuers may require payment of a sum sufficient to cover any transfer tax, assessments, or similar governmental charge payable in connection therewith (other than any such transfer taxes, assessments or similar governmental charge payable upon exchange or transfer pursuant to Section 2.07, 3.06, 4.05, 4.14 or 9.04 of the Indenture).

(iii) Prior to the due presentation for registration of transfer of any Note, the Issuers, the Trustee, the Paying Agent or the Registrar may deem and treat the person in whose name a Note is registered as the absolute owner of such Note for the purpose of receiving payment of principal of and interest on such Note and for all other purposes whatsoever, whether or not such Note is overdue, and none of the Issuers, the Trustee, the Paying Agent or the Registrar shall be affected by notice to the contrary.

(iv) All Notes issued upon any transfer or exchange pursuant to the terms of the Indenture shall evidence the same debt and shall be entitled to the same benefits under the Indenture as the Notes surrendered upon such transfer or exchange.

(g) No Obligation of the Trustee.

(i) The Trustee and Agents shall have no responsibility or obligation to any beneficial owner of a Global Note, a member of, or a participant in the Depositary or any other Person with respect to the accuracy of the records of the Depositary or its nominee or of any participant or member thereof, with respect to any ownership interest in the Notes or with respect to the delivery to any participant, member, beneficial owner or other Person (other than the Depositary) of any notice (including any notice of redemption or repurchase) or the payment of any amount, under or with respect to such Notes. All notices and communications to be given to the Holders and all payments to be made to Holders under the Notes shall be given or made only to the registered Holders (which shall be the Depositary or its nominee in the case of a Global Note). The rights of beneficial owners in any Global Note shall be exercised only through the Depositary subject to the applicable rules and procedures of the Depositary. The Trustee and Agents may rely and shall be fully protected in relying upon information furnished by the Depositary with respect to its members, participants and any beneficial owners.

(ii) The Trustee shall have no obligation or duty to monitor, determine or inquire as to compliance, and shall not be responsible or liable for compliance, with any restrictions on transfer, exchange, redemption, purchase or repurchase, as applicable, imposed under the Indenture or under applicable law or regulation with respect to any transfer, exchange, redemption, purchase or repurchase, as applicable of any interest in any Note (including, without limitation, any transfers between or among Depositary participants, members or beneficial owners in any Global Note) other than to require delivery of such certificates and other documentation or evidence as are expressly required by, and to do so if and when expressly required by, the terms of the Indenture, and to examine the same to determine substantial compliance as to form with the express requirements hereof, it being understood that without limiting the generality of the foregoing, the Trustee shall not have any obligation or duty to monitor, determine or inquire as to compliance, and shall not be responsible or liable for compliance, with restrictions on transfer, exchange, redemption, purchase or repurchase, as applicable, of minimum denominations imposed under the Indenture or under applicable law or regulation with respect to any transfer, exchange, redemption, purchase or repurchase, as applicable, of any interest in any Note.

2.4 Transfer and Exchange of Global Notes for Definitive Registered Notes.

(a) A Global Note deposited with the Depositary or with the Notes Custodian pursuant to Section 2.1 of this Exhibit A shall be transferred to the beneficial owners thereof in the form of Definitive Registered Notes in an aggregate principal amount equal to the principal amount of such Global Note, in exchange for such Global

Note, only if such transfer complies with Section 2.3 of this Exhibit A and (i) the Depositary notifies the Issuers that it is unwilling or unable to continue as a Depositary for such Global Note and a successor depositary is not appointed by the Issuers within 120 days of such notice or after the Issuers become aware of such cessation, or (ii) if the owner of a book-entry interest in such Global Note requests such exchange in writing delivered through the Depository following an Event of Default and enforcement action is being taken in respect thereof under the Indenture.

(b) Any Global Note that is transferable to the beneficial owners thereof pursuant to this Section 2.4 shall be surrendered by the Depositary to the Trustee or the Registrar, to be so transferred, in whole or from time to time in part, without charge, and the Trustee or an Authenticating Agent shall authenticate and deliver, upon such transfer of each portion of such Global Note, an equal aggregate principal amount of Definitive Registered Notes of authorized denominations. Any portion of a Global Note transferred pursuant to this Section 2.4 shall be executed, authenticated and delivered only in minimum denominations of $150,000 and multiples of $1,000 in excess thereof and registered in such names as the Depositary shall direct. Any certificated Note in the form of a Definitive Registered Note delivered in exchange for an interest in the Global Note shall, to the extent required by Section 2.3(d) of this Exhibit A, bear the Restricted Notes Legend.

(c) Subject to the provisions of Section 2.4(b) of this Exhibit A, the registered Holder of a Global Note may grant proxies and otherwise authorize any Person, including Agent Members and Persons that may hold interests through Agent Members, to take any action which a Holder is entitled to take under the Indenture or the Notes.

(d) In the event of the occurrence of any of the events specified in Section 2.4(a)(i) or (ii) of this Exhibit A, the Issuers will promptly make available to the Trustee a reasonable supply of Definitive Registered Notes in fully registered form without interest coupons.

[FORM OF FACE OF NOTE]

9⅜% SENIOR NOTES DUE 2022

[Global Notes Legend]

UNLESS THIS CERTIFICATE IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITORY TRUST COMPANY ("DTC"), TO THE ISSUERS OR THEIR AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE OR PAYMENT, AND ANY CERTIFICATE ISSUED IS REGISTERED IN THE NAME OF ITS AUTHORIZED NOMINEE, OR SUCH OTHER NAME AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC (AND ANY PAYMENT IS MADE TO ITS AUTHORIZED NOMINEE, OR TO SUCH OTHER ENTITY AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC), ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH AS THE REGISTERED OWNER HEREOF, ITS AUTHORIZED NOMINEE, HAS AN INTEREST HEREIN.

TRANSFERS OF THIS GLOBAL NOTE SHALL BE LIMITED TO TRANSFERS IN WHOLE, BUT NOT IN PART, TO NOMINEES OF DTC OR TO A SUCCESSOR THEREOF OR SUCH SUCCESSOR'S NOMINEE AND TRANSFERS OF PORTIONS OF THIS GLOBAL NOTE SHALL BE LIMITED TO TRANSFERS MADE IN ACCORDANCE WITH THE RESTRICTIONS SET FORTH IN THE INDENTURE REFERRED TO ON THE REVERSE HEREOF.

[Restricted Notes Legend]

THIS NOTE HAS NOT BEEN REGISTERED UNDER THE UNITED STATES SECURITIES ACT OF 1933, AS AMENDED (THE "U.S. SECURITIES ACT"), AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD, EXCEPT AS SET FORTH IN THE FOLLOWING SENTENCE. BY ITS ACQUISITION HEREOF, THE HOLDER FOR THE BENEFIT OF THE ISSUERS AND THE GUARANTORS AND ANY OF THEIR SUCCESSORS IN INTEREST (1) REPRESENTS THAT IT IS A "QUALIFIED INSTITUTIONAL BUYER" (AS DEFINED IN RULE 144A UNDER THE U.S. SECURITIES ACT), (2) AGREES THAT IT WILL NOT PRIOR TO THE DATE WHICH IS ONE YEAR (OR SUCH SHORTER PERIOD OF TIME AS PERMITTED BY RULE 144 UNDER THE U.S. SECURITIES ACT OR ANY SUCCESSOR PROVISION THEREUNDER) AFTER THE LATER OF THE DATE OF ORIGINAL ISSUE AND THE LAST DATE ON WHICH THE ISSUERS OR ANY AFFILIATE OF THE ISSUERS WAS THE OWNER OF THE NOTES (OR ANY PREDECESSOR THERETO) (THE "RESALE RESTRICTION TERMINATION DATE") RESELL, PLEDGE OR OTHERWISE TRANSFER THIS NOTE OR A BENEFICIAL INTEREST IN THIS NOTE EXCEPT (A) TO THE ISSUERS, THE GUARANTORS OR ANY SUBSIDIARY THEREOF, (B) TO A PERSON THAT THE SELLER, AND ANY PERSON ACTING ON ITS BEHALF, REASONABLY BELIEVES IS A QUALIFIED INSTITUTIONAL BUYER IN A TRANSACTION COMPLYING WITH RULE 144A UNDER

THE U.S. SECURITIES ACT, (C) PURSUANT TO OFFERS AND SALES THAT OCCUR OUTSIDE THE UNITED STATES IN AN OFFSHORE TRANSACTION IN COMPLIANCE WITH REGULATION S UNDER THE U.S. SECURITIES ACT, (D) PURSUANT TO ANY OTHER AVAILABLE EXEMPTION FROM REGISTRATION UNDER THE U.S. SECURITIES ACT OR (E) PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE U.S. SECURITIES ACT, AND IN EACH OF SUCH CASES IN COMPLIANCE WITH ANY APPLICABLE SECURITIES LAW OF ANY STATE OF THE UNITED STATES AND (3) AGREES THAT IT WILL DELIVER TO EACH PERSON TO WHOM THIS NOTE IS TRANSFERRED A NOTICE SUBSTANTIALLY TO THE EFFECT OF THIS LEGEND. PROVIDED THAT THE ISSUERS, THE TRUSTEE AND THE REGISTRAR SHALL HAVE THE RIGHT PRIOR TO ANY SUCH OFFER, SALE OR TRANSFER PURSUANT TO CLAUSE (C) OR PURSUANT TO CLAUSE (D) PRIOR TO THE RESALE RESTRICTION TERMINATION DATE TO REQUIRE THAT AN OPINION OF COUNSEL, CERTIFICATIONS OR OTHER INFORMATION SATISFACTORY TO THE ISSUERS, THE TRUSTEE AND THE REGISTRAR IS COMPLETED AND DELIVERED BY THE TRANSFEROR. THIS LEGEND WILL BE REMOVED UPON THE REQUEST OF THE ISSUERS AFTER THE RESALE RESTRICTION TERMINATION DATE. AS USED HEREIN, THE TERMS “OFFSHORE TRANSACTION”, AND “UNITED STATES” HAVE THE MEANING GIVEN TO THEM BY REGULATION S UNDER THE U.S. SECURITIES ACT.

[Each Definitive Registered Note shall bear the following additional legend:]

IN CONNECTION WITH ANY TRANSFER, THE HOLDER WILL DELIVER TO THE REGISTRAR AND TRANSFER AGENT SUCH CERTIFICATES AND OTHER INFORMATION AS THE ISSUERS MAY REASONABLY REQUIRE TO CONFIRM THAT THE TRANSFER COMPLIES WITH THE FOREGOING RESTRICTIONS.

[Rule 144A / Regulation S]

CUSIP
ISIN

Issue Date: _____

[$_____9⅜% Senior Notes due 2022]

No. _____ $ _____

FERROGLOBE PLC
and
GLOBE SPECIALTY METALS, INC.

Ferroglobe PLC, a public limited company incorporated under the laws of England and Wales, having its registered office at 5 Fleet Place, London, England EC4M 7RD, United Kingdom and Globe Specialty Metals, Inc., a corporation organized under the laws of Delaware, having its registered office at 515 S. DuPont Hwy., Dover, Delaware, the United States of America, promise to pay Cede & Co., or its registered assigns, the principal sum of $_____ subject to adjustments listed on the Schedule of Increases or Decreases in the Global Note attached hereto, on March 1, 2022.

Interest Payment Dates: March 1 and September 1, commencing on _____.

Record Dates: [One Clearing System Business Day immediately preceding the relevant Interest Payment Date][*for Global Notes*]/[February 15 and August 15 immediately preceding the relevant Interest Payment Date][*for Definitive Registered Notes*]

This Note and the Note Guarantees in respect thereof are also subject to the transfer restrictions set forth on the other side of this Note and in the Offering Memorandum dated February 9, 2017.

The maximum principal amount of the Notes may be increased in accordance with the provisions set forth under the Indenture.

Additional provisions of this Note are set forth on the other side of this Note.

(Signature page to follow.)

IN WITNESS WHEREOF, Ferroglobe PLC has caused this Note to be signed manually or by facsimile by its duly authorized officers.

Dated:

Ferroglobe PLC

By: _____

Name:

Title:

IN WITNESS WHEREOF, Globe Specialty Metals, Inc. has caused this Note to be signed manually or by facsimile by its duly authorized officers.

Dated:

Globe Specialty Metals, Inc.

By: _____

Name:

Title:

Dated: _____

Trustee's Certificate of Authentication

This is one of the 9.375% Senior Notes due 2022 described in the within-mentioned Indenture.

WILMINGTON TRUST, NATIONAL ASSOCIATION,
as Trustee

By: _____
Authorized Signatory

1. Interest.

Ferroglobe PLC, a public limited company incorporated under the laws of England and Wales (such company, and its successors and assigns under the Indenture hereinafter referred to, being herein called the "*Parent*"), and Globe Specialty Metals, Inc., a corporation organized under the laws of Delaware (such company, and its successors and assigns under the Indenture hereinafter referred to, being herein called the "US Co-Issuer and, together with the Parent, the "*Issuers*"), promise to pay interest on the principal amount of this Note at the rate of 9.375% per annum. The Issuers shall pay interest on this Note semi-annually in arrears on March 1 and September 1, commencing on September 1, 2017. The Issuers will make each interest payment to Holders of record of the Notes one Clearing System Business Day immediately preceding the relevant Interest Payment Date. Interest on the Notes shall accrue from the most recent date to which interest has been paid or duly provided for or, if no interest has been paid or duly provided for, from the Issue Date until the principal hereof is due. Interest shall be computed on the basis of a 360-day year comprised of twelve 30-day months.

The Issuers will pay interest (including post-petition interest in any proceeding under any Bankruptcy Law) on overdue principal at a rate that is 1% higher than the then applicable interest rate on the Notes to the extent lawful; it will pay interest (including post-petition interest in any proceeding under any Bankruptcy Law) and Additional Amounts, if any, on overdue installments of interest, if any (without regard to any applicable grace period), at the same rate to the extent lawful.

2. Method of Payment.

Holders must surrender Notes to the Paying Agent to collect principal payments. The Issuers shall pay principal, premium, Additional Amounts, if any, and interest in U.S. dollars. Principal, interest and premium, if any, on the Global Notes (as defined below) will be payable at the specified office or agency of one or more Paying Agents; *provided* that all such payments with respect to the Notes represented by one or more Global Note registered in the name of or held by a nominee of a custodian for DTC, will be made by wire transfer of immediately available funds to the account specified by the Holder or Holders thereof.

Principal, interest and premium, Additional Amounts, if any, on the Definitive Registered Notes will be payable at the specified office or agency of one or more Paying Agents maintained for such purposes. In addition, interest on the Definitive Registered Notes may be paid by wire transfer to a U.S. dollar account with a bank located in the United States in accordance with instructions provided to the Paying Agent in writing by the registered Holder no less than 15 days prior to a payment date or check mailed to the registered Holder entitled thereto as shown on the register for the Definitive Registered Notes.

The rights of Holders to receive the payments of interest on such Notes are subject to applicable procedures of DTC. If the due date for any payment in respect of any Notes is not a Clearing System Business Day at the place at which such payment is due to be paid, the Holder thereof will not be entitled to payment of the amount due until the next succeeding

Clearing System Business Day at such place, and will not be entitled to any further interest or other payment as a result of any such delay.

3. Paying Agent and Registrar.

Initially, Wilmington Trust, National Association will act as Paying Agent, Registrar and Transfer Agent. The Issuers may appoint and change any Registrar, Transfer Agent or Paying Agent. The Issuers or any of their Restricted Subsidiaries may act as Registrar, Transfer Agent and Paying Agent.

4. Indenture.

The Issuers issued the Notes under the Indenture dated as of February 15, 2017 (the "*Indenture*"), among the Issuers, the Guarantors, Wilmington Trust, National Association, as trustee (in such capacity, the "*Trustee*"), paying agent, registrar and transfer agent. The terms of the Notes include those stated in the Indenture. Terms defined in the Indenture and not defined herein have the meanings ascribed thereto in the Indenture. The Notes are subject to all terms and provisions of the Indenture, and Holders are referred to the Indenture for a statement of such terms and provisions. In the event of a conflict, the terms of the Indenture control.

The Notes are general, senior obligations of the Issuer. This Note is one of the Notes referred to in the Indenture. The Notes and, if issued, any Additional Notes are treated as a single class for all purposes under the Indenture, including, without limitation, with respect to waivers, amendments, redemptions and offers to purchase, except as otherwise provided for therein.

5. Optional Redemption.

(a) Except as provided in this Section 5 and Section 6, the Notes are not redeemable until March 1, 2019.

(b) On and after March 1, 2019 the Issuers may redeem all or, from time to time, part of the Notes upon not less than 10 nor more than 60 days' notice to the Holder, at the following redemption prices (expressed as a percentage of principal amount) plus accrued and unpaid interest and Additional Amounts (as defined below), if any, to, but not including, the applicable redemption date (subject to the right of Holders of record on the relevant record date to receive interest due on the relevant interest payment date), if redeemed during the twelve-month period beginning on March 1 of the years indicated below:

Year	**Redemption Price**
2019	104.688%
2020	102.344%
2021 and thereafter	100.000%

Any such redemption and notice may, in the Issuers' discretion, be subject to the satisfaction of one or more conditions precedent. If such redemption or notice is subject to satisfaction of one or more conditions precedent, such notice shall state that, in the Issuers' discretion, the redemption date may be delayed until such time as any or all such conditions shall be satisfied, or such redemption may not occur and such notice may be rescinded in the event that any or all such conditions shall not have been satisfied by the redemption date, or by the redemption date so delayed; *provided* that in no case shall the notice have been delivered less than 10 days or more than 60 days prior to the date on which such redemption (if any) occurs. In addition, the Issuers may provide in such notice that payment of the redemption price and performance of the Issuers' obligations with respect to such redemption may be performed by another Person.

(c) Prior to March 1, 2019, the Issuers may on any one or more occasions redeem up to 35% of the aggregate principal amount of the Notes (including the principal amount of any Additional Notes), upon not less than 10 nor more than 60 days' notice, with funds in an aggregate amount (the "*Redemption Amount*") not exceeding the Net Cash Proceeds of one or more Equity Offerings at a redemption price of 109.375% of the principal amount of the Notes, plus accrued and unpaid interest and Additional Amounts, if any, to, but not including, the applicable redemption date (subject to the right of Holders of record on the relevant record date to receive interest due on the relevant interest payment date); *provided* that:

(1) at least 65% of the original principal amount of the Notes (including the principal amount of any Additional Notes) remains outstanding immediately after each such redemption; and

(2) the redemption occurs within 120 days after the closing of such Equity Offering.

(d) Prior to March 1, 2019, the Issuers may redeem all or, from time to time, a part of the Notes upon not less than 10 nor more than 60 days' notice at a redemption price equal to 100% of the principal amount of the Notes plus the Applicable Premium and accrued and unpaid interest and Additional Amounts, if any, to, but not including, the applicable redemption date (subject to the right of Holders of record on the relevant record date to receive interest due on the relevant interest payment date). Any such redemption and notice may, at the Issuers' discretion, be subject to the satisfaction of one or more conditions precedent.

"*Applicable Premium*" means with respect to any Note the greater of

(A) 1% of the principal amount of such Note, and

(B) the excess (to the extent positive) of:

(i) the present value at such redemption date of (1) the redemption price of such Note at March 1, 2019 (such redemption price (expressed in percentage of principal amount) being set forth in the table above under Section 5(b) (excluding accrued and unpaid interest)), plus (2) all required interest payments due on such Note to and including March 1, 2019 (excluding accrued but unpaid interest), computed upon the redemption

date using a discount rate equal to the Treasury Rate at such redemption date plus 50 basis points; over

(ii) the outstanding principal amount of such Note,

as calculated by the Issuers or on behalf of the Issuers by such Person as the Issuers shall designate. For the avoidance of doubt, calculation of Applicable Premium shall not be an obligation or duty of the Trustee or any Paying Agent or Registrar.

"*Treasury Rate*" means, as obtained by the Issuers, as of any date of redemption of Notes, the yield to maturity as of such date U.S. Treasury securities with a constant maturity (as compiled and published in the most recent Federal Reserve Statistical Release H.15 (519) that has become publicly available at least two Business Days prior to the date notice of the applicable redemption of Notes is sent in accordance with the Indenture (or, if such Statistical Release is no longer published, any publicly available source of similar market data)) most nearly equal to the period from such date to March 1, 2019; *provided*, *however*, that if the period from such date to March 1, 2019, is less than one year, the weekly average yield on actively traded U.S. Treasury securities adjusted to a constant maturity of one year will be used.

6. Optional Tax Redemption.

The Issuers may redeem the Notes in whole, but not in part, at any time upon giving not less than 10 nor more than 60 days' prior notice to the Holders of the Notes (which notice will be irrevocable) at a redemption price equal to 100% of the principal amount thereof, together with accrued and unpaid interest, if any, to the date fixed for redemption (a "*Tax Redemption Date*") (subject to the right of Holders of record on the relevant record date to receive interest due on the relevant interest payment date) and all Additional Amounts (as defined in Section 4.13 of the Indenture), if any, then due and which will become due on the Tax Redemption Date as a result of the redemption or otherwise, if any, if the Issuers determine in good faith that, as a result of:

(1) any change in, or amendment to, the law or treaties (or any regulations or rulings promulgated thereunder) of a Relevant Taxing Jurisdiction (as defined in Section 4.13 of the Indenture) affecting taxation; or

(2) any amendment to, or change in an official application or interpretation of such laws, treaties, regulations or rulings (including a holding, judgment or order by a court of competent jurisdiction or a change in published administrative practice) (each of the foregoing in clauses (1) and (2), a "*Change in Tax Law*"),

a Payor (as defined below) is, or on the next interest payment date in respect of the Notes would be, required to pay Additional Amounts with respect of the Notes (but, in the case of a Guarantor, only if the payment giving rise to such requirement cannot be made by the Issuers or another Guarantor who can make such payment without the obligation to pay Additional Amounts) and such obligation cannot be avoided by taking reasonable measures available to the Payor (including, for the avoidance of doubt, the appointment of a new Paying Agent where this would be reasonable). Such Change in Tax Law must be announced and become effective on or after the Issue Date (or if the applicable Relevant Taxing Jurisdiction became a Relevant Taxing

Jurisdiction on a date after the Issue Date, such later date). The foregoing provisions shall apply *mutatis mutandis* to any successor Person, after such successor Person becomes a party to the Indenture, with respect to a change or amendment occurring after the time such successor Person becomes a party to the Indenture.

Notice of redemption for taxation reasons will be published in accordance with the procedures described in Section 8. Notwithstanding the foregoing, no such notice of redemption will be given (a) earlier than 60 days prior to the earliest date on which the Payor would be obligated to make such payment of Additional Amounts and (b) unless at the time such notice is given, such obligation to pay such Additional Amounts remains in effect. Prior to the publication or mailing of any notice of redemption of Notes pursuant to the foregoing, the Issuers will deliver to the Trustee (a) an Officer's Certificate stating that it is entitled to effect such redemption and setting forth a statement of facts showing that the conditions precedent to its right so to redeem have been satisfied and (b) an opinion of an independent tax counsel of recognized standing to the effect that the Payor has been or will become obligated to pay Additional Amounts as a result of a Change in Tax Law. The Trustee shall be entitled to rely on such Officer's Certificate and opinion as sufficient evidence of the satisfaction of the conditions precedent described above, without further inquiry, in which event it will be conclusive and binding on the Holders.

7. Sinking Fund.

The Issuers are not required to make mandatory redemption payments or sinking fund payments with respect to the Notes.

8. Notice of Redemption.

Subject to the next paragraph, not less than 10 days but not more than 60 days before a date for redemption of Notes, the Issuers shall transmit to each Holder (with a copy to the Trustee and Registrar) a notice of redemption in accordance with Section 12.01 of the Indenture; *provided*, *however*, that any notice of redemption provided for by Section 6 shall not be given (a) earlier than 60 days prior to the earliest date on which the Payor would be obligated to make a payment of Additional Amounts and (b) unless at the time such notice is given, the obligation to pay such Additional Amounts remains in effect. In addition, for so long as the Notes are listed on the Irish Stock Exchange and the rules of the Irish Stock Exchange so require, the Issuers shall publish notice of redemption in a daily newspaper with general circulation in Ireland (which is expected to be *The Irish Times*) and in addition to such publication, not less than 10 nor more than 60 days prior to the redemption date, mail such notice to Holders by first-class mail, postage prepaid, at their respective addresses as they appear on the registration books of the Registrar. While in global form, notices to Holders may be delivered via DTC and in accordance with the applicable procedures of DTC in lieu of notice via registered mail. Such notice of redemption may also be published on the website of the Irish Stock Exchange (*www.ise.ie*) in lieu of publication in a daily newspaper to the extent and as permitted by the rules of the Irish Stock Exchange. The notice shall identify the Notes to be redeemed and shall state the information required pursuant to Section 3.03 of the Indenture.

At the Issuers' request, the Trustee or the Paying Agent shall give the notice of redemption in the Issuers' name and at the Issuers' expense. In such event, the Issuers shall deliver to the Trustee and the Paying Agent, with a copy to the Trustee, at least 5 Business Days prior to the date on which notice of redemption is to be delivered to the Holders (unless a shorter period is satisfactory to the Registrar), an Officer's Certificate requesting that the Registrar give such notice and the information required and within the time periods specified by this Section 8.

If less than all of the Notes are to be redeemed at any time, the Trustee will select Notes for redemption in compliance with the requirements of the principal securities exchange, if any, on which the Notes are listed, and in compliance with the applicable procedures DTC, or if the Notes are not so listed or such exchange prescribes no method of selection and the Notes are not held through DTC, or DTC prescribes no method of selection, on a *pro rata* basis by lot or by such other method as the Trustee deems fair and appropriate; *provided, however*, that no Definitive Registered Note of $150,000 in aggregate principal amount or less shall be redeemed in part and only Notes in integral multiples of $1,000 will be redeemed. None of the Trustee, the Paying Agent nor the Registrar will be liable for any selections made by it in accordance with this paragraph.

If any Note is to be redeemed in part only, the notice of redemption that relates to that Note shall state the portion of the principal amount thereof to be redeemed. In the case of a Definitive Registered Note, a new Definitive Registered Note in principal amount equal to the unredeemed portion of any Definitive Registered Note redeemed in part will be issued in the name of the Holder thereof upon cancellation of the original Definitive Registered Note. In the case of a Global Note, an appropriate notation will be made on such Note to decrease the principal amount thereof to an amount equal to the unredeemed portion thereof. Subject to the terms of the applicable redemption notice, Notes called for redemption become due on the date fixed for redemption. Unless the Issuers default in payment of the redemption price, on and after the redemption date, interest ceases to accrue on Notes or portions of Notes called for redemption. If the Issuers elect to redeem the Notes or portions thereof and request the Trustee to distribute to the Holders of the Notes any amounts deposited in trust (which, for the avoidance of doubt, will include accrued and unpaid interest to the date fixed for redemption) prior to the date fixed for redemption in accordance with the provisions set forth under Section 8.01 the applicable redemption notice will state that Holders of the Notes will receive such amounts deposited in trust prior to the date fixed for redemption and the payment date.

9. Additional Amounts.

All payments made by a Payor on the Notes or any Note Guarantee, as applicable, will be made free and clear of and without withholding or deduction for, or on account of, any Taxes subject to and in accordance with Section 4.13 of the Indenture.

10. Repurchase of Notes at the Option of Holders upon (i) a Change of Control and (ii) the occurrence of certain Asset Sales.

If a Change of Control occurs, each Holder of Notes will have the right, subject to certain conditions specified in the Indenture, to require the Issuers to repurchase all or any part of such Holder's Notes at a purchase price in cash equal to 101% of the principal amount of the

Notes, plus accrued and unpaid interest to but excluding the date of purchase (subject to the right of Holders of record on the relevant record date to receive interest due on the relevant interest payment date) as provided in, and subject to the terms of, the Indenture.

In accordance with Section 4.05 of the Indenture, the Issuers will be required to, or may be permitted to, offer to purchase Notes upon the occurrence of certain events, including certain Asset Dispositions.

11. [Reserved]

12. Denominations; Transfer; Exchange.

The Notes are in registered form without interest coupons in minimum denominations of $150,000 and multiples of $1,000 in excess thereof. A Holder may transfer or exchange Notes in accordance with the Indenture. In connection with any such transfer or exchange, the Indenture will require the transferring or exchanging Holder to, among other things, furnish appropriate endorsements and transfer documents, furnish information regarding the account of the transferee at DTC, where appropriate, furnish certain certificates and opinions, and pay any taxes, duties and governmental charges in connection with such transfer or exchange. Any such transfer or exchange will be made without charge to the Holder, other than any taxes, duties and governmental charges payable in connection with such transfer.

13. Persons Deemed Owners.

Except as provided in Section 2, the registered Holder of this Note will be treated as the owner of it for all purposes. Only registered Holders will have rights under the Indenture, including, without limitation, with respect to enforcement and the pursuit of other remedies.

14. Unclaimed Money.

If money for the payment of principal or interest remains unclaimed for two years, the Trustee or Paying Agent shall pay the money back to the Issuers at its written request unless an abandoned property law designates another Person. After any such payment, Holders entitled to the money must look to the Issuers for payment as general creditors and the Trustee and the Paying Agent shall have no further liability with respect to such monies.

15. Discharge and Defeasance.

Subject to certain conditions, the Issuers at any time may terminate all of its obligations and all obligations of each Guarantor under the Notes, any Note Guarantee and the Indenture if the Issuers, among other things, deposit or causes to be deposited with the Trustee money or U.S. dollar-denominated Government Obligations, or a combination thereof, in an amount sufficient, without consideration of reinvestment, to pay and discharge the entire indebtedness on the Notes not previously delivered to the Trustee for cancellation, for principal, premium, if any, and interest to the date of deposit (in the case of Notes that have become due and payable), or to the Stated Maturity or redemption date, as the case may be.

16. Amendment, Waiver.

The Indenture and the Notes may be amended as set forth in the Indenture.

17. Defaults and Remedies.

Each of the following is an "*Event of Default*" under the Indenture:

(a) default in any payment of interest on any Note issued under the Indenture when due and payable, continued for 30 days;

(b) default in the payment of the principal amount of or premium, if any, on any Note issued under the Indenture when due at its Stated Maturity, upon optional redemption, upon required repurchase, upon declaration or otherwise;

(c) failure by an Issuer or any Guarantor to comply with its obligations under Section 5.01;

(d) failure by an Issuer or any Guarantor to comply for 30 days after written notice by the Trustee or the Holders of at least 25% in principal amount of the outstanding Notes with its obligation to make a Change of Control Offer under Section 4.14;

(e) failure by the Parent or any of its Restricted Subsidiaries to comply for 60 days after notice by the Trustee or the Holders of at least 25% in principal amount of the outstanding Notes with its other agreements contained in the Indenture (in each case, other than a default in performance, or breach of, a covenant or agreement specifically addressed in clauses (a) to (d) above);

(f) default under any mortgage, indenture or instrument under which there may be issued or by which there may be secured or evidenced any Indebtedness for money borrowed by the Parent or any of its Restricted Subsidiaries (or the payment of which is Guaranteed by the Parent or any of its Restricted Subsidiaries) other than Indebtedness owed to the Parent or a Restricted Subsidiary whether such Indebtedness or Guarantee now exists, or is created after the Issue Date, which default:

(i) is caused by a failure to pay principal at stated maturity on such Indebtedness, immediately upon the expiration of the grace period provided in such Indebtedness ("*payment default*"); or

(ii) results in the acceleration of such Indebtedness prior to its maturity (the "*cross acceleration provision*"),

and, in each case, the principal amount of any such Indebtedness, together with the principal amount of any other such Indebtedness under which there has been a payment default or the maturity of which has been so accelerated, aggregates $25.0 million or more;

(g) the Issuers or any Restricted Subsidiary that is a Significant Subsidiary or any group of Restricted Subsidiaries that, taken together, would constitute a Significant Subsidiary, pursuant to or within the meaning of any Bankruptcy Law:

(i) commences proceedings to be adjudicated bankrupt or insolvent;

(ii) consents to the institution of bankruptcy or insolvency proceedings against it, or the filing by it of a petition or answer or consent seeking reorganization or relief under applicable Bankruptcy Law;

(iii) consents to the appointment of a receiver, liquidator, assignee, trustee, sequestrator or other similar official of it or for all or substantially all of its property;

(iv) makes a general assignment for the benefit of its creditors; or

(v) admits in writing that it is unable to pay its debts as they become due;

(h) a court of competent jurisdiction enters an order or decree under any Bankruptcy Law that:

(i) is for relief against the Issuers or any Restricted Subsidiary that is a Significant Subsidiary or any group of Restricted Subsidiaries that, taken together, would constitute a Significant Subsidiary, in a proceeding in which the Issuers or any such Restricted Subsidiary, that is a Significant Subsidiary or any group of Restricted Subsidiaries that, taken together, would constitute a Significant Subsidiary, is to be adjudicated bankrupt or insolvent;

(ii) appoints a receiver, liquidator, assignee, trustee, sequestrator or other similar official of the Issuers or any Restricted Subsidiary that is a Significant Subsidiary or any group of Restricted Subsidiaries that, taken together, would constitute a Significant Subsidiary, or for all or substantially all of the property of the Issuers or any Restricted Subsidiary that is a Significant Subsidiary or any group of Restricted Subsidiaries that, taken together, would constitute a Significant Subsidiary; or

(iii) orders the winding up or liquidation of the Issuers or any Restricted Subsidiary that is a Significant Subsidiary or any group of Restricted Subsidiaries that, taken together, would constitute a Significant Subsidiary,

and, in the case of any of (i), (ii) or (iii) of this clause (h), the order or decree remains unstayed and in effect for 60 consecutive days;

(i) failure by an Issuer or any Significant Subsidiary or group of Restricted Subsidiaries that, taken together (as of the latest audited consolidated financial statements for the Parent and its Restricted Subsidiaries), would constitute a Significant Subsidiary to pay final judgments aggregating in excess of $25.0 million (exclusive of any amounts that a solvent

insurance company has acknowledged liability for), which judgments are not paid, discharged or stayed for a period of 60 days after the judgment becomes final (the "*judgment default provision*"); and

(j) any Note Guarantee of a Significant Subsidiary ceases to be in full force and effect (other than in accordance with the terms of such Note Guarantee or the Indenture) or is declared invalid or unenforceable in a judicial proceeding or any Guarantor denies or disaffirms in writing its obligations under its Guarantee and any such Default continues for 10 days.

The foregoing shall constitute Events of Default whatever the reason for any such Event of Default and whether it is voluntary or involuntary or is effected by operation of law or pursuant to any judgment, decree or order of any court of any order, rule or regulation of any administrative or governmental body. However, a default under clause (c), (d), (e), (f) or (h) will not constitute an Event of Default until the Trustee or the Holders of at least 25% in principal amount of the outstanding Notes under the Indenture notify the Parent of the default and, with respect to clause (d), (e) or (h), the Parent does not cure such default within the time specified in clause (d), (e) or (h), as applicable, after receipt of such notice.

18. Trustee Dealings with the Issuers

The Trustee under the Indenture, in its individual or any other capacity, may become the owner or pledgee of Notes and may otherwise deal with and collect obligations owed to it by the Issuers or their Affiliates and may otherwise deal with the Issuers or their Affiliates with the same rights it would have if it were not Trustee.

19. No Recourse Against Others.

No director, officer, employee, incorporator or shareholder of the Parent or any of their respective Subsidiaries or Affiliates as such, shall have any liability for any obligations of the Issuers or the Guarantors under the Notes Documents, or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes. Such waiver may not be effective to waive liabilities under the U.S. federal securities laws, and it is the view of the SEC that such a waiver is against public policy.

20. Authentication.

This Note shall not be valid until an authorized signatory of the Trustee or the Authenticating Agent manually signs the certificate of authentication on the other side of this Note. The signature shall be conclusive evidence that the security has been authenticated under the Indenture.

21. Abbreviations.

Customary abbreviations may be used in the name of a Holder or an assignee, such as TEN COM (=tenants in common), TEN ENT (=tenants by the entireties), JT TEN (=joint tenants with rights of survivorship and not as tenants in common), CUST (=custodian), and U/G/M/A (=Uniform Gift to Minors Act).

22. Governing Law.

THIS SECURITY SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.

23. CUSIP or ISINs.

The Issuers in issuing the Notes may use CUSIP numbers or ISINs (if then generally in use) and, if so, the Trustee shall use CUSIP numbers or ISINs in notices of redemption as a convenience to Holders; *provided*, *however*, that any such notice may state that no representation is made as to the correctness of such numbers either as printed on the Notes or as contained in any notice of a redemption and that reliance may be placed only on the other identification numbers printed on the Notes, and any such redemption shall not be affected by any defect in or omission of such numbers.

The Issuers will furnish to any Holder of Notes upon written request and without charge to the Holder a copy of the Indenture which has in it the text of this Note.

[ASSIGNMENT FORM]

To assign this Note, fill in the form below:

I or we assign and transfer this Note to:

(Print or type assignee's legal name)

(Insert assignee's soc. sec. or tax I.D. No.)

(Insert assignee's name, address and zip or post code)

and irrevocably appoint

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to transfer this Note on the books of the Issuers. The agent may substitute another to act for him.

Date: _____

Your Signature:

Sign exactly as your name appears on the other side of this Note.

Signature Guarantee*:

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*(Signature must be guaranteed by a participant in a recognized signature guaranty medallion program or other signature guarantor acceptable to the Trustee)

[FORM OF CERTIFICATE TO BE DELIVERED UPON EXCHANGE OR
REGISTRATION OF TRANSFER RESTRICTED NOTES]

This certificate relates to $ principal amount of Notes held in (check applicable box) book-entry or definitive registered form by the undersigned.

The undersigned (check one box below):

as requested the Trustee by written order to deliver, in exchange for its beneficial interest in the Global Note held by the Depositary, a Definitive Registered Note in definitive, registered form of authorized denominations and an aggregate principal amount equal to its beneficial interest in such Global Note (or the portion thereof indicated above);

as requested the Trustee by written order to exchange or register the transfer of a Note.

In connection with any transfer of any of the Notes evidenced by this certificate occurring prior to the expiration of the period referred to in Rule 144(k) under the Securities Act, the undersigned confirms that such Notes are being transferred in accordance with its terms:

CHECK ONE BOX BELOW

(1) to the Issuers; or

(2) to the Registrar for registration in the name of the Holder, without transfer; or

(3) pursuant to an effective registration statement under the U.S. Securities Act of 1933; or

(4) inside the United Sates to a “qualified institutional buyer” (as defined in Rule 144A under the Securities Act of 1933) that purchases for its own account or for the account of a qualified institutional buyer to whom notice is given that such transfer is being made in reliance on Rule 144A, in each case pursuant to and in compliance with Rule 144A under the Securities Act of 1933; or

(5) outside the United States in an offshore transaction within the meaning of Regulation S under the Securities Act in compliance with Rule 904 under the Securities Act of 1933 and such Note shall be held immediately after the transfer through DTC; or

(6) pursuant to Rule 144 under the U S. Securities Act of 1933 or another available exemption from registration.

Unless one of the boxes is checked, the Trustee will refuse to register any of the Notes evidenced by this certificate in the name of any Person other than the registered Holder thereof; *provided*, *however*, that if box (5) or (6) is checked, the Trustee may require, prior to registering any such transfer of the Notes, such legal opinions, certifications and other information as the Trustee or the Issuers have reasonably requested to confirm that such transfer is being made pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the U.S. Securities Act of 1933.

Date: _____

Your Signature:

_____

Sign exactly as your name appears on the other side of this Note.

Signature Guarantee*: _____

*(Signature must be guaranteed by a participant in a recognized signature guaranty medallion program or other signature guarantor acceptable to the Trustee)

TO BE COMPLETED BY PURCHASER IF (4) ABOVE IS CHECKED.

The undersigned represents and warrants that it is purchasing this Note for its own account or an account with respect to which it exercises sole investment discretion and that it and any such account is a "qualified institutional buyer" within the meaning of Rule 144A under the U.S. Securities Act of 1933, and is aware that the sale to it is being made in reliance on Rule 144A and acknowledges that it has received such information regarding the Issuers as the undersigned has requested pursuant to Rule 144A or has determined not to request such information and that it is aware that the transferor is relying upon the undersigned's foregoing representations in order to claim the exemption from registration provided by Rule 144A.

Date: _____

Signature: _____

(to be executed by an executive officer of purchaser)

Schedule of Increases and Decreases in the Global Notes

The initial principal amount of this Global Note is $. The following increases or decreases in this Global Note have been made:

Date of Increase/Decrease	Amount of Decrease in Principal Amount of this Global Note	Amount of Increase in Principal Amount of this Global Note	Principal Amount of this Global Note Following such Decrease or Increase	Signature of Authorized Signatory of Registrar or Paying Agent

[FORM OF OPTION OF HOLDER TO ELECT PURCHASE]

If you want to elect to have this Note purchased by the Issuers pursuant to Section 4.14 (Change of Control) or Section 4.05 (Limitation on Sales of Assets and Subsidiary Stock) of the Indenture, check the box:

Asset Disposition Change of Control

If you want to elect to have only part of this Note purchased by the Issuers pursuant to Section 4.14 or Section 4.05 of the Indenture, state the amount (minimum amount of $150,000):

$_____

Date: _____

Your Signature:

_____

(Sign exactly as your name appears on the other side of the Note)

Signature Guarantee*: _____

*(SIGNATURE MUST BE GUARANTEED BY A PARTICIPANT IN A RECOGNIZED SIGNATURE GUARANTY MEDALLION PROGRAM OR OTHER SIGNATURE GUARANTOR ACCEPTABLE TO THE TRUSTEE)

FORM OF SUPPLEMENTAL INDENTURE

SUPPLEMENTAL INDENTURE

SUPPLEMENTAL INDENTURE No. [●] (this "*Supplemental Indenture*"), dated as of [●], among [●], a company organized and existing under the laws of [●] (the "*Additional Guarantor*"), a subsidiary of Ferroglobe PLC, a public limited company incorporated under the laws of England and Wales (the "*Parent*"), Globe Specialty Metals, Inc., a corporation organized under the laws of Delaware (the "*US Co-Issuer*" and, together with the Parent, the "*Issuers*") and Wilmington Trust, National Association, as trustee (the "*Trustee*").

W I T N E S S E T H

WHEREAS, the Issuers have heretofore executed and delivered to the Trustee an indenture (the "*Indenture*"), dated as of February 15, 2017 providing for the issuance of the Issuer's U.S. dollar-denominated 9⅜ Senior Notes due 2022 (the "*Notes*");

WHEREAS, the Indenture provides that under certain circumstances a Subsidiary may execute and deliver to the Trustee a supplemental indenture pursuant to which such Subsidiary shall unconditionally guarantee all of the Issuers' Obligations under the Notes and the Indenture on the terms and conditions set forth herein (the "*Note Guarantee*"); and

WHEREAS, pursuant to Section 9.01 of the Indenture, the Issuers, the Additional Guarantor and the Trustee are authorized to execute and deliver this Supplemental Indenture.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the Additional Guarantor and the Trustee mutually covenant and agree for the equal and ratable benefit of the Holders as follows:

1. CAPITALIZED TERMS. Capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.

2. AGREEMENT TO GUARANTEE. The Additional Guarantor hereby agrees to provide an unconditional Note Guarantee on the terms and subject to the conditions set forth in the Note Guarantee and in the Indenture including but not limited to Article X thereof.

[In addition, pursuant to Section 10.07 of the Indenture, the obligations of the [Guarantor]/[Additional Guarantor] and the granting of its Guarantee shall be limited as follows: [●].]

3. NO RECOURSE AGAINST OTHERS. No past, present or future director, officer, employee, incorporator or stockholder of any Additional Guarantor, as such, shall have any liability for any obligations of the Issuers or any Additional Guarantor under the Notes, the Indenture, the Note Guarantees or this Supplemental Indenture or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder by accepting a Note

waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes. The waiver may not be effective to waive liabilities under applicable securities laws.

4. THE LAWS OF THE STATE OF NEW YORK SHALL GOVERN AND BE USED TO CONSTRUE THIS SUPPLEMENTAL INDENTURE, THE NOTES AND THE NOTE GUARANTEES.

5. Each of the parties hereto irrevocably agrees that any suit, action or proceeding arising out of, related to, or in connection with the Indenture, this Supplemental Indenture, the Notes and the Note Guarantees or the transactions contemplated hereby, and any action arising under U.S. Federal or state securities laws, may be instituted in any U.S. federal or state court located in the State and City of New York, Borough of Manhattan; irrevocably waives, to the fullest extent it may effectively do so, any objection which it may now or hereafter have to the laying of venue of any such proceeding; and irrevocably submits to the jurisdiction of such courts in any such suit, action or proceeding. The Parent and each of the Guarantors (including the Additional Guarantor) has appointed (or hereby appoints) the US Co-Issuer, as its authorized agent (the "*Authorized Agent*") upon whom process may be served in any such suit, action or proceeding which may be instituted in any Federal or state court located in the State of New York, Borough of Manhattan arising out of or based upon the Indenture, this Supplemental Indenture, the Notes or the transactions contemplated hereby or thereby, and any action brought under U.S. Federal or state securities laws. The Issuers and each of the Guarantors (including the Additional Guarantor) expressly consents to the jurisdiction of any such court in respect of any such action and waives any other requirements of or objections to personal jurisdiction with respect thereto and waives any right to trial by jury. Such appointment shall be irrevocable unless and until replaced by an agent reasonably acceptable to the Trustee. The Issuers and each of the Guarantors (including the Additional Guarantor) represents and warrants that the Authorized Agent has agreed to act as said agent for service of process, and the Issuers agrees to take any and all action, including the filing of any and all documents and instruments, that may be necessary to continue such appointment in full force and effect as aforesaid. Service of process upon the Authorized Agent and written notice of such service to the Parent shall be deemed, in every respect, effective service of process upon the Parent and the Guarantors (including the Additional Guarantor).

6. COUNTERPARTS. The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

7. EFFECT OF HEADINGS. The Section headings herein are for convenience only and shall not affect the construction hereof.

8. THE TRUSTEE. The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Additional Guarantor and the Issuers.

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed and attested, all as of the date first above written.

Dated: __, [●]

Ferroglobe PLC

By: _____
Name:
Title:

Dated: __, [●]

Globe Specialty Metals, Inc.

By: _____
Name:
Title:

[ADDITIONAL GUARANTOR]]

By: _____
Name:
Title:

WILMINGTON TRUST, NATIONAL ASSOCIATION,
as Trustee

By: _____
Name:
Title: Authorized Signatory

Exhibit 12.1

CERTIFICATION

I, Pedro Larrea Paguaga, certify that:

1. I have reviewed this annual report on Form 20-F of Ferroglobe PLC;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;

4. The company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in U.S. Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in U.S. Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and

5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: May 1, 2017

By: /s/ Pedro Larrea Paguaga
Chief Executive Officer (Principal Executive Officer)

Exhibit 12.2

CERTIFICATION

I, Joseph Ragan, certify that:

1. I have reviewed this annual report on Form 20-F of Ferroglobe PLC;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;

4. The company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in U.S. Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in U.S. Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and

5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: May 1, 2017

By: /s/ Joseph Ragan

Chief Financial Officer and Principal Accounting Officer (Principal Financial Officer)

Exhibit 13.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002

In connection with the annual report of Ferroglobe PLC (the "Company") on Form 20-F for the period ended December 31, 2016, as filed with the U.S. Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to his knowledge:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the U.S. Securities Exchange Act of 1934; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 1, 2017

By: /s/ Pedro Larrea Paguaga
Chief Executive Officer (Principal Executive Officer)

By: /s/ Joseph Ragan
Chief Financial Officer and Principal Accounting Officer (Principal Financial Officer)

This certification is being furnished to the U.S. Securities and Exchange Commission with this Report pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and shall not, except to the extent required by such Act, be deemed filed by the Company for purposes of Section 18 of the U.S. Securities Exchange Act of 1934, or otherwise subject to the liability of that section.

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to Ferroglobe and will be retained by Ferroglobe and furnished to the U.S. Securities and Exchange Commission or its staff upon request.

Exhibit 16.1

Mine Safety and Health Administration Safety Data

On July 21, 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Act") was enacted. Section 1503 of the Act contains new reporting requirements regarding coal or other mine safety.

We are committed to providing a safe workplace for all of our employees. We continue to engage proactively with federal and state agencies in support of measures which can legitimately improve the safety and well-being of our employees.

The operation of our mines located in the United States is subject to regulation by the Federal Mine Safety and Health Administration (MSHA) under the Federal Mine Safety and Health Act of 1977 (the "Mine Act"). MSHA inspects our mines on a regular basis and issues various citations and orders when it believes a violation has occurred under the Mine Act. We present information below regarding certain mining safety and health violations, orders and citations issued by MSHA, as well as related assessments and legal actions with respect to our mining operations. In evaluating this information, consideration should be given to factors such as the following: (i) the number of violations, citations and orders will vary depending on the size of the mine, (ii) the number of citations and orders issued will vary from inspector to inspector and mine to mine, and (iii) violations, citations and orders can be contested and appealed, and in that process, may be reduced in severity and amount, and are sometimes dismissed.

The table below includes references to specific sections of the Mine Act. We are providing the information in the table by mining complex because that is how we manage and operate our business. The information in the table reflects violations, citations and orders issued to us by MSHA and related assessments and legal actions during the year ended December 31, 2016, as reflected in our records. Due to timing and other factors, the data in our system may not agree with the data maintained by MSHA.

For each mine, of which we or one of our Subsidiaries is an operator (number of occurrences, except for proposed assessment U.S. Dollar values).

Mine of Operating Name/MSHA Identification Number	**Section 104 S&S Citations (#)**	**Section 104(b) Orders (#)**	**Section 104(d) Citations and Orders (#)**	**Section 110(b)(2) Violations (#)**	**Section 107(a) Orders (#)**	**Total Dollar Value of MSHA Assessments Proposed ($)**	**Total Number of Mining Related Fatalities (#)**	**Received Notice of Pattern of Violations Under Section 104(e) (yes/no)**	**Received Notice of Potential to Have Pattern Under Section 104(e) (yes/no)**	**Legal Actions Pending as of Last Day of Period (#)**	**Legal Actions Initiated During the Period (#)**	**Legal Actions Resolved During Period (#)**
Alden Resources - Maple Creek - 151914	0	0	0	0	0	$ 1,012	0	NO	NO	0	9	9
Alden Resources - Mulberry - 1519687	0	0	0	0	0	$ 0	0	NO	NO	0	0	0
Alden Resources - Westbourne Lane - 4003337	0	0	0	0	0	$ 0	0	NO	NO	0	0	0
Alden Resources - Mine #3 Bain Branch- 1517691	12	0	0	0	0	$ 8,088	0	NO	NO	7	54	52
Alden Resources - Gatliff Plant - 1509938	6	0	0	0	0	$ 3,411	0	NO	NO	0	22	28
Alden Resources - Catron Branch - 1519245	0	0	0	0	0	$ 0	0	NO	NO	0	0	0
Alden Resources - Elliott Branch - 1519387	0	0	0	0	0	$ 0	0	NO	NO	1	0	0
Alden Resources - Colonel Hollow - 1519508	0	0	0	0	0	$ 540	0	NO	NO	0	0	0
Alden Resources - Lick Fork - 1519596	0	0	0	0	0	$ 0	0	NO	NO	0	0	0
ARL Resources - Emlyn Tipple - 1508019	0	0	0	0	0	$ 0	0	NO	NO	0	0	0
Alabama Sand and Gravel: 01-03461 Miller Pit	1	0	0	0	0	$ 447.00	0	NO	NO	0	3	3
Alabama Sand and Gravel: 01-03316 Mims Pit	2	0	0	0	0	$ 138.00	0	NO	NO	2	1	4
Alabama Sand and Gravel: 01-03479 Rail/Washer Pit	0	0	0	0	0	$ 100.00	0	NO	NO	0	1	1

(A) The pending legal actions are all contests of citations and orders, which typically are filed prior to an operator's receipt of a proposed penalty assessment from MSHA or relate to orders for which penalties are not assessed (such as imminent danger orders under Section 107 of the Mine Act). This category includes:

- contests of citations or orders issued under section 104 of the Mine Act,
- contests of imminent danger withdrawal orders under section 107 of the Mine Act, and
- emergency response plan dispute proceedings (as required under the Mine Improvement and New Emergency Response Act of 2006, Pub. L. No. 109-236, 120 Stat. 493).

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement No. 333-208911 on Form S-8 of our reports dated May 1, 2017 relating to the consolidated financial statements of Ferroglobe PLC and the effectiveness of Ferroglobe PLC's internal control over financial reporting (which report expresses an adverse opinion on the effectiveness of the Company's internal control over financial reporting because of material weaknesses), appearing in this Annual Report on Form 20-F of Ferroglobe PLC for the year ended December 31, 2016.

/s/ Deloitte, S.L.

Madrid, Spain
May 1, 2017