FERRO CORP Form 10-K February 25, 2015 Table of Contents

UNITED STATES SECURITIES AND EXCHANGE COM	IMISSION
Washington, D.C. 20549	
Form 10-K	
(Mark One)	
ANNUAL REPORT PURSUANT TO SECTION 13 OR 1 For the fiscal year ended December 31, 2014	5(d) OF THE SECURITIES EXCHANGE ACT OF 1934
or	
TRANSITION REPORT PURSUANT TO SECTION 13 (1934  For the transition period from to  Commission file number 1-584	OR 15(d) OF THE SECURITIES EXCHANGE ACT OF
FERRO CORPORATION	
(Exact name of registrant as specified in its charter)	
Ohio (State of Corporation) 6060 Parkland Blvd. Suite 250	34-0217820 (IRS Employer Identification No.)
Mayfield Heights, OH	44124
(Address of principal executive offices) Registrant's telephone number, including area code: 216-875	(Zip Code) 5-5600

Securities Registered Pursuant to section 12(b) of the Act:

Title of Each Class

Name of Each Exchange on Which Registered

Common Stock, par value \$1.00 New York Stock Exchange

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

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. YES NO

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 Web site, 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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained here, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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

Large accelerated filer Accelerated filer Non-accelerated filer

Smaller reporting company

(Do not check if a smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). YES NO

The aggregate market value of Ferro Corporation Common Stock, par value \$1.00, held by non-affiliates and based on the closing sale price as of June 30, 2014, was approximately \$1,079,691,000.

On January 31, 2015, there were 86,990,066 shares of Ferro Corporation Common Stock, par value \$1.00 outstanding.

### DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Proxy Statement for Ferro Corporation's 2015 Annual Meeting of Shareholders are incorporated into Part III of this Annual Report on Form 10-K.

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PART I

Item 1 — Business

History, Organization and Products

Ferro Corporation was incorporated in Ohio in 1919 as an enameling company. When we use the terms "Ferro," "we," "us" or "the Company," we are referring to Ferro Corporation and its subsidiaries unless we indicate otherwise. Today, we are a leading producer of specialty materials that are sold to a broad range of manufacturers who, in turn, make products for many end-use markets. We operate approximately 33 facilities around the world that manufacture the following types of performance materials:

· Frits, porcelain and other glass enamels, glazes, stains, decorating colors, pigments, inks, polishing materials, specialty dielectrics, electronic glasses, and other specialty coatings

We refer to our products as performance materials because we formulate them to perform specific functions in the manufacturing processes and end products of our customers. The products we develop often are delivered to our customers in combination with customized technical service. The value of our products stems from the benefits they deliver in actual use. We develop and deliver innovative products to our customers through our key strengths in:

- · Particle Engineering Our ability to design and produce very small particles made of a broad variety of materials, with precisely controlled characteristics of shape, size and size distribution. We understand how to disperse these particles within liquid, paste and gel formulations.
- · Color and Glass Science Our understanding of the chemistry required to develop and produce pigments that provide color characteristics ideally suited to customers' applications. We have a demonstrated ability to provide glass-based coatings with properties that precisely meet customers' needs in a broad variety of applications.
- · Surface Chemistry and Surface Application Technology Our understanding of chemicals and materials used to develop products and processes that involve the interface between layers and the surface properties of materials.
- Product Formulation Our ability to develop and manufacture combinations of materials that deliver specific
  performance characteristics designed to work within customers' particular products and manufacturing processes.
   We deliver these key technical strengths to our customers in a way that creates additional value through our integrated
  applications support. Our applications support personnel provide assistance to our customers in their material
  specification and evaluation, product design and manufacturing process characterization in order to help them
  optimize the efficient and cost-effective application of our products.

During 2014, we sold substantially all of the assets within our Polymer Additives and Specialty Plastics reportable segments. We now divide our operations into four business units, which comprise three reportable segments. We have grouped these units by their product group below:

Performance Materials

Tile Coating Systems(1)
Porcelain Enamel(1)
Performance Colors and Glass
Pigments, Powders and Oxides

(1) Tile Coating Systems and Porcelain Enamel are combined into one reportable segment, Performance Coatings, for financial reporting purposes.

Financial information about our segments is included herein in Note 19 to the consolidated financial statements under Item 8 of this Annual Report on Form 10-K.

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#### Markets and Customers

Ferro's products are used in a variety of product applications in markets including:

Appliances Household furnishings
Automobiles Industrial products
Building and renovation Packaging

Electronics

Many of our products are used as coatings on our customers' products, such as glazes and decorations on tile, glass and dinnerware. Other products are supplied to customers as powders that are used to manufacture electronic components and other products. Still other products are added during our customers' manufacturing processes to provide desirable properties to their end product. Often, our products are a small portion of the total cost of our customers' products, but they can be critical to the appearance or functionality of those products.

Our leading customers include manufacturers of ceramic tile, major appliances, construction materials, automobile parts, glass, bottles, and wall coverings. Many of our customers, including makers of major appliances and automobile parts, purchase materials from more than one of our business units. Our customer base is well diversified both geographically and by end market.

We generally sell our products directly to our customers. However, a portion of our business uses indirect sales channels, such as agents and distributors, to deliver products to market. In 2014, no single customer or related group of customers represented more than 10% of net sales. In addition, none of our reportable segments is dependent on any single customer or related group of customers.

#### Backlog of Orders and Seasonality

Generally, there is no significant lead time between customer orders and delivery in any of our business segments. As a result, we do not consider that the dollar amount of backlogged orders believed to be firm is material information for an understanding of our business. We also do not regard any material part of our business to be seasonal. However, customer demand has historically been higher in the second quarter when building and renovation markets are particularly active, and this quarter is normally the strongest for sales and operating profit.

### Competition

In most of our markets, we have a substantial number of competitors, none of which is dominant. Due to the diverse nature of our product lines, no single competitor directly matches all of our product offerings. Our competition varies by product and by region, and is based primarily on price, product quality and performance, customer service and technical support, and our ability to develop custom products to meet specific customer requirements.

We are a worldwide leader in the production of glass enamels, porcelain enamels, and ceramic tile coatings. There is strong competition in our markets, ranging from large multinational corporations to local producers. While many of our customers purchase customized products and formulations from us, our customers could generally buy from other sources, if necessary.

Raw Materials and Supplier Relations

Raw materials widely used in our operations include:

Other Inorganic Materials: Metal Oxides:

Boron acid(2) Aluminum oxide(1) Cobalt oxide(1)(2)Clay(2) Nickel oxide(1)(2) Feldspar(2) Lithium(2)

Titanium dioxide(1)(2)

Zinc oxide(2) Silica(2)
Zirconium dioxide(2) Zircon(2)

Precious and Non-precious Metals: Energy:

Bismuth(1) Electricity
Chrome(1)(2) Natural gas
Copper(1)

Gold(1) Silver(1)

- (1) Primarily used by Performance Colors and Glass (PCG) and Pigments, Powders and Oxides (PPO).
- (2) Primarily used by Performance Coatings.

These raw materials make up a large portion of our product costs in certain of our product lines, and fluctuations in the cost of raw materials can have a significant impact on the financial performance of the related businesses. We attempt to pass through to our customers raw material cost increases.

We have a broad supplier base and, in many instances, multiple sources of essential raw materials are available worldwide if problems arise with a particular supplier. We maintain many comprehensive supplier agreements for strategic and critical raw materials. We did not encounter raw material shortages in 2014 that significantly affected our manufacturing operations, but we are subject to volatile raw material costs that can affect our results of operations.

#### **Environmental Matters**

As part of the production of some of our products, we handle, process, use and store hazardous materials. As a result, we operate manufacturing facilities that are subject to a broad array of environmental laws and regulations in the countries in which we operate, particularly for plant wastes and emissions. In addition, some of our products are subject to restrictions under laws or regulations such as California Proposition 65 or the European Union's ("EU") chemical substances directive. The costs to comply with complex environmental laws and regulations are significant and will continue for the industry and us for the foreseeable future. These routine costs are expensed as they are incurred. While these costs may increase in the future, they are not expected to have a material impact on our financial position, liquidity or results of operations. We believe that we are in substantial compliance with the environmental regulations to which our operations are subject and that, to the extent we may not be in compliance with such regulations, non-compliance will not have a materially adverse effect on our financial position, liquidity or results of operations.

Our policy is to operate our plants and facilities in a manner that protects the environment and the health and safety of our employees and the public. We intend to continue to make expenditures for environmental protection and improvements in a timely manner consistent with available technology. Although we cannot precisely predict future environmental spending, we do not expect the costs to have a material impact on our financial position, liquidity or results of operations. Capital expenditures for environmental protection were \$0.7 million in 2014, \$2.5 million in

2013, and \$0.9 million in 2012. We also accrue for environmental remediation costs when it is probable that a liability has been incurred and we can reasonably estimate the amount. We determine the timing and amount of any liability based upon assumptions regarding future events, and inherent uncertainties exist in such evaluations primarily due to unknown conditions, changing governmental regulations and legal standards regarding liability, and evolving technologies. We adjust these liabilities periodically as remediation efforts progress, the nature and extent of contamination becomes more certain, or as additional technical or legal information become available.

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# Research and Development

We are involved worldwide in research and development activities relating to new and existing products, services and technologies required by our customers' continually changing markets. Our research and development resources are organized into centers of excellence that support our regional and worldwide major business units. These centers are augmented by local laboratories that provide technical service and support to meet customer and market needs in various geographic areas.

Total expenditures for product and application technology, including research and development, customer technical support and other related activities, were \$22.7 million in 2014, \$25.9 million in 2013, and \$35.0 million in 2012. These amounts include expenditures for company-sponsored research and development activities of approximately \$19.2 million in 2014, \$22.8 million in 2013, and \$25.5 million in 2012.

#### Patents, Trademarks and Licenses

We own a substantial number of patents and patent applications relating to our various products and their uses. While these patents are of importance to us and we exercise diligence to ensure that they are valid, we do not believe that the invalidity or expiration of any single patent or group of patents would have a material adverse effect on our businesses. Our patents will expire at various dates through the year 2032. We also use a number of trademarks that are important to our businesses as a whole or to a particular segment. We believe that these trademarks are adequately protected.

#### **Employees**

At December 31, 2014, we employed 3,979 full-time employees, including 3,262 employees in our foreign consolidated subsidiaries and 717 in the United States ("U.S."). Total employment increased by 103 in our foreign subsidiaries and decreased by 488 in the U.S. from the prior year end due to the net effect of cost reduction initiatives, divestitures of the Specialty Plastics and the North America-based Polymer Additives businesses, and the additions related to our Vetriceramici acquisition and new business opportunities.

Collective bargaining agreements cover 13.67% of our U.S. workforce. None of our U.S. labor agreements expire in 2015. We consider our relations with our employees, including those covered by collective bargaining agreements, to be good.

Our employees in Europe have protections afforded them by local laws and regulations through unions and works councils. Some of these laws and regulations may affect the timing, amount and nature of restructuring and cost reduction programs in that region.

#### Domestic and Foreign Operations

We began international operations in 1927. Our products are manufactured and/or distributed through our consolidated subsidiaries and unconsolidated affiliates in the following countries:

#### Consolidated Subsidiaries:

Argentina	France	Malaysia	Taiwan
Australia	Germany	Mexico	Thailand
Belgium	India	Netherlands	United Kingdom
Brazil	Indonesia	Poland	United States
Canada	Ireland	Portugal	Venezuela
China	Italy	Russia	Turkey
Egypt	Japan	Spain	

Unconsolidated Affiliates:

Italy Spain South Korea Ecuador

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Indonesia

Financial information for geographic areas is included in Note 19 to the consolidated financial statements under Item 8 of this Annual Report on Form 10-K. More than 75% of our net sales are outside of the U.S. Our customers represent more than 30 industries and operate in approximately 100 countries.

Our U.S. parent company receives technical service fees and/or royalties from many of its foreign subsidiaries. As a matter of corporate policy, the foreign subsidiaries have historically been expected to remit a portion of their annual earnings to the U.S. parent company as dividends. To the extent earnings of foreign subsidiaries are not remitted to the U.S. parent company, those earnings are indefinitely re-invested in those subsidiaries.

#### Available Information

Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K, including any amendments, will be made available free of charge on our Web site, www.ferro.com, as soon as reasonably practical, following the filing of the reports with the U.S. Securities and Exchange Commission ("SEC"). Our Corporate Governance Principles, Legal and Ethical Policies, Guidelines for Determining Director Independence, and charters for our Audit Committee, Compensation Committee and Governance and Nomination Committee are available free of charge on our Web site or to any shareholder who requests them from the Ferro Corporation Investor Relations Department located at 6060 Parkland Blvd., Suite 250, Mayfield Heights, Ohio, 44124.

### Forward-looking Statements

Certain statements contained here and in future filings with the SEC reflect our expectations with respect to future performance and constitute "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These statements are subject to a variety of uncertainties, unknown risks and other factors concerning our operations and the business environment, which are difficult to predict and are beyond our control.

### Item 1A — Risk Factors

Many factors could cause our actual results to differ materially from those suggested by statements contained in this filing and could adversely affect our future financial performance. Such factors include the following:

We sell our products into industries where demand has been unpredictable, cyclical or heavily influenced by consumer spending, and such demand and our results of operations may be further impacted by macro-economic circumstances.

We sell our products to a wide variety of customers who supply many different market segments. Many of these market segments, such as building and renovation, major appliances, transportation, and electronics, are cyclical or closely tied to consumer demand. Consumer demand is difficult to accurately forecast and incorrect forecasts of demand or unforeseen reductions in demand can adversely affect costs and profitability due to factors such as underused manufacturing capacity, excess inventory, or working capital needs. Our forecasting systems and modeling tools may not accurately predict changes in demand for our products or other market conditions.

Our results of operations are materially affected by conditions in capital markets and economies in the U.S. and elsewhere around the world. Concerns over fluctuating prices, energy costs, geopolitical issues, government deficits and debt loads, and the availability and cost of credit have contributed to economic uncertainty around the world. Our customers may be impacted by these conditions and may modify, delay, or cancel plans to purchase our products. Additionally, if customers are not successful in generating sufficient revenue or are precluded from securing financing, they may not be able to pay, or may delay payment of, accounts receivable that are owed to us. A reduction in demand or inability of customers to pay us for our products may adversely affect our earnings and cash flow.

We have undertaken cost-savings initiatives, including restructuring programs, to improve our operating performance, but we may not be able to implement and/or administer these initiatives in the manner contemplated and these initiatives may not produce the desired results.

We have undertaken cost-savings initiatives, including restructuring programs, and may undertake additional cost-savings initiatives in the future. These initiatives involve, among other things, restructuring programs that involve plant closures and staff reductions. Although we expect these initiatives to help us achieve incremental cost savings and operational efficiencies, we may not be able to implement and/or administer these initiatives, including plant closures and staff reductions, in the manner contemplated, which could cause the initiatives to fail to achieve the desired results. Additionally, the implementation of these initiatives may result in impairment charges, some of which could be material. Even if we do implement and administer these initiatives in the manner contemplated, they may not produce the desired results. Accordingly, the initiatives that we have implemented and those that we may implement in the future may not improve our operating performance and may not help us achieve cost savings. Failure to successfully implement and/or administer these initiatives could have an adverse effect on our financial performance.

We are subject to a number of restrictive covenants under our revolving credit facility, which could affect our flexibility to fund ongoing operations and strategic initiatives, and, if we are unable to maintain compliance with such covenants, could lead to significant challenges in meeting our liquidity requirements.

Our New Credit Facility contains a number of restrictive covenants, including those described in more detail in Note 8 to the consolidated financial statements under Item 8 of this Annual Report on Form 10 K. These covenants include limitations on use of loan proceeds, limitations on the Company's ability to pay dividends and repurchase stock, limitations on acquisitions and dispositions and limitations on certain types of investments. The New Credit Facility also contains standard provisions relating to conditions of borrowing and customary events of default, including the non-payment of obligations by the Company and the bankruptcy of the Company. Specific to the revolving credit facility, the Company is subject to financial covenants regarding the Company's outstanding net indebtedness and interest coverage ratios. If an event of default occurs, all amounts outstanding under the New Credit Facility may be accelerated and become immediately due and payable. The New Credit Facility is described in more detail in "Capital Resources and Liquidity" under Item 7 and in Note 8 to the consolidated financial statements under Item 8 of this Annual Report on Form 10-K.

The most critical of these ratios is the leverage ratio. As of December 31, 2014, we were in compliance with our maximum leverage ratio covenant of 3.75x as our actual ratio was 1.74x, providing \$70.2 million of EBITDA cushion on the leverage ratio, as defined within our credit facility. To the extent that economic conditions in key markets deteriorate or we are unable to meet our business projections and EBITDA falls below approximately \$100 million for a rolling four quarters, based on reasonably consistent debt levels with those as of December 31, 2014, we could be unable to maintain compliance with our leverage ratio covenant, in which case, our lenders could demand immediate payment of outstanding amounts and we would need to seek alternate financing sources to pay off such debts and to fund our ongoing operations. Such financing may not be available on favorable terms, if at all.

We depend on external financial resources, and the economic environment and credit market uncertainty could interrupt our access to capital markets, borrowings, or financial transactions to hedge certain risks, which could adversely affect our financial condition.

At December 31, 2014, we had approximately \$312.0 million of short-term and long-term debt with varying maturities and approximately \$33.9 million of off balance sheet arrangements, including consignment arrangements for precious metals, bank guarantees, and standby letters of credit. These arrangements have allowed us to make

investments in growth opportunities and fund working capital requirements. In addition, we may enter into financial transactions to hedge certain risks, including foreign exchange, commodity pricing, and sourcing of certain raw materials. Our continued access to capital markets, the stability of our lenders, customers and financial partners and their willingness to support our needs are essential to our liquidity and our ability to meet our current obligations and to fund operations and our strategic initiatives. An interruption in our access to external financing or financial transactions to hedge risk could adversely affect our business prospects and financial condition. See further information regarding our liquidity in "Capital Resources and Liquidity" under Item 7 and in Note 8 to the consolidated financial statements under Item 8 of this Annual Report on Form 10 K.

We strive to improve operating margins through sales growth, price increases, productivity gains, and improved purchasing techniques, but we may not achieve the desired improvements.

We work to improve operating profit margins through activities such as growing sales to achieve increased economies of scale, increasing prices, improving manufacturing processes, and adopting purchasing techniques that lower costs or provide increased cost predictability to realize cost savings. However, these activities depend on a combination of improved product design and engineering, effective manufacturing process control initiatives, cost-effective redistribution of production, and other efforts that may not be as successful as anticipated. The success of sales growth and price increases depends not only on our actions but also on the strength of customer demand and competitors' pricing responses, which are not fully predictable. Failure to successfully implement actions to improve operating margins could adversely affect our financial performance.

We rely on information systems to conduct our business and interruption, or damage to, or failure or compromise of, these systems may adversely affect our business and results of operations.

We rely on information systems to obtain, process, analyze and manage data to forecast and facilitate the purchase and distribution of our products; to receive, process, and ship orders on a timely basis; to account for other product and service transactions with customers; to manage the accurate billing and collections for thousands of customers; to process payments to suppliers; and to manage data and records relating to our employees, contractors, and other individuals. Our business and results of operations may be adversely affected if these systems are interrupted, damaged, or compromised or if they fail for any extended period of time, due to events including but not limited to programming errors, computer viruses and security breaches. Information privacy and security risks have generally increased in recent years because of the proliferation of new technologies and the increased sophistication and activities of perpetrators of cyber-attacks, and prevention of information and privacy security breaches cannot be assured. We may be required to expend additional resources to continue to enhance our information privacy and security measures and/or to investigate and remediate any information security vulnerabilities. In addition, third-party service providers are responsible for managing a significant portion of our information systems, and we are subject to risk as a result of possible information privacy and security breaches of those third parties. The consequences of these risks could adversely impact our results of operations, financial condition, and cash flows.

We depend on reliable sources of energy and raw materials, minerals and other supplies, at a reasonable cost, but the availability of these materials and supplies could be interrupted and/or their prices could escalate and adversely affect our sales and profitability.

We purchase energy and many raw materials, which we use to manufacture our products. Changes in their availability or price could affect our ability to manufacture enough products to meet customers' demands or to manufacture products profitably. We try to maintain multiple sources of raw materials and supplies where practical, but this may not prevent unanticipated changes in their availability or cost and, for certain raw materials, there may not be alternative sources. We may not be able to pass cost increases through to our customers. Significant disruptions in availability or cost increases could adversely affect our manufacturing volume or costs, which could negatively affect product sales or profitability of our operations.

The global scope of our operations exposes us to risks related to currency conversion rates, new and different regulatory schemes and changing economic, regulatory, social and political conditions around the world.

More than 75% of our net sales during 2014 were outside of the U.S. In order to support global customers, access regional markets and compete effectively, our operations are located around the world. We may encounter difficulties

expanding into additional growth markets around the world. Our operations have additional complexity due to economic, regulatory, social and political conditions in multiple locations and we are subject to risks relating to currency conversion rates. Other risks inherent in international operations include the following:

- · New and different legal and regulatory requirements and enforcement mechanisms in local jurisdictions;
- · U.S. and other export licenses may be difficult to obtain and we may be subject to export duties or import quotas or other trade restrictions or barriers;
- · Increased costs, and decreased availability, of transportation or shipping;

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- · Credit risk and financial conditions of local customers and distributors:
- · Risk of nationalization of private enterprises by foreign governments or restrictions on investments;
- · Potentially adverse tax consequences, including imposition or increase of withholding and other taxes on remittances and other payments by subsidiaries; and
  - Local political, economic and social conditions, including the possibility of hyperinflationary conditions, deflation, and political instability in certain countries.

We have subsidiaries in Venezuela, a country that has established rigid controls over the ability of foreign companies to repatriate cash, and in Egypt, a country with recent political instability. Such conditions could potentially impact our ability to recover both the cost of our investments and earnings from those investments. While we attempt to anticipate these changes and manage our business appropriately in each location where we do business, these changes are often beyond our control and difficult to forecast.

The consequences of these risks may have significant adverse effects on our results of operations or financial position, and if we fail to comply with applicable laws and regulations, we could be exposed to civil and criminal penalties, reputational harm, and restrictions on our operations.

We have a presence in regions of the world where it can be difficult for a multi-national company such as Ferro to compete lawfully with local competitors, which may cause us to lose business opportunities.

We pursue business opportunities around the world and many of our most promising growth opportunities are in developing markets and the Asia-Pacific region, including the People's Republic of China. Although we have been able to compete successfully in those markets to date, local laws and customs can make it difficult for a multi-national company such as Ferro to compete on a "level playing field" with local competitors without engaging in conduct that would be illegal under U.S. or other countries' anti-bribery laws. Our strict policy of observing the highest standards of legal and ethical conduct may cause us to lose some otherwise attractive business opportunities to competitors in these regions.

Regulatory authorities in the U.S., European Union and elsewhere are taking a much more aggressive approach to regulating hazardous materials and other substances, and those regulations could affect sales of our products.

Legislation and regulations concerning hazardous materials and other substances can restrict the sale of products and/or increase the cost of producing them. Some of our products are subject to restrictions under laws or regulations such as California Proposition 65 or the EU's chemical substances directive. The EU "REACH" registration system requires us to perform studies of some of our products or components of our products and to register the information in a central database, increasing the cost of these products. As a result of such regulations, customers may avoid purchasing some products in favor of less hazardous or less costly alternatives. It may be impractical for us to continue manufacturing heavily regulated products, and we may incur costs to shut down or transition such operations to alternative products. These circumstances could adversely affect our business, including our sales and operating profits.

Our businesses depend on a continuous stream of new products, and failure to introduce new products could affect our sales, profitability and liquidity.

One way that we remain competitive is by developing and introducing new and improved products on an ongoing basis. Customers continually evaluate our products in comparison to those offered by our competitors. A failure to introduce new products at the right time that are price competitive and that provide the features and performance required by customers could adversely affect our sales, or could require us to compensate by lowering prices. In

addition, when we invest in new product development, we face risks related to production delays, cost over-runs and unanticipated technical difficulties, which could impact sales, profitability and/or liquidity.

We may not be able to complete or successfully integrate future acquisitions into our business, which could adversely affect our business or results of operations.

As part of our strategy, we intend to pursue acquisitions. Our success in accomplishing growth through acquisitions may be limited by the availability and suitability of acquisition candidates and by our financial resources, including available cash and

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borrowing capacity. Acquisitions involve numerous risks, including difficulty determining appropriate valuation, integrating operations, technologies, services and products of the acquired product lines or businesses, personnel turnover, and the diversion of management's attention from other business matters. In addition, we may be unable to achieve anticipated benefits from these acquisitions in the time frame that we anticipate, or at all, which could adversely affect our business or results of operations.

Our strategy includes seeking opportunities in new growth markets, and failure to identify or successfully enter such markets could affect our ability to grow our revenues and earnings.

Certain of our products are sold into mature markets and part of our strategy is to identify and enter into markets growing more rapidly. These growth opportunities may involve new geographies, new product lines, new technologies, or new customers. We may not be successful capitalizing on such opportunities and our ability to increase our revenue and earnings could be impacted.

Sales of our products to certain customers or into certain industries may expose us to different and complex regulatory regimes.

We seek to expand our customer base and the industries into which we sell. Selling products to certain customers or into certain industries, such as governments or the defense industry, requires compliance with regulatory regimes that do not apply to sales involving other customers or industries and that can be complex and difficult to navigate. Our failure to comply with these regulations could result in liabilities or damage to our reputation with customers, which could negatively impact our business, financial condition, or results of operations.

We have limited or no redundancy for certain of our manufacturing facilities, and damage to or interference with those facilities could interrupt our operations, increase our costs of doing business and impair our ability to deliver our products on a timely basis.

If certain of our existing production facilities become incapable of manufacturing products for any reason, we may be unable to meet production requirements, we may lose revenue and we may not be able to maintain our relationships with our customers. Without operation of certain existing production facilities, we may be limited in our ability to deliver products until we restore the manufacturing capability at the particular facility, find an alternative manufacturing facility or arrange an alternative source of supply. Although we carry business interruption insurance to cover lost revenue and profits in an amount we consider adequate, this insurance does not cover all possible situations. In addition, our business interruption insurance would not compensate us for the loss of opportunity and potential adverse impact on relations with our existing customers resulting from our inability to produce products for them.

The markets for our products are highly competitive and subject to intense price competition, which could adversely affect our sales and earnings performance.

Our customers typically have multiple suppliers from which to choose. If we are unwilling or unable to provide products at competitive prices, and if other factors, such as product performance and value-added services do not provide an offsetting competitive advantage, customers may reduce, discontinue, or decide not to purchase our products. If we could not secure alternate customers for lost business, our sales and earnings performance could be adversely affected.

If we are unable to protect our intellectual property rights or to successfully resolve claims of infringement brought against us, our product sales and financial performance could be adversely affected.

Our performance may depend in part on our ability to establish, protect and enforce intellectual property rights with respect to our products, technologies and proprietary rights and to defend against any claims of infringement, which involves complex legal, scientific and factual questions and uncertainties. We may have to rely on litigation to enforce our intellectual property rights. The intellectual property laws of some countries may not protect our rights to the same extent as the laws of the U.S. In addition, we may face claims of infringement that could interfere with our ability to use technology or other intellectual property rights that are material to our business operations. If litigation that we initiate is unsuccessful, we may not be able to protect the value of some of our intellectual property. In the event a claim of infringement against us is successful, we may be required to pay royalties or license fees to continue to use technology or other intellectual property rights that we have been using or we may be unable to obtain necessary licenses from third parties at a reasonable cost or within a reasonable time.

Our operations are subject to operating hazards and, as a result, to stringent environmental, health and safety regulations, and compliance with those regulations could require us to make significant investments.

Our production facilities are subject to hazards associated with the manufacture, handling, storage, and transportation of chemical materials and products. These hazards can cause personal injury and loss of life, severe damage to, or destruction of, property and equipment and environmental contamination and other environmental damage and could have an adverse effect on our business, financial condition or results of operations.

We strive to maintain our production facilities and conduct our manufacturing operations in a manner that is safe and in compliance with all applicable environmental, health and safety regulations. Compliance with changing regulations, or other circumstances, may require us to make significant capital investments, incur training costs, make changes in manufacturing processes or product formulations, or incur costs that could adversely affect our profitability, and violations of these laws could lead to substantial fines and penalties. These costs may not affect competitors in the same way due to differences in product formulations, manufacturing locations or other factors, and we could be at a competitive disadvantage, which might adversely affect financial performance.

If we are unable to manage our general and administrative expenses, our business, financial condition or results of operations could be negatively impacted.

We may not be able to manage our administrative expense in all circumstances. While we attempt to effectively manage such expenses, including through projects designed to create administrative efficiencies, increases in staff-related and other administrative expenses may occur from time to time. Recently, we have made significant efforts to achieve general and administrative cost savings and improve our operational performance. As a part of these initiatives, we have and will continue to consolidate business and management operations and enter into arrangements with third parties offering additional cost savings. It cannot be assured that our strategies to reduce our general and administrative costs and improve our operating performance will be successful or achieve the anticipated savings.

Our multi-jurisdictional tax structure may not provide favorable tax efficiencies.

We conduct our business operations in a number of countries and are subject to taxation in those jurisdictions. While we seek to minimize our worldwide effective tax rate, our corporate structure may not optimize tax efficiency opportunities. We develop our tax position based upon the anticipated nature and structure of our business and the tax laws, administrative practices and judicial decisions now in effect in the countries in which we have assets or conduct business, which are subject to change or differing interpretations. In addition, our effective tax rate could be adversely affected by several other factors, including: increases in expenses that are not deductible for tax purposes, the tax effects of restructuring charges or purchase accounting for acquisitions, changes related to our ability to ultimately realize future benefits attributed to our deferred tax assets, including those related to other-than-temporary impairment, and a change in our decision to indefinitely reinvest foreign earnings. Further, we are subject to review and audit by both domestic and foreign tax authorities, which may result in adverse decisions. Increased tax expense could have a negative effect on our operating results and financial condition.

We have significant deferred tax assets, and if we are unable to utilize these assets, our results of operations may be adversely affected.

To fully realize the carrying value of our net deferred tax assets, we will have to generate adequate taxable profits in various tax jurisdictions. At December 31, 2014, we had \$30.4 million of net deferred tax assets, after valuation allowances. If we do not generate adequate profits within the time periods required by applicable tax statutes, the

carrying value of the tax assets will not be realized. If it becomes unlikely that the carrying value of our net deferred tax assets will be realized, the valuation allowances may need to be increased in our consolidated financial statements, adversely affecting results of operations. Further information on our deferred tax assets is presented in Note 10 to the consolidated financial statements under Item 8 of this Annual Report on Form 10 K.

We may not be successful in implementing our strategies to increase our return on invested capital.

We are taking steps to generate a higher return on invested capital. There are risks associated with the implementation of these steps, which may be complicated and may involve substantial capital investment. To the extent we fail to achieve these strategies, our results of operations may be adversely affected.

We are subject to stringent labor and employment laws in certain jurisdictions in which we operate, we are party to various collective bargaining arrangements, and our relationship with our employees could deteriorate, which could adversely impact our operations.

A majority of our full-time employees are employed outside the U.S. In certain jurisdictions where we operate, labor and employment laws are relatively stringent and, in many cases, grant significant job protection to certain employees, including rights on termination of employment. In addition, in certain countries where we operate, our employees are members of unions or are represented by works councils. We are often required to consult and seek the consent or advice of these unions and/or works councils. These regulations and laws, coupled with the requirement to consult with the relevant unions or works councils, could have a significant impact on our flexibility in managing costs and responding to market changes.

Furthermore, approximately 13.67% of our U.S. employees as of December 31, 2014, are subject to collective bargaining arrangements or similar arrangements. None of these agreements expire during 2015, and, while we expect to be able to renew these agreements without significant disruption to our business when they are scheduled to expire, there can be no assurance that we will be able to negotiate labor agreements on satisfactory terms or that actions by our employees will not be disruptive to our business. If these workers were to engage in a strike, work stoppage or other slowdown or if other employees were to become unionized, we could experience a significant disruption of our operations and/or higher ongoing labor costs, which could adversely affect our business, financial condition and results of operations.

Employee benefit costs, especially postretirement costs, constitute a significant element of our annual expenses, and funding these costs could adversely affect our financial condition.

Employee benefit costs are a significant element of our cost structure. Certain expenses, particularly postretirement costs under defined benefit pension plans and healthcare costs for employees and retirees, may increase significantly at a rate that is difficult to forecast and may adversely affect our financial results, financial condition or cash flows. Declines in global capital markets may cause reductions in the value of our pension plan assets. Such circumstances could have an adverse effect on future pension expense and funding requirements. Further information regarding our retirement benefits is presented in Note 12 to the consolidated financial statements under Item 8 of this Annual Report on Form 10 K.

Our implementation and operation of business information systems and processes could adversely affect our results of operations and cash flow.

We have been implementing and operating information systems and related business processes to standardize and streamline our business operations. Implementation of information systems and related processes involves risk, including risks related to programming and data transfer. Costs of implementation also could be greater than anticipated. In addition, we may be unable or decide not to implement such systems and processes in certain locations. Inherent risks, decisions and constraints related to implementation and operation of information systems could result in operating inefficiencies and could impact our ability to perform business transactions. These risks could adversely impact our results of operations, financial condition, and cash flows.

We are subject to risks associated with outsourcing functions to third parties.

We have entered into outsourcing agreements with third parties, and rely on such parties, to provide certain services in support of our business. One such vendor provides a number of business services related to our information systems

and finance and accounting activity. Arrangements with third party service providers may make our operations vulnerable if vendors fail to provide the expected service or there are changes in their own operations, financial condition, or other matters outside of our control. If these service providers are unable to perform to our requirements or to provide the level of service expected, our operating results and financial condition may suffer and we may be forced to pursue alternatives to provide these services, which could result in delays, business disruptions and additional expenses.

There are risks associated with the manufacture and sale of our materials into industries making products for sensitive applications.

We manufacture and sell materials to parties that make products for sensitive applications, such as medical devices. The supply of materials that enter the human body involves the risk of injury to consumers, as well as commercial risks. Injury to consumers could result from, among other things, tampering by unauthorized third parties or the introduction into the material of foreign objects,

substances, chemicals and other agents during the manufacturing, packaging, storage, handling or transportation phases. Shipment of adulterated materials may be a violation of law and may lead to an increased risk of exposure to product liability or other claims, product recalls and increased scrutiny by federal and state regulatory agencies. Such claims or liabilities may not be covered by our insurance or by any rights of indemnity or contribution that we may have against third parties. In addition, the negative publicity surrounding any assertion that our materials caused illness or injury could have a material adverse effect on our reputation with existing and potential customers, which could negatively impact our business, operating results or financial condition.

We are exposed to lawsuits in the normal course of business, which could harm our business.

We are from time to time exposed to certain legal proceedings, which may include claims involving product liability, infringement of intellectual property rights of third parties and other claims. Due to the uncertainties of litigation, we can give no assurance that we will prevail on claims made against us in the lawsuits that we currently face or that additional claims will not be made against us in the future. We do not believe that lawsuits we currently face are likely to have a material adverse effect on our business, operating results or financial condition. Future claims or lawsuits, if they were to result in a ruling adverse to us, could give rise to substantial liability, which could have a material adverse effect on our business, operating results or financial condition.

We are exposed to intangible asset risk, and a write down of our intangible assets could have an adverse impact to our operating results and financial position.

We have recorded intangible assets, including goodwill, in connection with business acquisitions. We are required to perform goodwill impairment tests on at least an annual basis and whenever events or circumstances indicate that the carrying value may not be recoverable from estimated future cash flows. As a result of our annual and other periodic evaluations, we may determine that the intangible asset values need to be written down to their fair values, which could result in material charges that could be adverse to our operating results and financial position. See further information regarding our goodwill and other intangible assets in "Critical Accounting Policies" under Item 7 and in Note 7 to the consolidated financial statements under Item 8 of this Form 10-K.

Interest rates on some of our borrowings are variable, and our borrowing costs could be adversely affected by interest rate increases.

Portions of our debt obligations have variable interest rates. Generally, when interest rates rise, our cost of borrowings increases. We estimate, based on the debt obligations outstanding at December 31, 2014, that a one percent increase in interest rates would cause interest expense to increase by \$3.0 million annually. Continued interest rate increases could raise the cost of borrowings and adversely affect our financial performance. See further information regarding our interest rates on our debt obligations in "Quantitative and Qualitative Disclosures about Market Risk" under Item 7A and in Note 8 to the consolidated financial statements under Item 8 of this Form 10-K.

Many of our assets are encumbered by liens that have been granted to lenders, and those liens affect our flexibility to dispose of property and businesses.

Certain of our debt obligations are secured by substantially all of our assets. These liens could reduce our ability and/or extend the time to dispose of property and businesses, as these liens must be cleared or waived by the lenders prior to any disposition. These security interests are described in more detail in Note 8 to the consolidated financial statements under Item 8 of this Annual Report on Form 10 K.

We may not pay dividends on our common stock at any time in the foreseeable future.

Holders of our common stock are entitled to receive such dividends as our Board of Directors from time to time may declare out of funds legally available for such purposes. Our Board of Directors has no obligation to declare dividends under Ohio law or our amended Articles of Incorporation. We may not pay dividends on our common stock at any time in the foreseeable future. Any determination by our Board of Directors to pay dividends in the future will be based on various factors, including our financial condition, results of operations and current anticipated cash needs and any limits our then-existing credit facility and other debt instruments place on our ability to pay dividends.

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We are exposed to risks associated with acts of God, terrorists and others, as well as fires, explosions, wars, riots, accidents, embargoes, natural disasters, strikes and other work stoppages, quarantines and other governmental actions, and other events or circumstances that are beyond our control.

Ferro is exposed to risks from various events that are beyond our control, which may have significant effects on our results of operations. While we attempt to mitigate these risks through appropriate loss prevention measures, insurance, contingency planning and other means, we may not be able to anticipate all risks or to reasonably or cost-effectively manage those risks that we do anticipate. As a result, our operations could be adversely affected by circumstances or events in ways that are significant and/or long lasting.

The risks and uncertainties identified above are not the only risks that we face. Additional risks and uncertainties not presently known to us or that we currently believe to be immaterial also may adversely affect us. If any known or unknown risks and uncertainties develop into actual events, these developments could have material adverse effects on our financial position, results of operations, and cash flows.

Item 1B — Unresolved Staff Comments

None.

### Item 2 — Properties

We lease our corporate headquarters offices, which are located at 6060 Parkland Blvd., Mayfield Heights, Ohio. The company owns other facilities worldwide. We own principal manufacturing plants that range in size from 29,000 sq. ft. to over 800,000 sq. ft. Plants we own with more than 250,000 sq. ft. are located in Spain; Germany; Cleveland, Ohio; Penn Yan, New York; and Mexico. The locations of these principal manufacturing plants by reportable segment are as follows:

Performance Colors and Glass-U.S.: Washington, Pennsylvania, and Orrville, Ohio. Outside the U.S.: Brazil, China, France, Germany, Mexico, Spain, and the United Kingdom.

Performance Coatings-U.S.: Cleveland, Ohio. Outside the U.S.: Argentina, Brazil, China, Egypt, France, Indonesia, Italy, Mexico, Spain, Poland, Thailand and Venezuela.

Pigments, Powders and Oxides-U.S.: Penn Yan, New York. Outside the U.S.: China and Brazil.

Ferro's revolving credit facility has a security interest in the real estate of the parent company and its domestic material subsidiaries.

In addition, we lease manufacturing facilities for the Performance Colors and Glass segment in Germany, Japan, Italy, and Vista, California; and for Performance Coatings in Italy and Poland. In some instances, the manufacturing facilities are used for two or more segments. Leased facilities range in size from 18,000 sq. ft. to over 80,000 sq. ft.

Item 3 — Legal Proceedings

There are various lawsuits and claims pending against the Company and its consolidated subsidiaries. We do not currently expect the resolution of such matters to materially affect the consolidated financial position, results of operations, or cash flows of the Company.

Item 4 — Mine Safety Disclosures

Not applicable.

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# Executive Officers of the Registrant

The executive officers of the Company as of February 25, 2015, are listed below, along with their ages and positions held during the past five years. The year indicates when the individual was named to the indicated position. No family relationship exists between any of Ferro's executive officers.

Peter T. Thomas — 59

Chairman of the Board of Directors, 2014

President and Chief Executive Officer, 2013

Interim President and Chief Executive Officer, 2012

Vice President, Polymer and Ceramic Engineered Materials, 2009

Mark H. Duesenberg — 53

Vice President, General Counsel and Secretary, 2008

Ann E. Killian — 60

Vice President, Human Resources, 2005

Jeffrey L. Rutherford — 54

Vice President and Chief Financial Officer, 2012

Vice President and Chief Financial Officer, Park-Ohio Holdings Corp., an industrial supply chain logistics and diversified manufacturing business, 2008

#### **PART II**

Item 5 — Market for Registrant's Common Equity, Related Stockholder Matters, and Issuer Purchases of Equity Securities

Our common stock is listed on the New York Stock Exchange under the ticker symbol FOE. On January 31, 2015, we had 1,175 shareholders of record for our common stock, and the closing price of the common stock was \$11.13 per share.

The chart below compares Ferro's cumulative total shareholder return for the five years ended December 31, 2014, to that of the Standard & Poor's 500 Index and the Standard & Poor's MidCap Specialty Chemicals Index. In all cases, the information is presented on a dividend-reinvested basis and assumes investment of \$100.00 on December 31, 2009. At December 31, 2014, the closing price of our common stock was \$12.96 per share.

### COMPARISON OF FIVE-YEAR

#### **CUMULATIVE TOTAL RETURNS**

The quarterly high and low intra-day sales prices and dividends declared per share for our common stock during 2014 and 2013 were as follows:

	2014			2013		
	High	Low	Dividends	High	Low	Dividends
First Quarter	\$ 14.97	\$ 11.98	\$ —	\$ 6.99	\$ 3.60	\$ —
Second Quarter	14.23	11.86	_	7.26	6.39	_
Third Quarter	15.14	11.95	_	9.35	6.19	_
Fourth Quarter	14.51	11.53		14.17	9.12	

The restrictive covenants contained in our credit facility limit the amount of dividends we can pay on our common stock. For further discussion, see Management's Discussion and Analysis of Financial Condition and Results of Operations under Item 7 of this Annual Report on Form 10-K.

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The following table summarizes purchases of our common stock by the Company and affiliated purchasers during the three months ended December 31, 2014:

			Total Number of Shares  Purchased as	Maximum Number of Shares that May Yet Be	
			Part of Publicly	Purchased	
	Total Number	Average	Announced	Under the	
	of Shares	Price Paid	Plans or	Plans or	
	Purchased	per Share	Programs	Programs	
	(In thousands, except for per share amounts)				
October 1, 2014 to October 31, 2014		S —	_	_	
November 1, 2014 to November 30, 2014	_			_	
December 1, 2014 to December 31, 2014	_	_	_	_	
Total		_		_	

<sup>(1)</sup> Consists of shares of common stock surrendered by employees to meet minimum tax withholding obligations under current and previous long-term incentive plans.

# Item 6 — Selected Financial Data

The following table presents selected financial data for the last five years ended December 31st:

	2014 2013 2012 2011 2010 (Dollars in thousands, except for per share data)					
Net sales (Loss) income from continuing operations Basic earnings (loss) per share from continuing operations attributable to Ferro	\$ 1,111,626	\$ 1,188,582	\$ 1,267,695	\$ 1,636,639	\$ 1,623,844	
	(8,609)	63,905	(386,104)	(8,504)	12,736	
Corporation common shareholders Diluted earnings (loss) per share from continuing operations attributable to Ferro	(0.10)	0.73	(4.49)	(0.11)	0.12	
	(0.10)	0.72	(4.49)	(0.11)	0.12	

Corporation common shareholders

 Cash dividends declared per common shares
 -</

In 2014, we commenced a process to market for sale all of the assets within our Polymer Additives reportable segment, which is presented as discontinued operations in 2010 through 2014, and sold substantially all of the assets related to our North America-based Polymer Additives business.

In 2014, we sold substantially all of the assets in our Specialty Plastics business, which is presented as discontinued operations in 2010 through 2014.

In 2013, we sold our Pharmaceuticals business, which is presented as discontinued operations in 2010 through 2013.

In 2012, we changed our method of recognizing defined benefit pension and other postretirement benefit expense. Under the new method, we recognize actuarial gains and losses in our operating results in the year in which the gains or losses occur. All prior periods have been previously adjusted to apply the new method retrospectively.

Item 7 — Management's Discussion and Analysis of Financial Condition and Results of Operations

Overview - Update

During the year ended December 31, 2014, net sales were down \$77.0 million, or 6.5%, compared with 2013. Of the decline, \$74.7 million relates to the sale of our North American and Asian metal powders business and exit of solar pastes. Excluding the impact of the sold product lines, net sales in the continuing business was down \$2.3 million compared to 2013. Performance Coatings and Pigments, Powders and Oxides net sales were down compared with 2013 by \$11.8 million and \$8.1 million, respectively, which were partially mitigated by strong performance in Performance Colors and Glass, which achieved strong sales improvement of \$17.7 million compared with 2013. Despite the decline in net sales, gross profit increased \$7.4 million compared with 2013. As a percentage of net sales excluding precious metals, gross profit rate increased approximately 140 basis points to 26.8%, from 25.4% in the prior year.

For the year ended December 31, 2014, selling, general and administrative ("SG&A") expenses were up \$136.0 million, or 90.2%, compared with 2013, primarily driven by the pension and other postretirement benefits mark-to-market adjustment. In 2014, the adjustment resulted in a loss of \$82.3 million in SG&A, while in 2013, the adjustment resulted in a gain of \$69.5 million.

For the year ended December 31, 2014, net income was \$86.2 million, compared with net income of \$72.4 million in 2013, and net income attributable to common shareholders was \$86.1 million, compared with net income attributable to common shareholders of \$71.9 million in 2013. Loss from continuing operations was \$8.6 million for the year ended December 31, 2014, compared with income from continuing operations of \$63.9 million in 2013. Gross profit in 2014 was \$285.1 million, compared with \$277.7 million in 2013.

2014 Transactional Activity

Disposition of the Polymer Additives Business

During the fourth quarter of 2014, we completed the sale of substantially all of the assets in our North America-based Polymer Additives business to Polymer Additives, Inc. for \$153.5 million in cash. The sale resulted in a gain of \$72.7 million and net cash proceeds of \$149.5 million. Cash proceeds were used to repay debt under the revolving credit facility and will be used to fund strategic growth opportunities. This disposition was part of our value creation strategy, as we turn our focus to our core functional coatings and color businesses. Excluded from the transaction was our Europe-based Polymer Additives assets. Our Europe-based Polymer Additives assets are being separately marketed for sale.

### Acquisition of Vetriceramici S.p.A

During the fourth quarter of 2014, Ferro Coatings Italy S.R.L., a 100% owned subsidiary of Ferro, acquired 100% of the outstanding common shares and voting interest of Vetriceramici S.p.A. ("Vetriceramici") for €87.2 million in cash. The sale closed on December 1, 2014 for a purchase price of \$108.9 million, based on the exchange rate on that date. Vetriceramici is an Italian manufacturing, marketing and distribution group that offers a range of products (principally ceramic glazes, frits, inks and screen printing bases) to its customers for the production of ceramic tiles, with some diversification in the glass sector. Vetriceramici currently has manufacturing facilities in Italy and Mexico, a mixing plant in Poland and research and development and sales offices in Italy and Turkey.

Vetriceramici is a leading global supplier of specialty products that enhance the appearance and improve the durability of high-end ceramic tile. Its product line includes high-value, specialty frits and grits (finely-milled frits), glazes, digital inks, and other specialized tile coatings. Additionally, Vetriceramici has developed high-value forehearth color solutions that deliver greater production flexibility, lower manufacturing costs and improved inventory management to customers. The acquisition is expected to improve our growth opportunities by enhancing our product portfolio and improving our position in important growth markets, including the U.S., Mexico, Turkey, and Eastern Europe. We expect to achieve favorable synergies and cost reductions.

# Disposition of the Specialty Plastics Business

During the third quarter of 2014, we completed the sale of substantially all of the assets in our Specialty Plastics business to A. Schulman, Inc. for \$91.0 million in cash. The sale resulted in a gain of \$54.9 million and net cash proceeds of \$88.3 million. Cash

proceeds were used to pay down the 7.785% Senior Notes, as discussed below. This disposition was part of our value creation strategy, as we turn our focus to our core functional coatings and color businesses.

### Acquisition of Turkey Assets

During the third quarter of 2014, the Company acquired certain commercial assets of a reseller of our porcelain enamel products in Turkey for a cash purchase price of \$6.7 million. Our porcelain enamel sales to this entity in 2013 were approximately \$6.0 million. This action was an initial step to strengthen sales in growing geographic markets, such as Turkey.

#### 7.875% Senior Note Tender Offer

As discussed in Note 8, we completed a tender offer for our Senior Notes resulting in the purchase of \$143.0 million of notes, with the remaining outstanding notes of \$107.0 million being redeemed during the third quarter of 2014.

### New Credit Facility

As discussed in Note 8, on July 31, 2014, the Company entered into a new credit facility (the "New Credit Facility") with PNC Bank, National Association ("PNC"), as the Administrative Agent, the Collateral Agent and an Issuer, JPMorgan Chase Bank, N.A., as the Syndication Agent and an Issuer, the other agents party thereto and various financial institutions as lenders (the "Lenders"). The New Credit Facility refinances and replaces the 2013 Amended Credit Facility.

The New Credit Facility consists of a \$200 million secured revolving line of credit with a term of five years and a \$300 million secured term loan facility with a term of seven years. Up to \$100 million of the revolving line of credit will be available to certain of the Company's subsidiaries in the form of revolving loans denominated in Euros. Under the terms of the New Credit Facility, the Company is entitled, subject to the satisfaction of certain conditions, to request additional commitments under the revolving line of credit or term loans in the aggregate principal amount of up to \$200 million to the extent that existing or new lenders agree to provide such additional commitments and/or term loans.

The refinancing of the 7.875% Senior Notes and the 2013 Amended Credit Facility reduced interest expense and further enhanced strategic flexibility.

#### Outlook

During 2014, the Company made significant progress on its value creation strategy by reducing infrastructure costs, improving gross margins and reshaping the business portfolio. The Company has renewed its strategic focus on its core glass-based coatings business by divesting its Specialty Plastics business and substantially all of the assets in our North America-based Polymer Additives assets in the second half of 2014. During the fourth quarter of 2014, the Company also made an investment in the core coatings business by successfully acquiring Vetriceramici, a manufacturer of high end tile coatings. Through the divestitures of Specialty Plastics and our North America-based Polymer Additives businesses, we realized net cash proceeds of \$237.8 million, portions of which were used to pay down debt, as well as fund the acquisition of Vetriceramici. At December 31, 2014, our cash balance was \$140.5 million, which will provide financial flexibility to pursue additional strategic options in 2015.

Going into 2015, we are focused on the successful integration of our acquisition of Vetriceramici. We are focused on achieving the identified acquisition synergies and will continue to execute our value creation strategy including pursuing value-creating growth opportunities in our core performance materials businesses and pursuing opportunities to optimize our cost structure and make our business processes and systems more efficient, and optimize tax planning opportunities.

During 2015, we also expect to face some challenges, particularly as it pertains to foreign currency movements, specifically the Euro, which we expect to have a significant negative impact on our 2015 reported operating results, relative to 2014 exchange rates. In 2014, 45.0%, of our net sales excluding precious metals originated from Europe. The results of these business, as they are reported in U.S. dollars, would be adversely impacted by movement in the Euro exchange rate, assuming foreign currency rates remain unchanged from current levels. In addition, the Company anticipates continued pricing pressure in our Performance Coatings segment, principally related to our tile products. In 2014, negative pricing impacted our Performance Coatings reportable segment sales by approximately \$19.0 million.

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In 2015, we will continue our focus on divesting our Europe-based Polymer Additives assets, including the Antwerp, Belgium dibenzoates manufacturing assets, and related Polymer Additives European headquarters and lab facilities. The assets associated with this facility are currently classified held-for-sale on our consolidated balance sheets, and we remain committed to the established plan to divest this asset.

For 2015, we expect sales growth of 10 - 12%, including the addition of Vetriceramici and excluding the adverse impact of the changes in foreign currency. Excluding Vetriceramici, we expect the underlying business, on a constant currency basis, to generate sales growth of approximately 5% for 2015, including growth generated from new capital projects. We expect gross profit margins to increase over 2014 levels, due to higher sales volumes, the addition of the higher-end Vetriceramici product line, and expected higher gross margins related to our capital investments. In addition, we will continue to focus on reducing costs in SG&A and manufacturing related operations.

We expect the result of our efforts in all of these areas will allow the Company during 2015 to significantly improve profitability and generate \$50 - \$60 million of free cash flow.

Results of Operations - Consolidated

Comparison of the years ended December 31, 2014 and 2013

For the year ended December 31, 2014, loss from continuing operations was \$8.6 million, compared with income from continuing operations of \$63.9 million in 2013. For the year ended December 31, 2014, net income was \$86.2 million, compared with net income of \$72.4 million in 2013. For the year ended December 31, 2014, net income attributable to common shareholders was \$86.1 million, or \$0.99 per share, compared with net earnings attributable to common shareholders of \$71.9 million, or \$0.83 per share in 2013.

**Net Sales** 

				%
	2014	2013	\$ Change	Change
	(Dollars in th	nousands)	_	
Net sales excluding precious metals	\$ 1,065,652	\$ 1,091,860	\$ (26,208)	(2.4) %
Sales of precious metals	45,974	96,722	(50,748)	(52.5)%
Net sales	1,111,626	1,188,582	(76,956)	(6.5) %
Cost of sales	826,541	910,910	(84,369)	(9.3) %
Gross profit	\$ 285,085	\$ 277,672	\$ 7,413	2.7 %
Gross profit as a % of net sales excluding precious metals	26.8	% 25.4	%	

Net sales decreased by \$77.0 million, or 6.5%, in the year ended December 31, 2014, compared with the prior year. Net sales excluding precious metals decreased \$26.2 million, driven by decreased sales in our Pigments, Powders and Oxides segment of \$35.6 million, primarily due to the sale of our North American and Asian metal powders business and exit of solar pastes during 2013, and decreased sales in our Performance Coatings segment of \$11.8 million. Partially mitigating these declines were increased sales in our Performance Colors and Glass segment of \$21.2 million. Sales of precious metals were down compared with the prior year primarily due to the sale of our North American and Asian metal powders business and the exit of solar pastes which contributed \$47.2 million of the decline.

#### **Gross Profit**

Gross profit increased \$7.4 million, or 2.7%, in 2014 to \$285.1 million, compared with \$277.7 million in 2013. The significant driver of the increased gross profit was strong performance in our Performance Colors and Glass segment which exceeded prior year gross profit by \$22.1 million, primarily driven by higher sales volumes and favorable mix, favorable product pricing, and favorable manufacturing costs. This increase was partially offset by lower gross profit in our Pigments, Powders and Oxides and Performance Coatings segments.

### Geographic Revenues

				%
	2014	2013	\$ Change	Change
Geographic Revenues	(Dollars in th	ousands)	_	
Europe	\$ 479,771	\$ 480,897	\$ (1,126)	(0.2) %
United States	242,512	264,944	(22,432)	(8.5) %
Asia Pacific	182,339	183,797	(1,458)	(0.8) %
Latin America	161,030	162,222	(1,192)	(0.7) %
Total net sales excluding precious metals	\$ 1,065,652	\$ 1,091,860	\$ (26,208)	(2.4) %
Sale of precious metals	45,974	96,722	(50,748)	(52.5)%
Net sales	\$ 1,111,626	\$ 1,188,582	\$ (76,956)	(6.5) %

The decline in net sales excluding precious metals of \$26.2 million, compared with 2013, was driven by declines in all regions. The decline in sales is largely driven by the sale of our North American and Asian metal powders business and exit of solar pastes, which resulted in a decrease of \$27.5 million, partially mitigated by higher sales in the United States for Performance Colors and Glass products of \$11.2 million. In addition, lower sales in Latin America were due to decreased sales in our Performance Coatings and Pigments, Powders and Oxides segments of \$5.5 million and \$3.0 million, respectively, partially offset by higher sales in Performance Colors and Glass. The decline in sales in Europe in 2014 compared with 2013 was attributable to lower sales of

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Performance Coatings products of \$1.9 million, partially mitigated by slightly higher sales of Pigments, Powders and Oxides products compared to the prior year.

The following table presents our sales on the basis of where the sold product was shipped to, as compared to the table above that shows sales on the basis of where the sale originated.

				%
	2014	2013	\$ Change	Change
Geographic Revenues on a ship to basis	(Dollars in th	ousands)		
Europe	\$ 474,101	\$ 488,581	\$ (14,480)	(3.0) %
Latin America	185,803	185,857	(53)	(0.0) %
United States	189,991	197,390	(7,399)	(3.7) %
Asia Pacific	215,756	220,032	(4,275)	(1.9) %
Total net sales excluding precious metals	\$ 1,065,652	\$ 1,091,860	\$ (26,208)	(2.4) %
Sale of precious metals	45,974	96,722	(50,748)	(52.5)%
Net sales	\$ 1,111,626	\$ 1,188,582	\$ (76,956)	(6.5) %

## Selling, General and Administrative Expense

The following table presents selling, general and administrative ("SG&A") expenses attributable to operating sites and regional costs outside the United States together as Performance Materials, and regional costs attributable to the United States and other Corporate costs together as Corporate. Performance Materials and Corporate SG&A expenses exclude the impact of the annual mark-to-market adjustment on our pension and other postretirement benefit plans, as the volatility in this adjustment does not allow for a meaningful comparison of underlying SG&A costs between periods.

	2014	2013	\$ Change	% Change
	(Dollars in	thousands)		
Performance Materials	\$ 137,982	\$ 152,821	\$ (14,839)	(9.7) %
Corporate	66,485	67,450	(965)	(1.4) %
Pension and other postretirement benefits mark-to-market				
adjustment	82,295	(69,518)	151,813	(218.4)%
Selling, general and administrative expenses	\$ 286,762	\$ 150,753	\$ 136,009	90.2 %

The following represents the components with significant changes between 2014 and 2013:

	2014	2013	\$ Change	% Change
	(Dollars in	thousands)		
Personnel expenses	\$ 107,159	\$ 120,717	\$ (13,558)	(11.2) %
Incentive compensation	11,598	18,459	(6,861)	(37.2) %
Stock-based compensation	9,679	6,890	2,789	40.5 %
Pension and other postretirement benefits	85,081	(71,845)	156,926	(218.4)%
Bad debt	2,657	3,961	(1,304)	(32.9) %
All other expenses	70,588	72,571	(1,983)	(2.7) %
Selling, general and administrative expenses	\$ 286,762	\$ 150,753	\$ 136,009	90.2 %

SG&A expenses were \$136.0 million higher in 2014 compared with the prior year. As a percentage of net sales excluding precious metals, SG&A expenses increased from 13.8% in the prior year to 26.9% in 2014. The most significant driver of the increase in SG&A expenses in 2014 was the mark-to-market loss on our defined benefit pension plans and postretirement health care and life insurance benefit plans of \$82.3 million, and is included within the pension and other postretirement benefits line above. The adjustment was primarily related to changes in actuarial assumptions used in calculating the value of the U.S. pension liability. In 2014, the discount rate used to value the liability declined by 100 basis points, compared with the prior year, thereby increasing the value of the liability by approximately \$50 million. In addition, during the fourth quarter of 2014, the Company adopted the use of new mortality tables within its calculation assumptions, which had a one-time impact of increasing the liability. The new mortality tables reflect underlying increases in life expectancy of participants, thus driving longer benefit payment periods. The impact of the change in mortality assumption on the U.S. pension liability was an increase of the liability of approximately \$18 million. In 2013, the mark-to-market adjustments resulted in an actuarial gain of \$69.5 million. The 2013 gain was primarily driven by the change in

discount rate used to value the liability, which increased by 95 basis points, compared with 2012, resulting in a reduction in the value of the liability. Excluding the impacts of the mark-to-market adjustments, SG&A expenses decreased 100 basis points from 20.2% in the prior year to 19.2% in 2014. Various restructuring activities executed in 2013 that had a full year impact in 2014 drove the decrease in personnel expenses. The decreases were partially offset by higher stock-based compensation expense due to higher grants to retirement-eligible employees that require accelerated expense recognition, and the impact of improved stock price on our liability based awards.

#### Restructuring and Impairment Charges

	2014	2013	\$ Change	% Change
	(Dollars	in thousand	s)	
Amortizable intangible assets	\$ —	\$ 2,102	\$ (2,102)	(100.0)%
Property, plant and equipment	_	7,484	(7,484)	(100.0)%
Corporate plane	_	1,242	(1,242)	(100.0)%
Employee severance	2,744	20,922	(18,178)	(86.9) %
Lease termination costs	2,468	_	2,468	100.0 %
Other restructuring costs	3,637	9,179	(5,542)	(60.4) %
Restructuring and impairment charges	\$ 8,849	\$ 40,929	\$ (32,080)	(78.4) %

Restructuring and impairment charges decreased significantly in 2014 compared with 2013. The primary drivers of the decline were the decrease in employee severance cost of \$18.2 million in 2014 compared with 2013 and the various 2013 impairment charges of \$10.8 million that did not recur in 2014. Many of our restructuring activities commenced during the first half of 2013, thereby driving the higher prior year expenses. We had fewer restructuring activities during 2014.

## Interest Expense

				%
	2014	2013	\$ Change	Change
	(Dollars in	thousands)	)	
Interest expense	\$ 16,895	\$ 18,164	\$ (1,269)	(7.0) %
Amortization of bank fees	1,337	2,905	(1,568)	(54.0) %
Interest capitalization	(1,969)	(917)	(1,052)	114.7 %
Interest expense	\$ 16,263	\$ 20,152	\$ (3,889)	(19.3)%

Interest expense in 2014 decreased \$3.9 million compared with 2013, primarily due to the amendment of our revolving credit facility and retirement of the 7.875% Senior Notes. Additionally, interest expense decreased due to additional interest capitalization related to the construction project at our Antwerp, Belgium facility.

### Income Tax Expense

In 2014, we recorded an income tax benefit of \$34.2 million, or 79.9% of loss before income taxes, compared with income tax expense of \$14.3 million, or 18.3% of income before taxes in 2013. The 2014 effective tax rate was greater than the statutory income tax rate of 35% primarily as a result of a \$17.4 million benefit for the release of the valuation allowances related to deferred tax assets that were utilized in the current year, the release of valuation allowances concluded to no longer be necessary and the expiration of fully valued tax attributes, \$15.2 million of benefit related to current year domestic foreign tax credit generated and utilized, and foreign tax rate differences from the statutory income tax rate of 35%. The 2013 effective tax rate was less than the statutory income tax rate of 35% primarily as a result of a \$21.1 million benefit for the release of the valuation allowances related to deferred tax assets that were utilized and the expiration of fully valued tax credits, offset by a \$6.8 million charge related to the expiration of the fully valued tax credits.

Comparison of the years ended December 31, 2013 and 2012

For the year ended December 31, 2013, income from continuing operations was \$63.9 million, compared with a \$386.1 million loss from continuing operations in 2012. For the year ended December 31, 2013, net income was \$72.4 million, compared with net loss of \$373.0 million in 2012. For the year ended December 31, 2013, net income attributable to common shareholders was \$71.9

million, or \$0.83 earnings per share, compared with net loss attributable to common shareholders of \$374.3 million, or \$4.34 loss per share in 2012.

**Net Sales** 

				%
	2013	2012	\$ Change	Change
	(Dollars in the	ousands)		
Net sales excluding precious metals	\$ 1,091,860	\$ 1,094,945	\$ (3,085)	(0.3) %
Sales of precious metals	96,722	172,750	(76,028)	(44.0)%
Net sales	1,188,582	1,267,695	(79,113)	(6.2) %
Cost of sales	910,910	1,034,298	(123,388)	(11.9)%
Gross profit	\$ 277,672	\$ 233,397	\$ 44,275	19.0 %
Gross profit as a % of net sales excluding precious metals	25.4	% 21.3 %		

Net sales decreased by \$79.1 million, or 6.2% in the year ended December 31, 2013, compared with the prior year. Net sales excluding precious metals decreased \$3.1 million compared with the prior year, primarily due to lower sales within Pigments, Powders and Oxides of \$20 million, driven by lower volumes for solar pastes, partially offset by higher sales within Performance Colors and Glass of \$10.3 million due to higher volumes and favorable mix. Additionally, higher sales in Performance Coatings of \$6.7 million was driven by favorable volumes, mix and foreign currency impacts, partially offset by lower pricing. Sales of precious metals were down with the prior year due to the exit of solar pastes, and lower sales in our North American and Asian metal powders product lines prior to being sold in the fourth quarter of 2013.

#### Gross Profit

Gross profit increased \$44.3 million, or 19.0% in 2013 compared with the prior year, and as a percentage of net sales excluding precious metals, gross profit increased 420 basis points to 25.4%. The primary drivers of the increased gross profit were higher pricing and favorable manufacturing costs in Performance Colors and Glass and favorable volume and mix and lower manufacturing costs in Performance Coatings.

#### Geographic Revenues

				%	
	2013	2012	\$ Change	Chan	ge
Geographic Revenues	(Dollars in the	nousands)			
Europe	\$ 480,897	\$ 467,110	\$ 13,787	3.0	%
United States	264,944	281,481	(16,537)	(5.9)	%
Asia Pacific	183,797	180,272	3,525	2.0	%
Latin America	162,222	166,082	(3,860)	(2.3)	%

Total net sales excluding precious metals	\$ 1,091,860	\$ 1,094,945	\$ (3,085)	(0.3) %
Sale of precious metals	96,722	172,750	(76,028)	(44.0)%
Net sales	\$ 1.188.582	\$ 1.267.695	\$ (79.113)	(6.2) %

There was a decline in net sales excluding precious metals of \$3.1 million, compared with the 2012. The increased sales in Europe was due to higher sales of decorative and industrial products within Performance Colors and Glass, partially offset by lower sales of automotive products and higher sales of digital inks and frits and glazes in Performance Coatings. The decline in sales in the United States was primarily driven by the exit of solar pastes which resulted in a decrease of \$16.2 million. Sales increased in Asia Pacific due to higher sales of frits and glazes, digital inks and porcelain enamel in Performance Coatings, and sales decreased in Latin America due to weaker sales of tile related products.

### Selling, General and Administrative Expense

The following table presents selling, general and administrative expenses attributable to operating sites and regional costs outside the United States together as Performance Materials, and regional costs attributable to the United States and other corporate costs together as Corporate. Corporate SG&A expenses exclude the impact of the annual mark-to-market adjustment on our pension

and other postretirement benefit plans, as the volatility in this adjustment does not allow for a meaningful comparison of underlying Corporate SG&A costs between periods.

	2013	2012	\$ Change	% Change
	(Dollars in	thousands)		
Performance Materials	\$ 152,821	\$ 157,375	\$ (4,554)	(2.9) %
Corporate	67,450	91,309	(23,859)	(26.1) %
Pension and other postretirement benefits mark-to-market				
adjustment	(69,518)	23,153	(92,671)	(400.3)%
Selling, general and administrative expenses	\$ 150,753	\$ 271,837	\$ (121,084)	(44.5) %

The following represent the components with significant changes between 2013 and 2012:

	2013	2012	\$ Change	% Change
	(Dollars in	thousands)		
Personnel expenses	\$ 120,717	\$ 149,405	\$ (28,688)	(19.2) %
Incentive compensation	18,459	646	17,813	2,757.4 %
Stock-based compensation	6,890	2,677	4,213	157.4 %
Pension and other postretirement benefits	(71,845)	29,065	(100,910)	(347.2) %
Idle sites		2,077	(2,077)	(100.0) %
Bad debt	3,961	5,076	(1,115)	(22.0) %
All other expenses	72,571	82,891	(10,320)	(12.5) %
Selling, general and administrative expenses	\$ 150,753	\$ 271,837	\$ (121,084)	(44.5) %

SG&A expenses were \$121.1 million lower in 2013 compared with the prior year. As a percentage of net sales excluding precious metals, SG&A expenses decreased 1,100 basis points from 24.8% in the prior year to 13.8% in 2013. The most significant driver of the decline in SG&A expenses in 2013 was the mark-to-market gain on our defined benefit pension plans and postretirement health care and life insurance benefit plans of \$69.5 million and is included within the pension and other postretirement benefits above. In 2012, the mark-to-market adjustments resulted in an actuarial loss of \$23.2 million. Excluding the impact of the mark-to-market adjustment, SG&A expenses decreased 250 basis points from 22.7% in the prior year to 20.2% in 2013. Various restructuring activities executed in 2013 drove the decrease in personnel expenses. Our expenses related to idle sites have decreased in 2013 as a result of selling the majority of our idle sites during the year. The decreases were partially offset by higher incentive

compensation of approximately \$17.8 million due to strong performance in 2013. Incentive compensation in 2012 was \$0.6 million, driven by not meeting performance targets. Strong performance in 2013 was the primary driver of increased stock-based compensation expense.

Restructuring and Impairment Charges

	2013	2012	\$ Change	% Change	
	(Dollars in thousands)				
Goodwill	\$ —	\$ 153,566	\$ (153,566)	(100.0)	%
Amortizable intangible assets	2,102		2,102	100.0	%
Property, plant and equipment	7,484	46,800	(39,316)	(84.0)	%
Assets held for sale	_	14,913	(14,913)	(100.0)	%
Corporate plane	1,242	3,214	(1,972)	(61.4)	%
Employee severance	20,922	7,225	13,697	189.6	%
Other restructuring costs	9,179	6	9,173	152,883.3	%
Restructuring and impairment charges	\$ 40,929	\$ 225,724	\$ (184,795)	(81.9)	%

Restructuring and impairment charges decreased significantly in 2013 compared with 2012. The primary drivers of the decrease were the 2012 impairment charges of \$153.6 million taken against goodwill related to our Electronics Materials reporting unit and \$46.8 million related to property, plant and equipment associated with solar and metal powders related assets in 2012. Restructuring charges increased \$22.9 million in 2013 when compared with 2012 driven by various restructuring activities executed during the year.

Interest Expense

\$ %
2013 2012 Change Change
(Dollars in thousands)

Interest expense