

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 10-K

Annual Report Pursuant to Section 13 or 15(d) of the Securities and Exchange Act of 1934:

For the fiscal year ended December 31, 2012

Commission file number 1-31763

KRONOS WORLDWIDE, INC.

(Exact name of Registrant as specified in its charter)

DELAWARE
(State or other jurisdiction of
incorporation or organization)

76-0294959
(IRS Employer
Identification No.)

5430 LBJ Freeway, Suite 1700
Dallas, Texas 75240-2697
(Address of principal executive offices)

Registrant's telephone number, including area code: (972) 233-1700

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

<u>Title of each class</u>	<u>Name of each exchange on which registered</u>
Common stock (\$.01 par value)	New York Stock Exchange

No securities are registered pursuant to Section 12(g) of the Act.

Indicate by check mark:

If the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

If the Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

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 and (2) has been subject to such filing requirements for the past 90 days. Yes No

Whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

If disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, 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. Yes No

Whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company (as defined in Rule 12b-2 of the Act).

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company

Whether the Registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes No

The aggregate market value of the 20.7 million shares of voting stock held by nonaffiliates of Kronos Worldwide, Inc. as of June 30, 2012 (the last business day of the Registrant's most recently-completed second fiscal quarter) approximated \$326.2 million.

As of February 28, 2013, 115,906,598 shares of the Registrant's common stock were outstanding.

Documents incorporated by reference

The information required by Part III is incorporated by reference from the Registrant's definitive proxy statement to be filed with the Commission pursuant to Regulation 14A not later than 120 days after the end of the fiscal year covered by this report.

Forward-Looking Information

This Annual Report on Form 10-K contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended. Statements in this Annual Report that are not historical facts are forward-looking in nature and represent management's beliefs and assumptions based on currently available information. In some cases, you can identify forward-looking statements by the use of words such as "believes," "intends," "may," "should," "could," "anticipates," "expects" or comparable terminology, or by discussions of strategies or trends. Although we believe that the expectations reflected in such forward-looking statements are reasonable, we do not know if these expectations will be correct. Such statements by their nature involve substantial risks and uncertainties that could significantly impact expected results. Actual future results could differ materially from those predicted. The factors that could cause actual future results to differ materially from those described herein are the risks and uncertainties discussed in this Annual Report and those described from time to time in our other filings with the SEC include, but are not limited to, the following:

- Future supply and demand for our products
- The extent of the dependence of certain of our businesses on certain market sectors
- The cyclical nature of our business
- Customer inventory levels
- Unexpected or earlier-than-expected industry capacity expansion
- Changes in raw material and other operating costs (such as energy and ore costs)
- Changes in the availability of raw materials (such as ore)
- General global economic and political conditions (such as changes in the level of gross domestic product in various regions of the world and the impact of such changes on demand for TiO₂)
- Competitive products and substitute products
- Customer and competitor strategies
- Potential consolidation of our competitors
- The impact of pricing and production decisions
- Competitive technology positions
- The introduction of trade barriers
- Possible disruption of our business, or increases in our cost of doing business, resulting from terrorist activities or global conflicts
- Fluctuations in currency exchange rates (such as changes in the exchange rate between the U.S. dollar and each of the euro, the Norwegian krone and the Canadian dollar), or possible disruptions to our business resulting from potential instability resulting from uncertainties associated with the euro
- Operating interruptions (including, but not limited to, labor disputes, leaks, natural disasters, fires, explosions, unscheduled or unplanned downtime, transportation interruptions and cyber attacks)
- Our ability to renew or refinance credit facilities
- Our ability to maintain sufficient liquidity
- The ultimate outcome of income tax audits, tax settlement initiatives or other tax matters

- Our ability to utilize income tax attributes, the benefits of which have been recognized under the more-likely-than-not recognition criteria
- Environmental matters (such as those requiring compliance with emission and discharge standards for existing and new facilities)
- Government laws and regulations and possible changes therein
- The ultimate resolution of pending litigation
- Possible future litigation.

Should one or more of these risks materialize (or the consequences of such a development worsen), or should the underlying assumptions prove incorrect, actual results could differ materially from those forecasted or expected. We disclaim any intention or obligation to update or revise any forward-looking statements whether as a result of changes in information, future events or otherwise.

PART I

ITEM 1. BUSINESS

General

Kronos Worldwide, Inc. (NYSE: KRO) (Kronos), a Delaware corporation, is a leading global producer and marketer of value-added titanium dioxide pigments, or TiO₂, a base industrial product used in a wide range of applications. We, along with our distributors and agents, sell and provide technical services for our products to over 4,000 customers in approximately 100 countries with the majority of sales in Europe and North America. We believe we have developed considerable expertise and efficiency in the manufacture, sale, shipment and service of our products in domestic and international markets.

TiO₂ is a white inorganic pigment used in a wide range of products for its exceptional ability to impart whiteness, brightness, opacity and durability. TiO₂ is a critical component of everyday applications, such as coatings, plastics and paper, as well as many specialty products such as inks, food and cosmetics. TiO₂ is widely considered to be superior to alternative white pigments in large part due to its hiding power (or opacity), which is the ability to cover or mask other materials effectively and efficiently. TiO₂ is designed, marketed and sold based on specific end-use applications.

TiO₂ is the largest commercially used whitening pigment because it has a high refractive rating giving it more hiding power than any other commercially produced white pigment. In addition, TiO₂ has excellent resistance to interaction with other chemicals, good thermal stability and resistance to ultraviolet degradation. Although there are other white pigments on the market, we believe there are no effective substitutes for TiO₂ because no other white pigment has the physical properties for achieving comparable opacity and brightness or can be incorporated in as cost-effective a manner. Pigment extenders such as kaolin clays, calcium carbonate and polymeric opacifiers are used together with TiO₂ in a number of end-use markets. However, these products are not able to duplicate the opacity performance characteristics of TiO₂ and we believe these products are unlikely to have a significant impact on the use of TiO₂.

TiO₂ is considered a “quality-of-life” product. Demand for TiO₂ has generally been driven by worldwide gross domestic product and has generally increased with rising standards of living in various regions of the world. According to industry estimates, TiO₂ consumption has grown at a compound annual growth rate of approximately 2.5% since 2000. Per capita consumption of TiO₂ in the United States and Western Europe far exceeds that in other areas of the world, and these regions are expected to continue to be the largest consumers of TiO₂. We believe that North America and Western Europe currently account for approximately 16% and 22% of global TiO₂ consumption, respectively. Markets for TiO₂ are generally increasing in South America, Eastern Europe, the Far East and China and we believe these are significant markets where we expect continued growth as economies in these regions continue to develop and quality-of-life products, including TiO₂, experience greater demand.

In recent years, global production capacity for TiO₂ has increased primarily due to debottlenecking existing production facilities in the western world and construction of new plants in China. However, during 2008 and 2009, several TiO₂ manufacturers permanently reduced capacity at high operating cost facilities in Europe, North America and China, in part in connection with environmental-related issues. Decreased capacity, along with the decline in customer inventories which occurred in the first half of 2009, led to industry-wide tightness in TiO₂ inventories. As a result of these factors, TiO₂ selling prices began to increase in the second half of 2009 and continued to increase throughout 2010 and 2011. As demand weakened in 2012 as a result of global economic weakness and uncertainty, TiO₂ selling prices decreased. We expect that demand for TiO₂ products will increase as economic conditions improve in the various regions of the world.

At December 31, 2012, approximately 50% of our common stock was owned by Valhi, Inc. (NYSE: VHI) and approximately 30% was owned by NL Industries, Inc. (NYSE: NL). Valhi also owns approximately 83% of NL Industries’ outstanding common stock. Contran Corporation and its subsidiaries held approximately 93% of Valhi’s outstanding common stock. Substantially all of Contran Corporation’s outstanding voting stock is held by trusts established for the benefit of certain children and grandchildren of Harold C. Simmons (for which Mr. Simmons is trustee), or is held by Mr. Simmons or other persons or entities related to Mr. Simmons. Consequently, Mr. Simmons may be deemed to control all of these companies.

Products and End-use Markets

Including our predecessors, we have produced and marketed TiO₂ in North America and Europe, our primary markets, for over 90 years. We believe that we are the largest producer of TiO₂ in Europe with approximately one-half of our sales volumes attributable to markets in Europe. The table below shows our market share for our significant markets, Europe and North America, for the last three years.

	2010	2011	2012
Europe	19%	19%	19%
North America	18%	17%	19%

We believe that we are the leading seller of TiO₂ in several countries, including Germany, with an estimated 10% share of worldwide TiO₂ sales volume in 2012. Overall, we are the world’s third-largest producer of TiO₂.

We offer our customers a broad portfolio of products that include over 40 different TiO₂ pigment grades under the *Kronos*[®] trademark which provide a variety of performance properties to meet customers' specific requirements. Our major customers include domestic and international paint, plastics, decorative laminate and paper manufacturers. We ship TiO₂ to our customers in either a powder or slurry form via rail, truck and/or ocean carrier. Sales of our core TiO₂ pigments represented approximately 90% of our net sales in 2012. We and our agents and distributors primarily sell and provide technical services for our products in three major end-use markets: coatings, plastics and paper.

The following tables show our approximate sales volume by geographic region and end use for the year ended December 31, 2012:

Sales Volumes Percentages by Geographic Region		Sales Volumes Percentages by End-use	
Europe	47%	Coatings	54%
North America	35%	Plastics	34%
Asia Pacific	13%	Other	7%
Rest of World	5%	Paper	5%

Some of the principal applications for our products include the following.

TiO₂ for Coatings—Our TiO₂ is used to provide opacity, durability, tinting strength and brightness in industrial coatings, as well as coatings for home interiors and exteriors, automobiles, aircraft, machines, appliances, traffic paint and other special purpose coatings. The amount of TiO₂ used in coatings varies widely depending on the opacity, color and quality desired. In general, the higher the opacity requirement of the coating, the greater the TiO₂ content.

TiO₂ for Plastics—We produce TiO₂ pigments that improve the optical and physical properties in plastics, including whiteness and opacity. TiO₂ is used to provide opacity in items such as containers and packaging materials, and vinyl products such as windows, door profiles and siding. TiO₂ also generally provides hiding power, neutral undertone, brightness and surface durability for housewares, appliances, toys, computer cases and food packages. TiO₂'s high brightness along with its opacity, is used in some engineering plastics to help mask their undesirable natural color. TiO₂ is also used in masterbatch, which is a concentrate of TiO₂ and other additives and is one of the largest uses for TiO₂ in the plastics end-use market. In masterbatch, the TiO₂ is dispersed at high concentrations into a plastic resin and is then used by manufacturers of plastic containers, bottles, packaging and agricultural films.

TiO₂ for Paper—Our TiO₂ is used in the production of several types of paper, including laminate (decorative) paper, filled paper and coated paper to provide whiteness, brightness, opacity and color stability. Although we sell our TiO₂ to all segments of the paper end-use market, our primary focus is on the TiO₂ grades used in paper laminates, where several layers of paper are laminated together using melamine resin under high temperature and pressure. The top layer of paper contains TiO₂ and plastic resin and is the layer that is printed with decorative patterns. Paper laminates are used to replace materials such as wood and tile for such applications as counter tops, furniture and wallboard. TiO₂ is beneficial in these applications because it assists in preventing the material from fading or changing color after prolonged exposure to sunlight and other weathering agents.

TiO₂ for Other Applications—We produce TiO₂ to improve the opacity and hiding power of printing inks. TiO₂ allows inks to achieve very high print quality while not interfering with the technical requirements of printing machinery, including low abrasion, high printing speed and high temperatures. Our TiO₂ is also used in textile applications where TiO₂ functions as an opacifying and delustering agent. In man-made fibers such as rayon and polyester, TiO₂ corrects an otherwise undesirable glossy and translucent appearance. Without the presence of TiO₂, these materials would be unsuitable for use in many textile applications.

We produce high purity sulfate process anatase TiO₂ used to provide opacity, whiteness and brightness in a variety of cosmetic and personal care products, such as skin cream, lipstick, eye shadow and toothpaste. Our TiO₂ is also found in food products, such as candy and confectionaries, and in pet foods where it is used to obtain uniformity of color and appearance. In pharmaceuticals, our TiO₂ is used commonly as a colorant in pill and capsule coatings as well as in liquid medicines to provide uniformity of color and appearance. Kronos® purified anatase grades meet the applicable requirements of the CTFA (Cosmetics, Toiletries and Fragrances Association), USP and BP (United States Pharmacopoeia and British Pharmacopoeia) and the FDA (United States Food and Drug Administration).

Our TiO₂ business is enhanced by the following three complementary businesses, which comprised approximately 10% of our net sales in 2012:

- We own and operate two ilmenite mines in Norway pursuant to a governmental concession with an unlimited term. Ilmenite is a raw material used directly as a feedstock by some sulfate-process TiO₂ plants. We believe that we have a significant competitive advantage because our mines supply our feedstock requirements for all of our European sulfate-process plants. We also sell ilmenite ore to third-parties, some of whom are our competitors. The mines have estimated ilmenite reserves that are expected to last at least 50 years.
- We manufacture and sell iron-based chemicals, which are co-products and processed co-products of the sulfate and chloride process TiO₂ pigment production. These co-product chemicals are marketed through our Ecochem division and are primarily used as treatment and conditioning agents for industrial effluents and municipal wastewater as well as in the manufacture of iron pigments, cement and agricultural products.
- We manufacture and sell titanium oxychloride and titanyl sulfate, which are side-stream specialty products from the production of TiO₂. Titanium oxychloride is used in specialty applications in the formulation of pearlescent pigments, production of electroceramic capacitors for cell phones and other electronic devices. Titanyl sulfate productions are used in pearlescent pigments, natural gas pipe and other specialty applications.

Manufacturing, Operations and Properties

We produce TiO₂ in two crystalline forms: rutile and anatase. Rutile TiO₂ is manufactured using both a chloride production process and a sulfate production process, whereas anatase TiO₂ is only produced using a sulfate production process. Manufacturers of many end-use applications can use either form, especially during periods of tight supply for TiO₂. The chloride process is the preferred form for use in coatings and plastics, the two largest end-use markets. Due to environmental factors and customer considerations, the proportion of TiO₂ industry sales represented by chloride process pigments has increased relative to sulfate process pigments and in 2012, chloride process production facilities represented approximately 52% of industry capacity. The sulfate process is preferred for use in selected paper products, ceramics, rubber tires, man-made fibers, food and cosmetics. Once an intermediate TiO₂ pigment has been produced by either the chloride or sulfate process, it is “finished” into products with specific performance characteristics for particular end-use applications through proprietary processes involving various chemical surface treatments and intensive micronizing (milling).

- *Chloride Process*—The chloride process is a continuous process in which chlorine is used to extract rutile TiO₂. This process has also gained market share over the sulfate process because of the relatively lower upfront capital investment in plant and equipment required. The chloride process produces less waste than the sulfate process because much of the chlorine is recycled and feedstock bearing higher titanium content is used. The chloride process also has lower energy requirements and is less labor-intensive than the sulfate process. The chloride process produces an intermediate base pigment with a wide range of properties.
- *Sulfate Process*—The Sulfate process is a batch process in which sulfuric acid is used to extract the TiO₂ from ilmenite or titanium slag. After separation from the impurities in the ore (mainly iron) the TiO₂ is precipitated and calcined to form an intermediate base pigment ready for sale or can be upgraded through finishing treatments.

We produced 469,000 metric tons of TiO₂ in 2012, down from the 550,000 metric tons we produced in 2011. Our production amounts include our share of the output produced by our TiO₂ manufacturing joint venture discussed below in “TiO₂ Manufacturing Joint Venture.” Our average production capacity utilization rates were at or near full capacity in 2010 and 2011 and at approximately 85% of capacity in 2012.

We operate four TiO₂ plants in Europe (one in each of Leverkusen, Germany; Nordenham, Germany; Langerbrugge, Belgium; and Fredrikstad, Norway). In North America, we have a TiO₂ plant in Varennes, Quebec, Canada and, through the manufacturing joint venture described below in “TiO₂ Manufacturing Joint Venture,” a 50% interest in a TiO₂ plant in Lake Charles, Louisiana.

Our production capacity in 2012 was 550,000 metric tons, approximately three-fourths of which was from the chloride production process.

The following table presents the division of our expected 2013 manufacturing capacity by plant location and type of manufacturing process:

<u>Facility</u>	<u>Description</u>	<u>% of Capacity by TiO₂ Manufacturing Process</u>	
		<u>Chloride</u>	<u>Sulfate</u>
Leverkusen, Germany (1)	TiO ₂ production, chloride and sulfate process, co-products	39%	26%
Nordenham, Germany	TiO ₂ production, sulfate process, co-products	—	39
Langerbrugge, Belgium	TiO ₂ production, chloride process, co-products, titanium chemicals products	21	—
Fredrikstad, Norway (2)	TiO ₂ production, sulfate process, co-products	—	22
Varennes, Canada	TiO ₂ production, chloride and sulfate process, slurry facility, titanium chemicals products	21	13
Lake Charles, LA, US (3)	TiO ₂ production, chloride process	19	—
Total		100%	100%

- (1) The Leverkusen facility is located within an extensive manufacturing complex owned by Bayer AG. We own the Leverkusen facility, which represents about one-third of our current TiO₂ production capacity, but we lease the land under the facility from Bayer under a long-term agreement which expires in 2050. Lease payments are periodically negotiated with Bayer for periods of at least two years at a time. A majority-owned subsidiary of Bayer provides some raw materials including chlorine, auxiliary and operating materials, utilities and services necessary to operate the Leverkusen facility under separate supplies and services agreements.
- (2) The Fredrikstad plant is located on public land and is leased until April 2013 with an option to extend the lease for an additional 50 years. We have exercised the option to extend the lease and are currently negotiating the lease terms.
- (3) We operate the Lake Charles facility in a joint venture with Tioxide Americas Inc., a subsidiary of Huntsman Corporation and the amount indicated in the table above represents the share of TiO₂ produced by the joint venture to which we are entitled. See Note 5 to our Consolidated Financial Statements and “TiO₂ Manufacturing Joint Venture.”

We own the land underlying all of our principle production facilities unless otherwise indicated in the table above.

Our production capacity has increased by approximately 20% over the past ten years due to debottlenecking programs, with only moderate capital expenditures. We believe that our annual attainable production capacity for 2013 is approximately 550,000 metric tons, although we currently expect that we will operate at less-than-full production capacity for the year.

We also operate two ilmenite mines in Norway pursuant to a governmental concession with an unlimited term. In addition, we operate a rutile slurry manufacturing plant in Lake Charles, Louisiana, which converts dry pigment manufactured for us at the Lake Charles TiO₂ facility into a slurry form that is then shipped to customers.

We have various corporate and administrative offices located in the U.S., Germany, Norway, Canada and Belgium and various sales offices located in the U.S., Canada, Belgium, France, the Netherlands and the United Kingdom.

TiO₂ Manufacturing Joint Venture

Kronos Louisiana, Inc., one of our subsidiaries, and Tioxide Americas, Inc. (Tioxide), a subsidiary of Huntsman Corporation, each own a 50% interest in a manufacturing joint venture, Louisiana Pigment Company, L.P., or LPC. LPC owns and operates a chloride-process TiO₂ plant located in Lake Charles, Louisiana. We and Huntsman share production from the plant equally pursuant to separate offtake agreements, unless we and Huntsman agree otherwise (such as in 2012, when we purchased approximately 52% of the production from the plant).

A supervisory committee directs the business and affairs of the joint venture, including production and output decisions. This committee is composed of four members, two of whom we appoint and two of whom Huntsman appoints. Two general managers manage the operations of the joint venture acting under the direction of the supervisory committee. We appoint one general manager and Huntsman appoints the other.

The joint venture is not consolidated in our financial statements, because we do not control it. We account for our interest in the joint venture by the equity method. The joint venture operates on a break-even basis and therefore we do not have any equity in earnings of the joint venture. We are required to purchase one half of the TiO₂ produced by the joint venture, unless we and Huntsman agree otherwise (such as in 2012, when we purchased approximately 52% of the production from the plant). All costs and capital expenditures are shared equally with Huntsman with the exception of raw material and packaging costs for the pigment grades produced. Our share of net costs is reported as cost of sales as the TiO₂ is sold. See Notes 5 and 14 to our Consolidated Financial Statements.

Raw Materials

The primary raw materials used in chloride process TiO₂ are titanium-containing feedstock (natural rutile ore or purchased slag), chlorine and coke. Chlorine is available from a number of suppliers, while petroleum coke is available from a limited number of suppliers. Titanium-containing feedstock suitable for use in the chloride process is available from a limited but increasing number of suppliers principally in Australia, South Africa, Canada, India and the United States. We purchase chloride process grade slag from Rio Tinto Iron and Titanium under a long-term supply contract that expires at the end of 2016 and from Tronox Mineral Sands (PTY) LTD under a new

supply contract entered into in January 2013 that expires in December 2015. The 2013 Tronox Mineral Sands contract replaced the Exxaro TSA Sands contract which expired at the end of 2012. We purchase upgraded slag from Q.I.T. Fer et Titane Inc. (a subsidiary of Rio Tinto Iron and Titanium) under a long-term supply contract that expires at the end of 2015. We purchase natural rutile ore primarily from Iluka Resources, Limited under new supply contracts entered into in January 2013 and Sierra Rutile Limited under contracts that expire in 2013. The 2013 Iluka contracts replaced the Iluka contract which expired at the end 2012. In the past we have been, and we expect that we will continue to be, successful in obtaining short-term and long-term extensions to these and other existing supply contracts prior to their expiration. We expect the raw materials purchased under these contracts, and contracts that we may enter into in the near term, to meet our chloride process feedstock requirements over the next several years.

The primary raw materials used in sulfate process TiO₂ are titanium-containing feedstock, primarily ilmenite or purchased sulfate grade slag and sulfuric acid. Sulfuric acid is available from a number of suppliers. Titanium-containing feedstock suitable for use in the sulfate process is available from a limited number of suppliers principally in Norway, Canada, Australia, India and South Africa. As one of the few vertically-integrated producers of sulfate process TiO₂, we operate two rock ilmenite mines in Norway, which provided all of the feedstock for our European sulfate process TiO₂ plants in 2012. We expect ilmenite production from our mines to meet our European sulfate process feedstock requirements for the foreseeable future. For our Canadian sulfate process plant, we also purchase sulfate grade slag primarily from Q.I.T. Fer et Titane Inc. (a subsidiary of Rio Tinto Iron and Titanium), under a long-term supply contract that expires at the end of 2014. We expect the raw materials purchased under these contracts, and contracts that we may enter into in the near term, to meet our sulfate process feedstock requirements over the next several years.

Many of our raw material contracts contain fixed quantities we are required to purchase, or specify a range of quantities within which we are required to purchase. The pricing under these agreements is generally negotiated quarterly.

The following table summarizes our raw materials purchased or mined in 2012.

<u>Production Process/Raw Material</u>	<u>Raw Materials Procured or Mined</u> (In thousands of metric tons)
Chloride process plants:	
Purchased slag or rutile ore	399
Sulfate process plants:	
Ilmenite ore mined and used internally	291
Purchased slag	27

Sales and Marketing

Our marketing strategy is aimed at developing and maintaining strong customer relationships with new and existing accounts. Because TiO₂ represents a significant raw material cost for our customers, the purchasing decisions are often made by our customers' senior management. We work to maintain close relationships with the key decision makers, through in-depth

frequent in-person meetings. We endeavor to extend these commercial and technical relationships to multiple levels within our customers' organization using our direct sales force and technical service group to accomplish this objective. We believe this has helped build customer loyalty to Kronos and strengthened our competitive position. Close cooperation and strong customer relationships enable us to stay closely attuned to trends in our customers' businesses. Where appropriate, we work in conjunction with our customers to solve formulation or application problems by modifying specific product properties or developing new pigment grades. We also focus our sales and marketing efforts on those geographic and end-use market segments where we believe we can realize higher selling prices. This focus includes continuously reviewing and optimizing our customer and product portfolios.

Our marketing strategy is also aimed at working directly with customers to monitor the success of our products in their end-use applications, evaluate the need for improvements in product and process technology and identify opportunities to develop new product solutions for our customers. Our marketing staff closely coordinates with our sales force and technical specialists to ensure that the needs of our customers are met, and to help develop and commercialize new grades where appropriate.

We sell a majority of our products through our direct sales force operating from six sales offices in Europe and one sales office in North America. We also utilize sales agents and distributors who are authorized to sell our products in specific geographic areas. In Europe, our sales efforts are conducted primarily through our direct sales force and our sales agents. Our agents do not sell any TiO₂ products other than Kronos® brand products. In North America, our sales are made primarily through our direct sales force and supported by a network of distributors. In addition to our direct sales force and sales agents, many of our sales agents also act as distributors to service our smaller customers in all regions. We offer the same high level of customer and technical service to the customers who purchase our products through distributors as we offer to our larger customers serviced by our direct sales force.

We sell to a diverse customer base with just one customer, Behr Process Corporation, making up more than 10% of our sales in 2012. Our largest ten customers accounted for approximately 34% of sales in 2012.

Neither our business as a whole nor that of any of our principal product groups is seasonal to any significant extent. However, TiO₂ sales are generally higher in the second and third quarters of the year, due in part to the increase in paint production in the spring to meet demand during the spring and summer painting seasons. With certain exceptions, we have historically operated our production facilities at near full capacity rates throughout the entire year, which among other things helps to minimize our per-unit production costs. As a result, we normally will build inventories during the first and fourth quarters of each year, in order to maximize our product availability during the higher demand periods normally experienced in the second and third quarters.

Competition

The TiO₂ industry is highly competitive. We compete primarily on the basis of price, product quality, technical service and the availability of high performance pigment grades. Since TiO₂ is not a traded commodity, its pricing is largely a product of negotiation between suppliers and their respective customers. Although certain TiO₂ grades are considered specialty

pigments, the majority of our grades and substantially all of our production are considered commodity pigments with price and availability being the most significant competitive factors along with quality and customer service. During 2012, we had an estimated 10% share of worldwide TiO₂ sales volume, and based on sales volumes, we believe we are the leading seller of TiO₂ in several countries, including Germany.

Our principal competitors are E.I. du Pont de Nemours & Co., or Dupont; Millennium Inorganic Chemicals, Inc. (a subsidiary of National Titanium Dioxide Company Ltd.), or Cristal; Huntsman Corporation; Tronox Incorporated; and Sachtleben Chemie GmbH. The top five TiO₂ producers account for approximately 58% of the world's production capacity.

The following chart shows our estimate of worldwide production capacity in 2012:

DuPont	20%
Cristal	12%
Kronos	9%
Huntsman	9%
Tronox	8%
Other	42%

DuPont has over one-half of total North American TiO₂ production capacity and is our principal North American competitor.

Over the past ten years, we and our competitors increased industry capacity through debottlenecking projects, which in part compensated for the shut down of TiO₂ plants in France, the United States, the United Kingdom and China. In addition, in May 2011, Dupont announced a comprehensive plan to add approximately 350,000 metric tons of global capacity in the next three years. Although overall industry demand is expected to be higher in 2013 as compared to 2012 as a result of improving worldwide economic conditions, we do not expect any other significant efforts will be undertaken by us or our competitors to further increase capacity for the foreseeable future, other than through debottlenecking projects. If actual developments differ from our expectations, the TiO₂ industry's performance and that of our own could be unfavorably affected.

The TiO₂ industry is characterized by high barriers to entry consisting of high capital costs, proprietary technology and significant lead times (typically three to five years in our experience) required to construct new facilities or to expand existing capacity. In addition, we believe the suppliers of titanium-containing feedstock do not currently have the ability to supply the raw materials that would be required to operate any such new TiO₂ production capacity until they have invested in additional infrastructure required to expand their own production capacity, which we believe will take a few years to complete. We believe it is unlikely any new TiO₂ plants will be constructed in Europe or North America in the foreseeable future.

Research and Development

We employ scientists, chemists, process engineers and technicians who are engaged in research and development, process technology and quality assurance activities in Leverkusen, Germany. These individuals have the responsibility for improving our chloride and sulfate production processes, improving product quality and strengthening our competitive position by

developing new applications. Our expenditures for these activities were approximately \$13 million in 2010, \$20 million in 2011 and \$19 million in 2012. We expect to spend approximately \$20 million on research and development in 2013.

We continually seek to improve the quality of our grades and have been successful at developing new grades for existing and new applications to meet the needs of our customers and increase product life cycles. Since 2007, we have added six new grades for plastics and coatings.

Patents, Trademarks, Trade Secrets and Other Intellectual Property Rights

We have a comprehensive intellectual property protection strategy that includes obtaining, maintaining and enforcing our patents, primarily in the United States, Canada and Europe. We also protect our trademark and trade secret rights and have entered into license agreements with third parties concerning various intellectual property matters. We have also from time to time been involved in disputes over intellectual property.

Patents—We have obtained patents and have numerous patent applications pending that cover our products and the technology used in the manufacture of our products. Our patent strategy is important to us and our continuing business activities. In addition to maintaining our patent portfolio, we seek patent protection for our technical developments, principally in the United States, Canada and Europe. U.S. Patents are generally in effect for 20 years from the date of filing. Our U.S. patent portfolio includes patents having remaining terms ranging from one year to 19 years.

Trademarks and Trade Secrets—Our trademarks, including Kronos®, are covered by issued and/or pending registrations, including in Canada and the United States. We protect the trademarks that we use in connection with the products we manufacture and sell and have developed goodwill in connection with our long-term use of our trademarks. We conduct research activities in secret and we protect the confidentiality of our trade secrets through reasonable measures, including confidentiality agreements and security procedures. We rely upon unpatented proprietary knowledge and continuing technological innovation and other trade secrets to develop and maintain our competitive position. Our proprietary chloride production process is an important part of our technology and our business could be harmed if we fail to maintain confidentiality of our trade secrets used in this technology.

Employees

As of December 31, 2012, we employed the following number of people:

Europe	2,085
Canada	420
United States (1)	50
Total	<u>2,555</u>

(1) Excludes employees of our Louisiana joint venture.

Certain employees at each of our production facilities are organized by labor unions. In Europe, our union employees are covered by master collective bargaining agreements for the chemical industry that are generally renewed annually. In Canada, our union employees are covered by a collective bargaining agreement that expires in June 2013. It is possible that there could be future work stoppages or other labor disruptions that could materially and adversely affect our business, results of operations, financial position or liquidity.

Regulatory and Environmental Matters

Our operations and properties are governed by various environmental laws and regulations, which are complex, change frequently and have tended to become stricter over time. These environmental laws govern, among other things, the generation, storage, handling, use and transportation of hazardous materials; the emission and discharge of hazardous materials into the ground, air or water; and the health and safety of our employees. Certain of our operations are, or have been, engaged in the generation, storage, handling, manufacture or use of substances or compounds that may be considered toxic or hazardous within the meaning of applicable environmental laws and regulations. As with other companies engaged in similar businesses, certain of our past and current operations and products have the potential to cause environmental or other damage. We have implemented and continue to implement various policies and programs in an effort to minimize these risks. Our policy is to comply with applicable environmental laws and regulations at all our facilities and to strive to improve our environmental performance. It is possible that future developments, such as stricter requirements in environmental laws and enforcement policies, could adversely affect our operations, including production, handling, use, storage, transportation, sale or disposal of hazardous or toxic substances or require us to make capital and other expenditures to comply, and could adversely affect our consolidated financial position and results of operations or liquidity.

Our U.S. manufacturing operations are governed by federal, state and local environmental and worker health and safety laws and regulations. These include the Resource Conservation and Recovery Act, or RCRA, the Occupational Safety and Health Act, the Clean Air Act, the Clean Water Act, the Safe Drinking Water Act, the Toxic Substances Control Act and the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act, or CERCLA, as well as the state counterparts of these statutes. Some of these laws hold current or previous owners or operators of real property liable for the costs of cleaning up contamination, even if these owners or operators did not know of, and were not responsible for, such contamination. These laws also assess liability on any person who arranges for the disposal or treatment of hazardous substances, regardless of whether the affected site is owned or operated by such person. Although we have not incurred and do not currently anticipate any material liabilities in connection with such environmental laws, we may be required to make expenditures for environmental remediation in the future.

While the laws regulating operations of industrial facilities in Europe vary from country to country, a common regulatory framework is provided by the European Union, or the EU. Germany and Belgium are members of the EU and follow its initiatives. Norway is not a member but generally patterns its environmental regulatory actions after the EU.

At our sulfate plant facilities in Germany, we recycle spent sulfuric acid either through contracts with third parties or at our own facilities. In

addition, at our German locations we have a contract with a third-party to treat certain sulfate-process effluents. At our Norwegian plant, we ship spent acid to a third party location where it is used as a neutralization agent. These contracts may be terminated by either party after giving three or four years advance notice, depending on the contract.

From time to time, our facilities may be subject to environmental regulatory enforcement under U.S. and non-U.S. statutes. Typically we establish compliance programs to resolve these matters. Occasionally, we may pay penalties. To date such penalties have not involved amounts having a material adverse effect on our consolidated financial position, results of operations or liquidity. We believe that all of our facilities are in substantial compliance with applicable environmental laws.

In December 2006, the EU approved Registration, Evaluation and Authorization of Chemicals, or REACH, which took effect on June 1, 2007 and will be phased in over an 11-year period from the implementation date. Under REACH, companies that manufacture or import more than one ton of a chemical substance per year in the EU will be required to register such chemical substances in a central data base. REACH affects our European operations by imposing a testing, evaluation and registration program for many of the chemicals we use or produce in Europe. Under REACH, substances of very high concern may require authorization for further use and may also be restricted in the future, which could increase our production costs. We have established a REACH team that is working to identify and list all substances purchased, manufactured or imported by or for us in the EU. We spent \$2.6 million in 2010 and \$.4 million in each of 2011 and 2012 on REACH compliance and we do not anticipate that future compliance costs will be material to us.

Our capital expenditures related to ongoing environmental compliance, protection and improvement programs, including capital expenditures which are primarily focused on increased operating efficiency but also result in improved environmental protection such as lower emissions from our manufacturing facilities, were \$25.2 million in 2012 and are currently expected to be approximately \$25 million in 2013.

Website and other available information

Our fiscal year ends December 31. Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to those reports are available on our website at www.kronosww.com. These reports are available on the website, without charge, as soon as is reasonably practicable after we file or furnish them electronically with the Securities and Exchange Commission, or SEC. Additional information regarding us, including our Audit Committee charter, Code of Business Conduct and Ethics and our Corporate Governance Guidelines, can also be found at this website. Information contained on our website is not part of this report. We will also provide free copies of such documents upon written request. Such requests should be directed to the Corporate Secretary at our address on the cover page of this Form 10-K.

The public may read and copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. The public may obtain information about the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. We are an electronic filer and the SEC maintains an internet website that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC at www.sec.gov.

ITEM 1A. RISK FACTORS

Below are certain risk factors associated with our business. In addition to the potential effect of these risk factors discussed below, any risk factor which could result in reduced earnings or operating losses, or reduced liquidity, could in turn adversely affect our ability to service our liabilities or pay dividends on our common stock or adversely affect the quoted market prices for our securities.

Demand for, and prices of, certain of our products are influenced by changing market conditions for our products, which may result in reduced earnings or operating losses.

Approximately 90% of our revenues are attributable to sales of TiO₂. Pricing within the global TiO₂ industry over the long term is cyclical and changes in economic conditions, especially in Western industrialized nations, can significantly impact our earnings and operating cash flows. Historically, the markets for many of our products have experienced alternating periods of increasing and decreasing demand. Relative changes in the selling prices for our products are one of the main factors that affect the level of our profitability. In periods of increasing demand, our selling prices and profit margins generally will tend to increase, while in periods of decreasing demand our selling prices and profit margins generally tend to decrease. In addition, pricing may affect customer inventory levels as customers may from time to time accelerate purchases of TiO₂ in advance of anticipated price increases or defer purchases of TiO₂ in advance of anticipated price decreases. Our ability to further increase capacity without additional investment in greenfield or brownfield capacity increases may be limited and as a result, our profitability may become even more dependent upon the selling prices of our products.

The demand for TiO₂ during a given year is also subject to annual seasonal fluctuations. TiO₂ sales are generally higher in the second and third quarters of the year. This is due in part to the increase in paint production in the spring to meet demand during the spring and summer painting season.

The TiO₂ industry is concentrated and highly competitive and we face price pressures in the markets in which we operate, which may result in reduced earnings or operating losses.

The global market in which we operate our business is concentrated with the top five TiO₂ producers accounting for 58% of the world's production capacity and is highly competitive. Competition is based on a number of factors, such as price, product quality and service. Some of our competitors may be able to drive down prices for our products because their costs are lower than our costs. In addition, some of our competitors' financial, technological and other resources may be greater than our resources and such competitors may be better able to withstand changes in market conditions. Our competitors may be able to respond more quickly than we can to new or emerging technologies and changes in customer requirements. Further, consolidation of our competitors or customers may result in reduced demand for our products or make it more difficult for us to compete with our competitors. The occurrence of any of these events could result in reduced earnings or operating losses.

Higher costs or limited availability of our raw materials may reduce our earnings and decrease our liquidity. In addition, many of our raw material contracts contain fixed quantities we are required to purchase.

The number of sources for and availability of certain raw materials is specific to the particular geographical region in which a facility is located. For example, titanium-containing feedstocks suitable for use in our TiO₂ facilities are available from a limited number of suppliers around the world. Political and economic instability in the countries from which we purchase our raw material supplies could adversely affect their availability. If our worldwide vendors were unable to meet their contractual obligations and we were unable to obtain necessary raw materials, we could incur higher costs for raw materials or may be required to reduce production levels. After experiencing significant increases in our feedstock ore costs in 2012 as compared to 2011, we expect that our ore costs will be somewhat lower in 2013 as compared to 2012. We may also experience higher operating costs such as energy costs, which could affect our profitability. We may not always be able to increase our selling prices to offset the impact of any higher costs or reduced production levels, which could reduce our earnings and decrease our liquidity.

We have long-term supply contracts that provide for our TiO₂ feedstock requirements that currently expire through 2016, most of which we may be able to renew. We may not be successful in renewing these contracts or in obtaining long-term extensions to these contracts prior to expiration. Our current agreements (including those entered into in January 2013) require us to purchase certain minimum quantities of feedstock with minimum purchase commitments aggregating approximately \$1.8 billion in years subsequent to December 31, 2012. In addition, we have other long-term supply and service contracts that provide for various raw materials and services. These agreements require us to purchase certain minimum quantities or services with minimum purchase commitments aggregating approximately \$122 million at December 31, 2012. Our commitments under these contracts could adversely affect our financial results if we significantly reduce our production and were unable to modify the contractual commitments.

Our leverage may impair our financial condition or limit our ability to operate our businesses.

We currently have a significant amount of debt. As of December 31, 2012, our total consolidated debt was approximately \$400.1 million, which relates primarily to a term loan entered into in 2012. Our level of debt could have important consequences to our stockholders and creditors, including:

- making it more difficult for us to satisfy our obligations with respect to our liabilities;
- increasing our vulnerability to adverse general economic and industry conditions;
- requiring that a portion of our cash flows from operations be used for the payment of interest on our debt, which reduces our ability to use our cash flow to fund working capital, capital expenditures, dividends on our common stock, acquisitions or general corporate requirements;
- limiting the ability of our subsidiaries to pay dividends to us;
- limiting our ability to obtain additional financing to fund future working capital, capital expenditures, acquisitions or general corporate requirements;

- limiting our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate; and
- placing us at a competitive disadvantage relative to other less leveraged competitors.

In addition to our indebtedness, at December 31, 2012 we are party to various lease and other agreements (including feedstock ore purchase contracts as previously described) pursuant to which, along with our indebtedness, we are committed to pay approximately \$716.1 million in 2013. Our ability to make payments on and refinance our debt and to fund planned capital expenditures depends on our future ability to generate cash flow. To some extent, this is subject to general economic, financial, competitive, legislative, regulatory and other factors that are beyond our control. In addition, our ability to borrow funds under our or our subsidiaries' credit facilities in the future will, in some instances, depend in part on our ability to maintain specified financial ratios and satisfy certain financial covenants contained in the applicable credit agreement.

Our business may not generate cash flows from operating activities sufficient to enable us to pay our debts when they become due and to fund our other liquidity needs. As a result, we may need to refinance all or a portion of our debt before maturity. We may not be able to refinance any of our debt in a timely manner on favorable terms, if at all, in the current credit markets. Any inability to generate sufficient cash flows or to refinance our debt on favorable terms could have a material adverse effect on our financial condition.

Global climate change legislation could negatively impact our financial results or limit our ability to operate our businesses.

We operate production facilities in several countries. In many of the countries in which we operate, legislation has been passed, or proposed legislation is being considered, to limit greenhouse gases through various means, including emissions permits and/or energy taxes. In several of our production facilities, we consume large amounts of energy, primarily electricity and natural gas. To date, the permit system in effect in the various countries in which we operate has not had a material adverse effect on our financial results. However, if further greenhouse gas legislation were to be enacted in one or more countries, it could negatively impact our future results from operations through increased costs of production, particularly as it relates to our energy requirements or our need to obtain emissions permits. If such increased costs of production were to materialize, we may be unable to pass price increases onto our customers to compensate for increased production costs, which may decrease our liquidity, operating income and results of operations.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None

ITEM 2. PROPERTIES

Information on our properties is incorporated by reference to Item 1: Manufacturing, Operations and Properties above. Our corporate headquarters is located in Dallas, Texas. See Note 15 to our Consolidated Financial Statements for information on our leases.

ITEM 3. LEGAL PROCEEDINGS

We are involved in various environmental, contractual, intellectual property, product liability and other claims and disputes incidental to our business. Information called for by this Item is incorporated by reference to Note 15 to our Consolidated Financial Statements.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable

PART II**ITEM 5. MARKET FOR COMMON EQUITY AND RELATED STOCKHOLDER MATTERS**

Our common stock is listed and traded on the New York Stock Exchange (symbol: KRO). As of February 28, 2013, there were approximately 2,600 holders of record of our common stock. The following table sets forth the high and low closing per share sales price for our common stock for the periods indicated according to Bloomberg and dividends paid during such periods. On February 28, 2013 the closing price of our common stock was \$17.11.

	<u>High</u>	<u>Low</u>	<u>Cash Dividends Paid</u>
<i>Year ended December 31, 2011</i>			
First Quarter	\$29.50	\$20.41	\$.625
Second Quarter	31.47	24.76	.15
Third Quarter	33.92	16.08	.15
Fourth Quarter	23.16	15.13	.15
<i>Year ended December 31, 2012</i>			
First Quarter	\$25.38	\$18.77	.15
Second Quarter	24.52	15.45	.15
Third Quarter	18.83	13.57	.15
Fourth Quarter	19.63	12.67	.15
<i>January 1, 2013 through February 28, 2013</i>	\$20.23	\$16.85	—

In February 2013, our board of directors declared a first quarter 2013 regular quarterly dividend of \$.15 per share, payable on March 21, 2013 to stockholders of record as of March 11, 2013. The declaration and payment of future dividends is discretionary, and the amount, if any, will be dependent upon our results of operations, financial condition, cash requirements for our business, the current long-term outlook for our business and other factors deemed relevant by our board. There are currently no restrictions on our ability to pay dividends, although provisions in certain credit agreements to which we are a party could in the future limit or restrict our ability to pay dividends. Cash dividends in the first quarter of 2011 include a \$.50 per share special dividend.

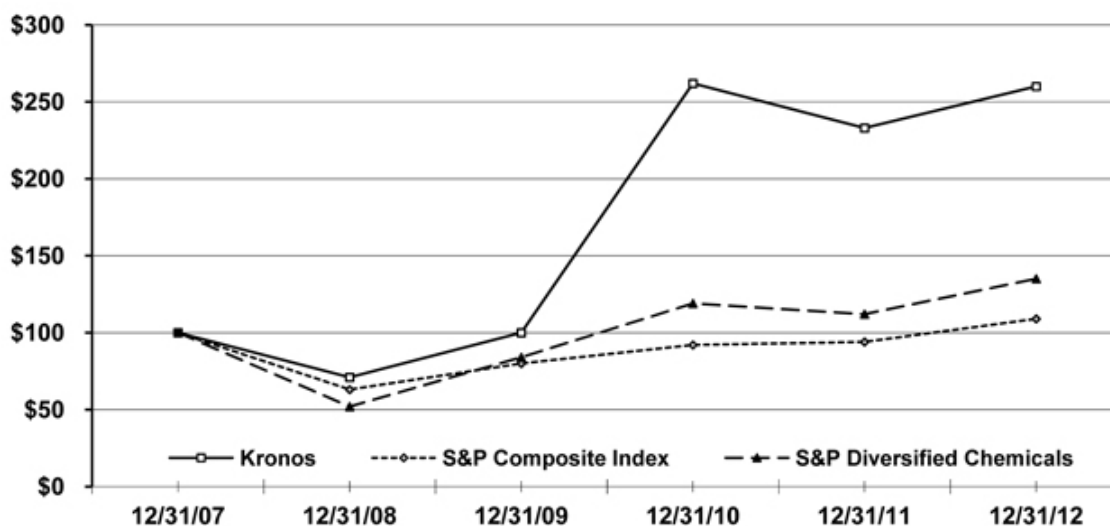
In November 2010, we completed a secondary public offering of 8.97 million shares of our common stock in an underwritten offering for net proceeds of \$337.6 million. See Note 13 to our Consolidated Financial Statements.

In December 2010 our board of directors authorized the repurchase of up to 2.0 million shares of our common stock in open market transactions, including block purchases, or in privately-negotiated transactions at unspecified prices and over an unspecified period of time. To date, we have not made any repurchases under the plan and all 2.0 million shares are available for repurchase. See Note 13 to our Consolidated Financial Statements.

Performance graph

Set forth below is a table and line graph comparing the yearly change in our cumulative total stockholder return on our common stock against the cumulative total return of the S&P Composite 500 Stock Index and the S&P 500 Diversified Chemicals Index. The graph shows the value at December 31 of each year, assuming an original investment of \$100 at December 31, 2007 and reinvestment of cash dividends and other distributions to stockholders.

	2007	2008	2009	2010	2011	2012
Kronos common stock	\$100	\$71	\$100	\$262	\$233	\$260
S&P 500 Composite Stock Index	100	63	80	92	94	109
S&P 500 Diversified Chemicals Index	100	52	84	119	112	135



The information contained in the performance graph shall not be deemed “soliciting material” or “filed” with the SEC, or subject to the liabilities of Section 18 of the Securities Exchange Act, except to the extent we specifically request that the material be treated as soliciting material or specifically incorporate this performance graph by reference into a document filed under the Securities Act or the Securities Exchange Act.

Equity compensation plan information

We have an equity compensation plan, which was approved by our stockholders, pursuant to which an aggregate of 200,000 shares of our common stock can be awarded to members of our board of directors. At December 31, 2012, 200,000 shares are available for award under this plan. See Note 13 to our Consolidated Financial Statements.

ITEM 6. SELECTED FINANCIAL DATA

The following selected financial data should be read in conjunction with our Consolidated Financial Statements and Item 7—“*Management’s Discussion and Analysis of Financial Condition and Results of Operations.*”

	Years ended December 31,				
	2008	2009	2010	2011	2012
(In millions, except per share data and TiO ₂ operating statistics)					
STATEMENTS OF OPERATIONS DATA:					
Net sales	\$1,316.9	\$1,142.0	\$1,449.7	\$1,943.3	\$1,976.3
Gross margin	220.6	130.3	345.3	748.4	560.4
Income (loss) from operations	47.2	(15.7)	178.4	546.5	359.6
Net income (loss)	9.0	(34.7)	130.6	321.0	218.5
Net income (loss) per share (1),(2)	.09	(.35)	1.29	2.77	1.89
Cash dividends per share (2)	.50	—	.125	1.075	.60
BALANCE SHEET DATA (at year end):					
Total assets	\$1,358.7	\$1,325.0	\$1,707.6	\$1,823.9	\$2,027.0
Notes payable and long-term debt including current maturities	638.5	613.2	539.6	365.1	400.1
Common stockholders’ equity (1)	317.9	312.5	761.2	924.3	1,062.1
STATEMENTS OF CASH FLOW DATA:					
Net cash provided by (used in):					
Operating activities	\$ 2.7	\$ 86.3	\$ 126.0	\$ 295.6	\$ 76.9
Investing activities	(68.1)	(23.7)	(145.8)	(218.1)	149.8
Financing activities (1)	10.3	(49.8)	295.1	(299.6)	(28.1)
TiO₂ OPERATING STATISTICS:					
Sales volume (3)	478	445	528	503	470
Production volume (3)	514	402	524	550	469
Production capacity at beginning of year (3)	532	532	532	532	550
Production rate as a percentage of capacity	97%	76%	99%	103%	85%

(1) In November, 2010, we completed a secondary public offering of 8.97 million shares of our common stock in an underwritten offering for net proceeds of \$337.6 million. Net income per share for 2010 reflects the impact of the issuance of the 8.97 million shares of common stock in November 2010. See Note 13 to our Consolidated Financial Statements.

(2) In May 2011, we implemented a 2-for-1 stock split of our common stock effected in the form of a stock dividend. All per share disclosures above reflect this stock split. Cash dividends in 2011 include a \$.50 per share special dividend paid to stockholders in the first quarter of 2011. See Note 13 to our Consolidated Financial Statements.

(3) Metric tons in thousands

RESULTS OF OPERATIONS

Business overview

We are a leading global producer and marketer of value-added TiO₂. TiO₂ is used for a variety of manufacturing applications, including plastics, paints, paper and other industrial products. During 2012, approximately one-half of our sales volumes were sold into European markets. We believe we are the largest producer of TiO₂ in Europe with an estimated 19% share of European TiO₂ sales volumes in 2012. In addition, we estimate we have a 19% share of North American TiO₂ sales volumes in 2012. Our production facilities are located throughout Europe and North America.

We consider TiO₂ to be a "quality of life" product, with demand affected by gross domestic product, or GDP, and overall economic conditions in our markets located in various regions of the world. Over the long-term, we expect demand for TiO₂ will grow by 2% to 3% per year, consistent with our expectations for the long-term growth in GDP. However, even if we and our competitors maintain consistent shares of the worldwide market, demand for TiO₂ in any interim or annual period may not change in the same proportion as the change in GDP, in part due to relative changes in the TiO₂ inventory levels of our customers. We believe that our customers' inventory levels are influenced in part by their expectation for future changes in market TiO₂ selling prices as well as their expectation for future availability of product. Although certain of our TiO₂ grades are considered specialty pigments, the majority of our grades and substantially all of our production are considered commodity pigment products with price and availability being the most significant competitive factors along with quality and customer service.

The factors having the most impact on our reported operating results are:

- Our TiO₂ sales and production volumes,
- TiO₂ selling prices,
- Currency exchange rates (particularly the exchange rate for the U.S. dollar relative to the euro, the Norwegian krone and the Canadian dollar) and
- Manufacturing costs, particularly raw materials, maintenance and energy-related expenses.

Our key performance indicators are our TiO₂ average selling prices and our level of TiO₂ sales and production volumes. TiO₂ selling prices generally follow industry trends and the selling prices will increase or decrease generally as a result of competitive market pressures.

In addition, our effective income tax rate in each of 2010, 2011 and 2012 has been impacted by certain favorable and unfavorable developments discussed below.

Executive Summary

We reported net income of \$218.5 million, or \$1.89 per share for 2012, compared to net income of \$321.0 million, or \$2.77 per share for 2011. Our earnings per share decreased from 2011 to 2012 due to lower income from operations in 2012 as a result of the unfavorable effects of lower sales and production volumes and higher raw material costs partially offset by higher average selling prices and the favorable effects of a lower effective income tax rate in 2012.

We reported net income of \$321.0 million, or \$2.77 per share for 2011, compared to net income of \$130.6 million, or \$1.29 per share for 2010. Our earnings per share increased from 2010 to 2011 primarily due to the net effects of (i) higher income from operations in 2011 resulting principally from higher average selling prices and higher production volumes in 2011, and (ii) a non-cash deferred income tax benefit recognized in the first quarter of 2010.

Net income in 2012 includes an aggregate charge of \$7.2 million (\$4.7 million, or \$.04 per share, net of income tax benefit) associated with the June 2012 redemption of the remaining €279.2 million principal amount of our 6.5% Senior Secured Notes, consisting of the call premium paid, interest from the June 14, 2012 indenture discharge date to the July 20, 2012 redemption date and the write-off of unamortized deferred financing costs and original issue discount.

Net income in 2011 includes an income tax provision of \$17.2 million for U.S. incremental income taxes (\$.15 per share) on current earnings repatriated from our German subsidiary, which earnings were used to fund a portion of the redemption and repurchases of our Senior Secured Notes. In addition, our net income in 2011 includes a net charge of \$3.1 million (\$2.1 million, or \$.02 per share, net of income tax benefit) related to the redemption and open market purchases of €120.8 million principal amount of our Senior Notes, consisting of the call premium, the write-off of unamortized deferred financing costs and original issue discount associated with the redeemed and purchased Notes.

Net income in 2010 includes a \$35.2 million first quarter non-cash income tax benefit (\$.36 per share) related to a European Court ruling that resulted in the favorable resolution of certain income tax issues in Germany and an increase in the amount of our German corporate and trade tax net operating loss carryforwards.

Critical accounting policies and estimates

The accompanying “Management’s Discussion and Analysis of Financial Condition and Results of Operations” is based upon our Consolidated Financial Statements, which we have prepared in accordance with accounting principles generally accepted in the United States of America, or GAAP. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amount of revenues and expenses during the reported period. On an ongoing basis we evaluate our estimates, including those related to the recoverability of long-lived assets, pension and other postretirement benefit obligations and the underlying actuarial assumptions related thereto, the realization of deferred income tax assets and accruals for litigation, income tax and other contingencies. We base our estimates on historical experience and on various other assumptions which we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about

the reported amounts of assets, liabilities, revenues and expenses. Actual results may differ significantly from previously-estimated amounts under different assumptions or conditions.

The following critical accounting policies affect our more significant judgments and estimates used in the preparation of our Consolidated Financial Statements:

- *Long-lived assets*—We recognize an impairment charge associated with our long-lived assets, including property and equipment, whenever we determine that recovery of such long-lived asset is not probable. Such determination is made in accordance with the applicable GAAP requirements of Accounting Standard Codification, or ASC, Topic 360-10-35 *Property, Plant and Equipment* and is based upon, among other things, estimates of the amount of future net cash flows to be generated by the long-lived asset and estimates of the current fair value of the asset. Significant judgment is required in estimating such cash flows. Adverse changes in such estimates of future net cash flows or estimates of fair value could result in an inability to recover the carrying value of the long-lived asset, thereby possibly requiring an impairment charge to be recognized in the future. We do not assess our property and equipment for impairment unless certain impairment indicators specified in ASC Topic 360-10-35 are present. We did not evaluate any long-lived assets for impairment during 2012 because no such impairment indicators were present.
- *Benefit Plans*—We maintain various defined benefit pension plans and postretirement benefits other than pensions, or OPEB, plans. The amounts recognized as defined benefit pension and OPEB expenses and the reported amounts of pension asset and accrued pension and OPEB costs are actuarially determined based on several assumptions, including discount rates, expected rates of returns on plan assets and expected health care trend rates. Variances from these actuarially assumed rates will result in increases or decreases, as applicable, in the recognized pension and OPEB obligations, pension and OPEB expenses and funding requirements. These assumptions are more fully described below under “Defined Benefit Pension Plans” and “OPEB Plans.”
- *Income taxes*—We recognize deferred taxes for future tax effects of temporary differences between financial and income tax reporting. We record a valuation allowance to reduce our deferred income tax assets to the amount that is believed to be realized under the more-likely-than-not recognition criteria. While we have considered future taxable income and ongoing prudent and feasible tax planning strategies in assessing the need for a valuation allowance, it is possible that we may change our estimate of the amount of the deferred income tax assets that would more-likely-than-not be realized in the future, resulting in an adjustment to the deferred income tax asset valuation allowance that would either increase or decrease, as applicable, reported net income in the period such change in estimate was made. For example, we have substantial net operating loss carryforwards in Germany (the equivalent of \$744 million for German corporate purposes and \$100 million for German trade tax purposes at December 31, 2012). At December 31, 2012, we have concluded that no deferred income tax asset valuation allowance is required to be recognized with respect to such carryforwards, principally because (i) such carryforwards have an indefinite

carryforward period, (ii) we have utilized a portion of such carryforwards during the most recent three-year period and (iii) we currently expect to utilize the remainder of such carryforwards over the long term. However, prior to the complete utilization of such carryforwards, if we were to generate losses in our German operations for an extended period of time, it is possible that we might conclude the benefit of such carryforwards would no longer meet the more-likely-than-not recognition criteria, at which point we would be required to recognize a valuation allowance against some or all of the then-remaining tax benefit associated with the carryforwards.

We record a reserve for uncertain tax positions where we believe it is more-likely-than-not our tax positions will not prevail with the applicable tax authorities. It is possible that in the future we may change our assessment regarding the probability that our tax positions will prevail that would require an adjustment to the amount of our reserve for uncertain tax positions that could either increase or decrease, as applicable, reported net income in the period the change in assessment was made.

In addition, we evaluate at the end of each reporting period as to whether or not some or all of the undistributed earnings of our non-U.S. subsidiaries are permanently reinvested (as that term is defined in GAAP). While we may have concluded in the past that some of such undistributed earnings are permanently reinvested, facts and circumstances can change in the future and it is possible that a change in facts and circumstances, such as a change in the expectation regarding the capital needs of our non-U.S. subsidiaries, could result in a conclusion that some or all of such undistributed earnings are no longer permanently reinvested. In such an event, we would be required to recognize a deferred income tax liability in an amount equal to the estimated incremental U.S. income tax and withholding tax liability that would be generated if all of such previously-considered permanently reinvested undistributed earnings were to be distributed to the U.S.

- *Contingencies*—We record accruals for legal and other contingencies when estimated future expenditures associated with such contingencies and commitments become probable and the amounts can be reasonably estimated. However, new information may become available or circumstances (such as applicable laws and regulations) may change, thereby resulting in an increase or decrease in the amount required to be accrued for such matters (and therefore a decrease or increase in reported net income in the period of such change).

Income from operations is impacted by certain of these and other significant judgments and estimates, such as allowance for doubtful accounts, reserves for obsolete or unmarketable inventories, impairment of equity method investments and long-lived assets, defined benefit pension plans and loss accruals. In addition, net income is impacted by the significant judgments and estimates for deferred income tax asset valuation allowances and loss accruals.

Comparison of 2012 to 2011 Results of Operations

	Year ended December 31,			
	2011	(Dollars in millions)		2012
Net sales	\$1,943.3	100%	\$1,976.3	100%
Cost of sales	1,194.9	61	1,415.9	72
Gross margin	748.4	39	560.4	28
Other operating income and expenses, net	201.9	11	200.8	10
Income from operations	\$ 546.5	28%	\$ 359.6	18%
				%
				Change
TiO ₂ operating statistics:				
Sales volumes*	503		470	(6)%
Production volumes*	550		469	(15)%
Percentage change in net sales:				
TiO ₂ product pricing				10%
TiO ₂ sales volumes				(6)
TiO ₂ product mix				2
Changes in currency exchange rates				(4)
Total				2%

* Thousands of metric tons

Industry conditions and 2012 overview – The TiO₂ industry has experienced decreased sales and production volumes as the majority of TiO₂ producers and consumers have been undertaking inventory correction initiatives in response to continued global economic weakness and uncertainty. While we operated our production facilities at full practical capacity rates throughout 2011 and through the first quarter of 2012, we operated our facilities at reduced rates during the remainder of 2012 (approximately 86% of practical capacity in the second quarter, approximately 71% in the third quarter and approximately 80% in the fourth quarter) to align production levels and inventories to current and anticipated near-term customer demand levels.

We increased our TiO₂ average selling prices throughout 2011. While our average selling prices at the end of the second quarter of 2012 were comparable to the end of 2011, our average selling prices declined during the second half of 2012. Overall our average selling prices in 2012 were 10% higher as compared to 2011 and our average selling prices at the end of 2012 were 17% lower than at the end of 2011.

We experienced significantly higher costs for our raw materials such as feedstock ore and petroleum coke in 2012. Overall, the cost per metric ton of TiO₂ we produced during 2012 was approximately 50% higher as compared to 2011, primarily due to the higher feedstock ore costs and unabsorbed fixed production costs resulting from reduced production volumes. However, as a substantial portion of the TiO₂ products we sold in the first quarter of 2012 were produced with lower-cost feedstock ore purchased in 2011, our cost of sales per metric ton in the first quarter of 2012 was significantly lower as compared to the cost per metric ton for products we sold in the second, third and fourth quarters of the year.

Net sales—Our net sales increased 2% or \$33.0 million in 2012 compared to 2011, primarily due to the net effects of a 10% increase in average TiO₂ selling prices (which increased net sales by approximately \$194 million) and a 6% decrease in sales volumes (which decreased net sales by approximately \$117 million). TiO₂ selling prices will increase or decrease generally as a result of competitive market pressures, changes in the relative level of supply and demand as well as changes in raw material and other manufacturing costs.

Our sales volumes decreased 6% in 2012 as compared to 2011 due to decreased customer demand in European markets partially offset by higher sales in U.S. and export markets. In addition, we estimate the unfavorable effect of changes in currency exchange rates decreased our net sales by approximately \$82 million, or 4%, as compared to 2011.

Cost of sales—Cost of sales increased \$221.0 million or 18% in 2012 compared to 2011 due to the net impact of higher raw material costs of approximately \$292 million (primarily feedstock ore and petroleum coke), a 6% decrease in sales volumes, a 15% decrease in production volumes and currency fluctuations (primarily the euro). Cost of sales as a percentage of net sales increased to 72% in 2012 compared to 61% in 2011 primarily due to the net effects of higher raw material costs, the unfavorable effects of unabsorbed fixed production costs resulting from reduced production volumes and higher average selling prices. The reduction in our TiO₂ production volumes during 2012, as discussed above, resulted in approximately \$25 million of unabsorbed fixed production costs which were charged directly to cost of sales. Additionally, 2012 reflects the benefit of lower raw material costs in the first quarter of 2012 (as compared to current costs) as lower cost raw materials purchased at the end of 2011 were used in the first quarter 2012 production process.

Gross margin and income from operations—Income from operations decreased by \$186.9 million from \$546.5 million in 2011 to \$359.6 million in 2012. Income from operations as a percentage of net sales decreased to 18% in 2012 from 28% in 2011. This decrease was driven by the decline in gross margin, which decreased to 28% in 2012 compared to 39% in 2011. As discussed and quantified above, our gross margin has decreased primarily due to the net effects of higher manufacturing costs (primarily raw materials), higher selling prices, lower sales volumes and unabsorbed fixed costs related to lower production volumes. Additionally, changes in currency exchange rates have negatively affected our gross margin and income from operations. We estimate that changes in currency exchange rates decreased income from operations by approximately \$10 million in 2012 compared to 2011.

As a percentage of net sales, selling, general and administrative expenses were relatively consistent at approximately 9% and 10% for 2012 and 2011 respectively.

Other non-operating income (expense)—In March 2011, we redeemed €80 million of our 6.5% Senior Secured Notes and borrowed under our European revolving credit facility in order to fund the redemption. In the third and fourth quarters of 2011, we repurchased in open market transactions an aggregate €40.8 million principal amount of our Senior Notes. As a result of these redemptions and open market purchases, we recognized a net \$3.1 million pre-tax interest charge consisting of the call premium and the write-off of unamortized deferred financing costs and original issue discount associated with the redeemed and repurchased Senior Notes.

We recognized an aggregate \$7.2 million pre-tax charge in the second quarter of 2012 related to the early extinguishment of our remaining Senior Secured Notes. See Note 9 to our Consolidated Financial Statements.

We recognized a \$3.9 million securities transaction loss in the fourth quarter of 2012 on the sale, pursuant to a tender offer, of our 4.2 million shares of Titanium Metals Corporation (TIMET) stock for \$70.0 million. See Note 6 to our Consolidated Financial Statements.

Interest expense decreased \$6.0 million from \$32.7 million in 2011 to \$26.7 million in 2012 primarily due to the effects of lower 2012 average debt levels of our Senior Secured Notes resulting from the March 2011 redemption and open market purchases in the third and fourth quarters of 2011. In addition, outstanding debt in 2012 carried lower average interest rates than in 2011. See Note 9 to our Consolidated Financial Statements.

Income tax provision—Our income tax provision was \$112.3 million in 2012 compared to \$196.1 million in 2011. This decrease in provision for income taxes was primarily due to lower income from operations in 2012 compared to 2011. See Note 10 to our Consolidated Financial Statements for a tabular reconciliation of our statutory income tax provision to our actual tax provision. Some of the more significant items impacting this reconciliation are summarized below.

- Our income tax provision in 2012 includes a net incremental tax benefit of \$3.1 million. We determined during the third quarter that due to global changes in the business we would not remit certain dividends from our non-U.S. jurisdictions. As a result, certain current year tax attributes were available for carryback to offset prior year tax expense and our provision for income taxes in the third quarter included an incremental tax benefit of \$11.1 million. During the fourth quarter as a result of a change in circumstances related to our sale and the sale by certain of our affiliates of their shares of TIMET common stock, which sale provided an opportunity for us and other members of our consolidated U.S. federal income tax group to elect to claim foreign tax credits, we determined that we could tax-efficiently remit non-cash dividends from our non-U.S. jurisdictions before the end of the year that absent the TIMET sale would not have been considered. Our provision for income taxes in the fourth quarter of 2012 includes an incremental tax related to the non-cash dividend distributions of \$8.0 million.
- Our income tax provision in 2011 includes \$17.2 million for U.S. incremental income taxes on current earnings repatriated from our German subsidiary, which earnings were used to fund a portion of the redemption and repurchases of our Senior Secured Notes.

Comparison of 2011 to 2010 Results of Operations

	Year ended December 31,			
	2010	(Dollars in millions)		2011
Net sales	\$1,449.7	100%	\$1,943.3	100%
Cost of sales	1,104.4	76	1,194.9	61
Gross margin	345.3	24	748.4	39
Other operating income and expenses, net	166.9	12	201.9	11
Income from operations	<u>\$ 178.4</u>	<u>12%</u>	<u>\$ 546.5</u>	<u>28%</u>
				%
				<u>Change</u>
TiO ₂ operating statistics:				
Sales volumes*	528		503	(5)%
Production volumes*	524		550	5%
Percentage change in net sales:				
TiO ₂ product pricing				40%
TiO ₂ sales volumes				(5)
TiO ₂ product mix				(6)
Changes in currency exchange rates				5
Total				<u>34%</u>

* Thousands of metric tons

Net sales—Net sales increased 34% or \$493.6 million in 2011 compared to 2010, primarily due to a 40% increase in average TiO₂ selling prices. TiO₂ selling prices will increase or decrease generally as a result of competitive market pressures, changes in the relative level of supply and demand as well as changes in raw material and other manufacturing costs.

While the amount of inventory available for shipment in 2011 increased due to higher production volumes during the year, our sales volumes were 5% lower than in 2010 as a result of soft demand in the fourth quarter of 2011 due to customer destocking.

In addition to the factors discussed above, we estimate the favorable effect of changes in currency exchange rates increased our net sales by approximately \$70 million, or 5%, as compared to 2010, while relative changes in mix of the various grades of our products sold decreased our net sales by approximately \$87 million, or 6%.

Cost of sales—Cost of sales increased \$90.5 million or 8% in 2011 compared to 2010 due to the net impact of a 5% increase in TiO₂ production volumes, higher raw material costs of \$75.1 million (primarily ore and petroleum coke), an increase in maintenance costs of \$15.0 million (consistent with the increase in production volumes) and currency fluctuations (primarily the euro). Overall, our per metric ton cost of TiO₂ we produced increased approximately 10% as compared to 2010. Cost of sales as a percentage of net sales decreased to 61% in 2011 compared to 76% in 2010 primarily due to the effects of higher selling prices and the benefit of higher production volumes in 2011. Our TiO₂ production volumes in 2011 established a new record for us for an annual production period.

Income from operations—Income from operations increased by \$368.1 million from \$178.4 million in 2010 to \$546.5 million in 2011. Income from operations as a percentage of net sales increased to 28% in 2011 from 12% in 2010. This increase is driven by the improvement in gross margin, which increased to 39% in 2011 compared to 24% in 2010. Our gross margin increased primarily because of the effect of higher selling prices which more than offset the impact of higher manufacturing costs (primarily raw materials and maintenance). Changes in currency exchange rates had a minimal effect on our income from operations in 2011 as compared to 2010.

As a percentage of net sales, selling, general and administrative expenses were relatively consistent at approximately 10% and 12% for 2011 and 2010 respectively.

Other non-operating income (expense)—In March 2011, we redeemed €80 million principal amount of our 6.5% Senior Secured Notes. In the third and fourth quarters of 2011, we repurchased in open market transactions an aggregate €40.8 million principal amount of our 6.5% Notes. We recognized a net \$3.1 million pre-tax interest charge related to the redemption and open market purchases of the 6.5% Notes, consisting of the call premium, the write-off of unamortized deferred financing costs and original issue discount associated with the redeemed and purchased Notes.

Interest expense decreased \$6.1 million from \$38.8 million in 2010 to \$32.7 million in 2011 due to the net effects of the prepayment and open market purchases of a portion of the 6.5% Senior Secured Notes as discussed above, and changes in currency exchange rates. The interest expense we recognize will vary with fluctuations in the euro exchange rate.

Income tax provision—Our income tax provision was \$196.1 million in 2011 compared to \$9.7 million in 2010. This increase is primarily due to our increased earnings. See Note 10 to our Consolidated Financial Statements for a tabular reconciliation of our statutory income tax provision to our actual tax provision. Some of the more significant items impacting this reconciliation are summarized below.

- Our income tax provision in 2011 includes \$17.2 million for U.S. incremental income taxes on current earnings repatriated from our German subsidiary, which earnings were used to fund a portion of the redemption and repurchases of our Senior Secured Notes.
- Our income tax provision in 2010 includes a \$35.2 million non-cash income tax benefit related to a European Court ruling that resulted in the favorable resolution of certain income tax issues in Germany and an increase in the amount of our German corporate and trade tax net operating loss carryforwards.

Effects of Currency Exchange Rates

We have substantial operations and assets located outside the United States (primarily in Germany, Belgium, Norway and Canada). The majority of our sales from non-U.S. operations are denominated in currencies other than the U.S. dollar, principally the euro, other major European currencies and the Canadian dollar. A portion of our sales generated from our non-U.S. operations is denominated in the U.S. dollar. Certain raw materials used worldwide, primarily titanium-containing feedstocks, are purchased primarily in U.S. dollars, while labor and other production costs are purchased primarily in local currencies. Consequently, the translated U.S. dollar value of our non-

U.S. sales and operating results are subject to currency exchange rate fluctuations which may favorably or unfavorably impact reported earnings and may affect the comparability of period-to-period operating results. In addition to the impact of the translation of sales and expenses over time, our non-U.S. operations also generate currency transaction gains and losses which primarily relate to the difference between the currency exchange rates in effect when non-local currency sales or operating costs are initially accrued and when such amounts are settled with the non-local currency.

Overall, we estimate that fluctuations in currency exchange rates had the following effects on our sales and income from operations for the periods indicated.

Impact of changes in currency exchange rates—2012 vs. 2011

	Transaction gains/(losses) recognized			Translation gain/(loss)-impact of rate changes	Total currency impact 2012 vs. 2011
	2011	2012	Change		
	(in millions)				
Impact on:					
Net sales	\$ —	\$ —	\$ —	\$ (82)	\$ (82)
Income from operations	3	(1)	(4)	(6)	(10)

Impact of changes in currency exchange rates—2011 vs. 2010

	Transaction gains/(losses) recognized			Translation gain/(loss)-impact of rate changes	Total currency impact 2010 vs. 2011
	2010	2011	Change		
	(in millions)				
Impact on:					
Net sales	\$ —	\$ —	\$ —	\$ 70	\$ 70
Income from operations	8	3	(5)	5	—

The negative impact on income from operations in 2012 versus 2011 is due to increased currency transaction losses in 2012 as compared currency transaction gains in 2011 which were a function of the timing of currency exchange rate changes and the settlement of non-local currency receivables and payables. The impact on income from operations in 2011 versus 2010 was minimal.

Outlook

During the first quarter of 2012, we operated our production facilities at full practical capacity levels, consistent with our operating rates throughout 2011. We operated our facilities at reduced rates during the second, third and fourth quarters of 2012 to align our production levels and inventories to current and anticipated near-term customer demand levels. If economic conditions improve in the various regions of the world during 2013, we expect demand for our TiO₂ products would increase, and our sales volumes would be expected to be higher in 2013 as compared to 2012. During 2013, we will continue to monitor current and anticipated near-term customer demand levels and align our production and inventories accordingly.

We implemented significant increases throughout 2011 and raised prices in certain markets in the first half of 2012, and as a result our average selling prices were 10% higher in 2012 as compared to 2011. While our average selling prices at the end of the second quarter of 2012 were comparable to the end of 2011, our average selling prices declined during the second half of 2012. Our average selling prices at the end of 2012 were 10% lower than at the end of the third quarter of 2012 and were 17% lower than at the end of 2011.

As expected, we experienced significantly higher TiO₂ feedstock costs in 2012 as compared to 2011 driven by tight ore supplies and higher-than-historical increases in petroleum coke and energy costs. We had experienced some moderation in the cost of TiO₂ feedstock ore procured in 2013, but our cost of sales per metric ton of TiO₂ sold in the first quarter of 2013 is expected to be higher as compared to our expected cost of sales per metric ton of TiO₂ sold in the remainder of 2013, as a substantial portion of the TiO₂ products we expect to sell in the first quarter of 2013 will have been produced with the higher-cost feedstock ore procured in 2012. Although the cost of feedstock ore has moderated recently, such reductions have been inadequate to compensate for the decline in selling prices for our products. As a result, we expect to implement increases in our selling prices during 2013 in order to adequately compensate for our raw material production costs, as we are starting 2013 with selling prices 17% lower than as compared to the start of 2012.

Overall, we expect that income from operations in 2013 will be significantly lower as compared to 2012, as the relatively negative effect associated with the impact on our first quarter 2012 income from operations resulting from the sale of TiO₂ produced with the lower-cost feedstock ore purchased in 2011 would more than offset the favorable effect of the higher sales and production volumes that would result assuming demand levels improve, as well as the favorable impact of increases in our selling prices that we are able to achieve during 2013.

Our expectations for our future operating results are based upon a number of factors beyond our control, including worldwide growth of gross domestic product, competition in the marketplace, continued operation of competitors, unexpected or earlier-than-expected capacity additions or reductions and technological advances. If actual developments differ from our expectations, our results of operations could be unfavorably affected.

LIQUIDITY AND CAPITAL RESOURCES

Consolidated cash flows

Operating activities

Trends in cash flows as a result of our operating activities (excluding the impact of significant asset dispositions and relative changes in assets and liabilities) are generally similar to trends in our earnings.

Cash provided by operating activities was \$76.9 million in 2012 compared to \$295.6 million in 2011. This \$218.7 million decrease was primarily due to the net effects of the following:

- lower income from operations in 2012 of \$186.9 million,
- lower net cash paid for income taxes in 2012 of \$10.4 million resulting from lower operating income and the timing of payments,

- higher net cash used in 2012 associated with relative changes in our inventories, receivables, prepaids, payables and accruals of \$8.4 million in 2012, and
- higher net contributions to our TiO₂ joint venture in 2012 of \$24.5 million, primarily to support the joint venture's higher working capital needs associated with higher-cost feedstock ore.

Cash flows provided by operating activities was \$295.6 million in 2011 compared to \$126.0 million in 2010. This \$169.6 million increase was primarily due to the net effects of the following items:

- higher income from operations in 2011 of \$368.1 million,
- higher net cash used by increases in our inventories, receivables, payables and accruals of \$117.4 million in 2011, primarily due to relative changes in our inventory levels, as discussed below,
- higher cash paid for income taxes in 2011 of \$80.7 million resulting from our increased profitability,
- higher net distributions from our TiO₂ joint venture in 2011 of \$1.4 million due to related changes in their cash requirements, and
- lower cash paid for interest in 2011 of \$3.5 million, primarily due to lower average borrowings in 2011 partially offset by the \$2.5 million call premium associated with the redemption of €80 million of our 6.5% Senior Secured Notes.

Changes in working capital are affected by accounts receivable and inventory changes. As shown below:

- Our average days sales outstanding increased from December 31, 2011 to December 31, 2012 as a result of lower average daily net sales in the fourth quarter of 2012 compared to the fourth quarter of 2011 and to timing of collections on receivable balances, and
- Our average days sales in inventory decreased from December 31, 2011 to December 31, 2012, due to higher inventory costs offset by slightly higher volumes in the fourth quarter of 2012 compared to the fourth quarter of 2011.

For comparative purposes, we have provided prior year numbers below.

	<u>December 31, 2010</u>	<u>December 31, 2011</u>	<u>December 31, 2012</u>
Days sales outstanding	55 days	55 days	61 days
Days sales in inventory	52 days	104 days	102 days

Investing activities

Our capital expenditures were \$37.7 million in 2010, \$68.6 million in 2011 and \$74.8 million in 2012. Capital expenditures are primarily incurred to maintain and improve the cost effectiveness of our manufacturing facilities. Our capital expenditures during the past three years include an aggregate of approximately \$75.4 million (\$25.2 million in 2012) for our ongoing environmental protection and compliance programs.

During 2012, we:

- loaned \$178.7 million and subsequently collected \$314.8 million under our unsecured revolving demand promissory note with Valhi,
- sold our 4.2 million shares of common stock of TIMET for \$70.0 million and
- sold \$21.1 million in mutual fund marketable securities.

During 2011, we:

- loaned a net \$74.2 million under our unsecured revolving demand promissory note with Valhi,
- purchased a net \$21.8 million in mutual fund marketable securities and
- purchased \$43.2 million in marketable equity securities of related parties, including \$3.6 million of purchases in late 2010 which settled in early 2011.

During 2010, we:

- loaned a net \$61.9 million under our revolving demand promissory note with Valhi, and
- purchased an aggregate of \$46.0 million in marketable equity securities of related parties, including \$3.6 million of purchases in late 2010 which settled in early 2011.

Our marketable securities are discussed in Note 6 to our Consolidated Financial Statements. Our loan to Valhi is further discussed in Note 14.

Financing activities

During 2012, we:

- borrowed €80 million (\$107.4 million when borrowed) on our European credit facility and subsequently repaid an aggregate €70 million (\$88.6 million when repaid),
- borrowed an aggregate \$394.0 million on a term loan entered into in June 2012 that was issued at 98.5% of the principal amount borrowed and subsequently repaid \$10.0 million principal amount,
- retired €279.2 million principal amount of our 6.5% Senior Secured Notes (\$352.3 million when retired),
- borrowed and subsequently repaid \$71 million on our revolving North American credit facility, and
- paid quarterly dividends to stockholders of \$.15 per share for an aggregate dividend of \$69.5 million (\$.60 per share).

During 2011, we:

- redeemed €80 million principal amount of our €400 million 6.5% Senior Secured Notes at 102.17% of the face value for an aggregate of \$115.7 million, including a \$2.5 million call premium in March 2011,
- borrowed €80 million (\$113.3 million when borrowed) under our European credit facility in order to fund the €80 million redemption of our Senior Secured Notes and subsequently repaid €80 million (\$115.0 million when repaid),

- repurchased €40.8 million principal amount of our 6.5% Senior Secured Notes in open market transactions for an aggregate of €40.6 million (\$57.6 million when repurchased), and
- paid quarterly dividends to stockholders aggregating \$.575 per share (\$.125 per share in the first quarter and \$.15 per share in each of the second, third and fourth quarters), or an aggregate of \$66.7 million, and paid a special dividend to stockholders of \$.50 per share, or an aggregate of \$57.9 million, in the first quarter.

During 2010, we:

- sold 17.94 million shares of our common stock in a secondary underwritten public offering for net proceeds of \$337.6 million,
- repaid \$16.7 million under our U.S. credit facility, and
- repaid net €9 million (\$8.5 million when borrowed/repaid) under our European credit facility.

In February 2013, our board of directors declared a first quarter 2013 regular quarterly dividend of \$.15 per share, payable on March 21, 2013 to stockholders of record as of March 11, 2013.

Outstanding debt obligations and borrowing availability

At December 31, 2012, our consolidated debt comprised:

- \$390.0 million aggregate borrowings under our new term loan (\$384.5 million carrying value, net of unamortized original issue discount),
- €10 million (\$13.2 million) under our European revolving credit facility which matures in September 2017 and
- approximately \$2.4 million of other indebtedness.

Certain of our credit agreements contain provisions which could result in the acceleration of indebtedness prior to their stated maturity for reasons other than defaults for failure to comply with applicable covenants. For example, certain credit agreements allow the lender to accelerate the maturity of the indebtedness upon a change of control (as defined in the agreement) of the borrower. In addition, certain credit agreements contain provisions that could result in the acceleration of all or a portion of the indebtedness following a sale of assets outside the ordinary course of business. We are in compliance with all of our debt covenants at December 31, 2012. See Note 9 to our Consolidated Financial Statements.

In addition to the outstanding indebtedness indicated above, at December 31, 2012 we have our €120 million European Credit Facility, under which €110 million (\$144.9 million) was available for borrowing by our European subsidiaries and our \$125 million North American credit facility, which had no borrowings outstanding and \$125 million available for borrowing.

In December 2011, our Canadian subsidiary entered into a Cdn. \$10.0 million loan agreement with the Bank of Montreal for the limited purpose of issuing letters of credit. The facility renews annually. Letters of credit are collateralized by restricted deposits at the Bank of Montreal (\$7.5 million at December 31, 2012). The facility contains certain restrictive covenants which, among other things, restrict the subsidiary from incurring additional indebtedness in excess of Cdn. \$35 million. At December 31, 2012, an aggregate of Cdn. \$7.5 million letters of credit were outstanding under this facility.

Our assets consist primarily of investments in operating subsidiaries, and our ability to service parent-level obligations, including our term loan, depends in part upon the distribution of earnings of our subsidiaries, whether in the form of dividends, advances or payments on account of intercompany obligations or otherwise. The term loan is collateralized by, among other things, a first priority lien on (i) 100% of the common stock of certain of our U.S. wholly-owned subsidiaries, (ii) 65% of the common stock or other ownership interest of our Canadian subsidiary (Kronos Canada, Inc.) and certain first-tier European subsidiaries (Kronos Titan GmbH and Kronos Denmark ApS) and (iii) a \$362.1 million unsecured promissory note issued by our wholly-owned subsidiary, Kronos International, Inc. (KII). The term loan is also collateralized by a second priority lien on our U.S. assets which collateralize our North American revolving facility. Our North American revolving credit facility is collateralized by, among other things, a first priority lien on the borrower's trade receivables and inventories.

Our term loan and our North American revolver contain a number of covenants and restrictions which, among other things, restrict our ability to incur additional debt, incur liens, pay dividends or merge or consolidate with, or sell or transfer substantially all of our assets to, another entity, and contains other provisions and restrictive covenants customary in lending transactions of this type. See Note 9 to our Consolidated Financial Statements.

In February 2013, we voluntarily prepaid an aggregate \$290 million principal amount of our term loan, using \$100 million of our cash on hand as well as borrowings of \$190 million under a new loan from Contran. We expect to recognize a non-cash pre-tax interest charge of approximately \$7 million in the first quarter of 2013 consisting of the write-off of unamortized original issue discount costs and deferred financing costs associated with such prepayment. See Note 9 to our Consolidated Financial Statements. It is possible we might borrow additional amounts from Contran in the future to voluntarily prepay the remaining \$100 million principal amount outstanding under the term loan. The independent members of our board of directors approved the terms and conditions of the new loan from Contran.

Liquidity

Our primary source of liquidity on an ongoing basis is cash flows from operating activities which is generally used to (i) fund working capital expenditures, (ii) repay any short-term indebtedness incurred for working capital purposes and (iii) provide for the payment of dividends. From time-to-time we will incur indebtedness, generally to (i) fund short-term working capital needs, (ii) refinance existing indebtedness or (iii) fund major capital expenditures or the acquisition of other assets outside the ordinary course of business. We will also from time-to-time sell assets outside the ordinary course of business and use the proceeds to (i) repay existing indebtedness, (ii) make investments in marketable and other securities, (iii) fund major capital expenditures or the acquisition of other assets outside the ordinary course of business or (iv) pay dividends.

The TiO₂ industry is cyclical, and changes in industry economic conditions significantly impact earnings and operating cash flows. Changes in TiO₂ pricing, production volumes and customer demand, among other things, could significantly affect our liquidity.

We routinely evaluate our liquidity requirements, alternative uses of capital, capital needs and availability of resources in view of, among other

things, our dividend policy, our debt service, our capital expenditure requirements and estimated future operating cash flows. As a result of this process, we have in the past and may in the future seek to reduce, refinance, repurchase or restructure indebtedness, raise additional capital, repurchase shares of our common stock, modify our dividend policy, restructure ownership interests, sell interests in our subsidiaries or other assets, or take a combination of these steps or other steps to manage our liquidity and capital resources. Such activities have in the past and may in the future involve related companies. In the normal course of our business, we may investigate, evaluate, discuss and engage in acquisition, joint venture, strategic relationship and other business combination opportunities in the TiO₂ industry. In the event of any future acquisition or joint venture opportunity, we may consider using then-available liquidity, issuing our equity securities or incurring additional indebtedness.

At December 31, 2012, we had credit available under our European credit facility of approximately \$144.9 million and approximately \$125 million under our North American revolving credit facility.

At December 31, 2012, we could borrow under our credit facilities without violating any existing covenants. We believe we will be able to comply with the financial covenants contained in such credit facility through its maturity; however if future operating results differ materially from our expectations we may be unable to maintain compliance. Based upon our expectation for the TiO₂ industry and anticipated demands on cash resources, we expect to have sufficient liquidity to meet our short term obligations (defined as the twelve-month period ending December 31, 2013) and our long-term obligations (defined as the five-year period ending December 31, 2017, our time period for long-term budgeting). If actual developments differ from our expectations, our liquidity could be adversely affected.

Stock repurchase program

In December 2010 our board of directors authorized the repurchase of up to 2.0 million shares of our common stock in open market transactions, including block purchases, or in privately-negotiated transactions at unspecified prices and over an unspecified period of time. To date, we have not made any repurchases under the plan and all 2.0 million shares are available for repurchase. See Note 13 to our Consolidated Financial Statements.

Capital expenditures

We intend to spend approximately \$60 million to maintain and improve our existing facilities during 2013, including approximately \$25 million in the area of environmental compliance, protection and improvement. The majority of our expenditures in 2013 will be to maintain and improve the cost-effectiveness of our manufacturing facilities. Our capital expenditures in the area of environmental compliance, protection and improvement include expenditures which are primarily focused on increased operating efficiency but also result in improved environmental protection, such as lower emissions from our manufacturing plants. Capital spending for 2013 is expected to be funded through cash on hand or borrowing under existing credit facilities.

Off-balance sheet financing

Other than operating lease commitments disclosed in Note 15 to our Consolidated Financial Statements, we are not party to any material off-balance sheet financing arrangements.

Cash, cash equivalents, restricted cash and marketable securities

At December 31, 2012 we had:

	Held by		Total
	U.S. Entities	Non-U.S. Entities	
Cash and cash equivalents	\$265.9	\$ 16.8	\$282.7
Restricted cash	—	10.2	10.2
Noncurrent marketable securities	21.6	—	21.6

In February 2013, we voluntarily prepaid an aggregate \$290 million principal amount of our term loan, using in part \$100 million of our cash on hand. See Note 9 to our Consolidated Financial Statements.

Related party transactions

We are party to certain transactions with related parties. See Note 14 to our Consolidated Financial Statements. It is our policy to engage in transactions with related parties on terms, in our opinion, no less favorable to us than could be obtained from unrelated parties.

Commitments and contingencies

See Notes 10 and 15 to our Consolidated Financial Statements for a description of certain income tax examinations currently underway, certain legal proceedings and other commitments.

Recent accounting pronouncements

See Note 17 to our Consolidated Financial Statements.

Debt and Other Contractual Commitments

As more fully described in the Notes to the Consolidated Financial Statements, we are a party to various debt, lease and other agreements which contractually and unconditionally commit us to pay certain amounts in the future. See Notes 9, 14, 15 and 16 to our Consolidated Financial Statements. The timing and amount shown for our commitments in the table below are based upon the contractual payment amount and the contractual payment date for such commitments. The following table summarizes such contractual commitments of ours and our consolidated subsidiaries as of December 31, 2012 by the type and date of payment.

Contractual commitment	Payment due date				Total
	2013	2014/ 2015	2016/ 2017	2018 and after	
	(In millions)				
Indebtedness(1)	\$ 21.2	\$ 40.9	\$ 53.5	\$ 290.0	\$ 405.6
Interest payments on indebtedness (2)	22.6	41.7	36.9	8.3	109.5
Operating leases	12.2	14.0	6.1	23.6	55.9
Long-term supply contracts for the purchase of TiO ₂ feedstock (3)	537.0	1,002.7	288.0	—	1,827.7
Long-term service and other supply contracts (4)	61.7	51.2	8.7	—	121.6
Fixed asset acquisitions	20.2	—	—	—	20.2
Estimated tax obligations (5)	41.2	—	—	—	41.2
	<u>\$716.1</u>	<u>\$1,150.5</u>	<u>\$393.2</u>	<u>\$ 321.9</u>	<u>\$2,581.7</u>

- (1) A significant portion of the amount shown for indebtedness relates to our term loan (\$384.5 million at December 31, 2012 which includes \$5.5 unamortized original issue discount at December 31, 2012). See Item 7A – “Quantitative and Qualitative Disclosures About Market Risk” and Note 9 to the Consolidated Financial Statements.
- (2) The amounts shown for interest for any outstanding variable-rate indebtedness is based upon the December 31, 2012 interest rates and assumes that such variable-rate indebtedness remains outstanding until maturity.
- (3) Our contracts for the purchase of TiO₂ feedstock contain fixed quantities that we are required to purchase, or specify a range of quantities within which we are required to purchase based on our feedstock requirements. The pricing under these agreements is generally negotiated quarterly. The timing and amount shown for our commitments related to the supply contracts for TiO₂ feedstock are based upon our current estimate of the quantity of material that will be purchased in each time period shown, the payment that would be due based upon such estimated purchased quantity and an estimate of the prices for the various suppliers which is primarily based on first quarter 2013 pricing. The actual amount of material purchased and the actual amount that would be payable by us, may vary from such estimated amounts. Our obligation for the purchase of TiO₂ feedstock is more fully described in Note 15 to our Consolidated Financial Statements and above in “Business – raw materials.” The amounts shown in the table above include the feedstock ore requirements from contracts we entered into in January 2013.
- (4) The amounts shown for the long-term service and other supply contracts primarily pertain to agreements we have entered into with various providers of products or services which help to run our plant facilities (electricity, natural gas, etc.), utilizing December 31, 2012 exchange rates. See Note 15 to our Consolidated Financial Statements.
- (5) The amount shown for estimated tax obligations is the consolidated amount of income taxes payable at December 31, 2012, which is assumed to be paid during 2013.

The above table does not reflect:

- Any amounts we might pay to fund our defined benefit pension plans and OPEB plans, as the timing and amount of any such future fundings are unknown and dependent on, among other things, the future performance of defined benefit pension plan assets, interest rate assumptions and actual future retiree medical costs. We expect to be required to contribute an aggregate of approximately \$27.4 million to our defined benefit pension plans and OPEB plans during 2013. Such defined benefit pension plans and OPEB plans are discussed below in greater detail. See Note 11 to our Consolidated Financial Statements.
- Any amounts we might pay to settle any of our uncertain tax positions, as the timing and amount of any such future settlements are unknown and dependent on, among other things, the timing of tax audits. See Note 10 to our Consolidated Financial Statements; and
- Any amounts we might pay to acquire TiO₂ from our TiO₂ manufacturing joint venture, as the timing and amount of such purchases are unknown and dependent on, among other things, the amount of TiO₂ produced by the joint venture in the future and the joint venture's future cost of producing such TiO₂. However, the table does include amounts related to our share of the joint venture's ore requirements necessary to produce TiO₂ for us. See Item 1, "Business" and Note 5 to our Consolidated Financial Statements.

We occasionally enter into raw material supply arrangements to mitigate the short-term impact of future increases in raw material costs. While these arrangements do not necessarily commit us to a minimum volume of purchase, they generally provide for stated unit prices based upon achievement of specified volume purchase levels. This allows us to stabilize raw material purchase prices to a certain extent, provided the specified minimum monthly purchase quantities are met.

Defined benefit pension plans

We maintain various defined benefit pension plans in the U.S., Europe and Canada. See Note 11 to our Consolidated Financial Statements.

Under defined benefit pension plan accounting, defined benefit pension plan expense and pension assets and accrued pension costs are each recognized based on certain actuarial assumptions, principally the assumed discount rate, the assumed long-term rate of return on plan assets and the assumed increase in future compensation levels. We recognize the full funded status of our defined benefit pension plans as either an asset (for overfunded plans) or a liability (for underfunded plans) in our Consolidated Balance Sheet.

We recognized consolidated defined benefit pension plan expense of \$22.8 million in 2010, \$25.8 million in 2011 and \$25.1 million in 2012. The amount of funding requirements for these defined benefit pension plans is generally based upon applicable regulations (such as ERISA in the U.S.) and will generally differ from pension expense for financial reporting purposes. We made contributions to all of our plans which aggregated \$24.6 million in 2010, \$25.5 million in 2011 and \$28.2 million in 2012.

The discount rates we use for determining defined benefit pension expense and the related pension obligations are based on current interest rates earned on long-term bonds that receive one of the two highest ratings given by recognized rating agencies in the applicable country where the defined benefit pension benefits are being paid. In addition, we receive third-party advice about appropriate discount rates and these advisors may in some cases use their own market indices. We adjust these discount rates as of each December 31 valuation date to reflect then-current interest rates on such long-term bonds. We use these discount rates to determine the actuarial present value of the pension obligations as of December 31 of that year. We also use these discount rates to determine the interest component of defined benefit pension expense for the following year.

At December 31, 2012, approximately 62%, 22%, 11% and 3% of the projected benefit obligations related to our plans in Germany, Canada, Norway and the U.S., respectively. We use several different discount rate assumptions in determining our consolidated defined benefit pension plan obligation and expense. This is because we maintain defined benefit pension plans in several different countries in Europe and North America and the interest rate environment differs from country to country.

We used the following discount rates for our defined benefit pension plans:

	Discount rates used for:		
	Obligations at December 31, 2010 and expense in 2011	Obligations at December 31, 2011 and expense in 2012	Obligations at December 31, 2012 and expense in 2013
Germany	5.2%	5.5%	3.5%
Canada	5.2%	4.3%	3.9%
Norway	4.8%	3.5%	4.3%
U.S.	5.1%	4.2%	3.6%

The assumed long-term rate of return on plan assets represents the estimated average rate of earnings expected to be earned on the funds invested or to be invested in the plans' assets provided to fund the benefit payments inherent in the projected benefit obligations. Unlike the discount rate, which is adjusted each year based on changes in current long-term interest rates, the assumed long-term rate of return on plan assets will not necessarily change based upon the actual short-term performance of the plan assets in any given year. Defined benefit pension expense each year is based upon the assumed long-term rate of return on plan assets for each plan, the actual fair value of the plan assets as of the beginning of the year and an estimate of the amount of contributions to and distributions from the plan during the year. Differences between the expected return on plan assets for a given year and the actual return are deferred and amortized over future periods based either upon the expected average remaining service life of the active plan participants (for plans for which benefits are still being earned by active employees) or the average remaining life expectancy of the inactive participants (for plans for which benefits are not still being earned by active employees).

At December 31, 2012, approximately 54%, 24%, 16% and 4% of the plan assets related to our plans in the Germany, Canada, Norway and the U.S., respectively. We use several different long-term rates of return on plan asset assumptions in determining our consolidated defined benefit pension plan expense. This is because the plan assets in different countries are invested in a different mix of investments and the long-term rates of return for different investments differ from country to country.

In determining the expected long-term rate of return on plan asset assumptions, we consider the long-term asset mix (e.g. equity vs. fixed income) for the assets for each of our plans and the expected long-term rates of return for such asset components. In addition, we receive third-party advice about appropriate long-term rates of return. Such assumed asset mixes are summarized below:

- In Germany, the composition of our plan assets is established to satisfy the requirements of the German insurance commissioner.
- In Canada, we currently have a plan asset target allocation of 46% to equity securities, 45% to fixed income securities, 9% to other investments and the remainder primarily to cash and liquid investments. We expect the long-term rate of return for such investments to average approximately 125 basis points above the applicable equity or fixed income index.
- In Norway, we currently have a plan asset target allocation of 12% to equity securities, 78% to fixed income securities, 9% to real estate and the remainder primarily to cash and liquid investments. The expected long-term rate of return for such investments is approximately 8%, 4%, 6% and 7%, respectively.
- In the U.S. substantially all of the assets are invested in The Combined Master Retirement Trust (CMRT), a collective investment trust sponsored by Contran to permit the collective investment by certain master trusts which fund certain employee benefits plans sponsored by Contran and certain of its affiliates. Harold C. Simmons is the sole trustee of the CMRT and is a member of the CMRT investment committee. The CMRT's long-term investment objective is to provide a rate of return exceeding a composite of broad market equity and fixed income indices (including the S&P 500 and certain Russell indices), while utilizing both third-party investment managers as well as investments directed by Mr. Simmons. Prior to December 2012, the CMRT had an investment in TIMET common stock; however, on December 20, 2012 the CMRT sold its shares of common stock in conjunction with the tender offer. See Note 6 to our Consolidated Financial Statements. During the history of the CMRT from its inception in 1988 through December 31, 2012, the average annual rate of return has been 14%.

Our pension plan weighted average asset allocations by asset category were as follows:

	December 31, 2012			
	Germany	Canada	Norway	CMRT
Equity securities and limited partnerships	27%	54%	13%	53%
Fixed income securities	54	38	68	12
Real estate	10	—	8	—
Other	9	8	11	35
Total	100%	100%	100%	100%

	December 31, 2011			
	Germany	Canada	Norway	CMRT
Equity securities and limited partnerships	29%	56%	10%	85%
Fixed income securities	50	41	70	14
Real estate	11	—	9	—
Other	10	3	11	1
Total	100%	100%	100%	100%

We regularly review our actual asset allocation for each non-US plan and will periodically rebalance the investments in each plan to more accurately reflect the targeted allocation when considered appropriate. The CMRT trustee and investment committee do not maintain a specific target asset allocation in order to achieve their objectives, but instead they periodically change the asset mix of the CMRT based upon, among other things, advice they receive from third-party advisors and their expectations regarding potential returns for various investment alternatives and what asset mix will generate the greatest overall return.

Our assumed long-term rates of return on plan assets for 2010, 2011 and 2012 were as follows:

	2010	2011	2012
Germany	5.0%	5.0%	4.8%
Canada	6.0%	6.0%	5.8%
Norway	5.0%	4.8%	4.8%
U.S.	10.0%	10.0%	10.0%

We currently expect to use the same long-term rate of return on plan asset assumptions in 2013 as we used in 2012 for purposes of determining the 2013 defined benefit pension plan expense.

To the extent that a plan's particular pension benefit formula calculates the pension benefit in whole or in part based upon future compensation levels, the projected benefit obligations and the pension expense will be based in part upon expected increases in future compensation levels. For all of our plans for which the benefit formula is so calculated, we generally base the assumed expected increase in future compensation levels upon average long-term inflation rates for the applicable country.

In addition to the actuarial assumptions discussed above, the amount of recognized defined benefit pension expense and the amount of net pension asset and net pension liability will vary based upon relative changes in currency exchange rates.

A reduction in the assumed discount rate generally results in an actuarial loss, as the actuarially-determined present value of estimated future benefit payments will increase. Conversely, an increase in the assumed discount rate generally results in an actuarial gain. In addition, an actual return on plan assets for a given year that is greater than the assumed return on plan assets results in an actuarial gain, while an actual return on plan assets that is less than the assumed return results in an actuarial loss. Other actual outcomes that differ from previous assumptions, such as individuals living longer or shorter than assumed in mortality tables, which are also used to determine the actuarially-determined present value of estimated future benefit payments, changes in such mortality table themselves or plan amendments, will also result in actuarial losses or gains. These amounts are recognized in other comprehensive income. In addition, any actuarial gains generated in future periods would reduce the negative amortization effect of any cumulative unrecognized actuarial losses, while any actuarial losses generated in future periods would reduce the favorable amortization effect of any cumulative unrecognized actuarial gains.

During 2012, all of our defined benefit pension plans generated a combined net actuarial loss of approximately \$66.9 million. This actuarial loss resulted primarily from the general reduction in discount rates from December 31, 2011 to December 31, 2012, partially offset by an actual return on plan assets during 2012 in excess of the expected return.

Based on the actuarial assumptions described above and our current expectation for what actual average currency exchange rates will be during 2013, we expect our defined benefit pension expense will approximate \$28 million in 2013. In comparison, we expect to be required to contribute approximately \$26.9 million to such plans during 2013.

As noted above, defined benefit pension expense and the amounts recognized as accrued pension costs are based upon the actuarial assumptions discussed above. We believe all of the actuarial assumptions used are reasonable and appropriate. However, if we had lowered the assumed discount rate by 25 basis points for all plans as of December 31, 2012, our aggregate projected benefit obligations would have increased by approximately \$23.8 million at that date and our defined benefit pension expense would be expected to increase by approximately \$1.7 million during 2012. Similarly, if we lowered the assumed long-term rate of return on plan assets by 25 basis points for all of our plans, our defined benefit pension expense would be expected to increase by approximately \$.9 million during 2012.

OPEB plans

Certain of our subsidiaries in the U.S. and Canada currently provide certain health care and life insurance benefits for eligible retired employees. See Note 11 to the Consolidated Financial Statements. Under other postretirement employee benefits (OPEB) accounting, OPEB expense and accrued OPEB costs are based on certain actuarial assumptions, principally the assumed discount rate and the assumed rate of increases in future health care costs. We recognize the full unfunded status of our OPEB plans as a liability.

We recognized consolidated OPEB cost of approximately \$1.2 million in 2010, \$.3 million in 2011 and \$.6 million in 2012. Similar to defined benefit pension benefits, the amount of funding will differ from the expense recognized for financial reporting purposes and contributions to the plans to cover benefit payments aggregated \$.5 million in 2010 and \$.4 million in each of 2011 and 2012. Substantially all of our U.S. accrued OPEB cost relates to benefits being paid to current retirees and their dependents and no material amount of OPEB benefits are being earned by current U.S. employees. Some of our Canadian employees are earning OPEB benefits. Our expected OPEB benefit payments for 2013 are expected to be similar to those paid in 2012.

The discount rates we use for determining OPEB expense and the related OPEB obligations are based on current interest rates earned on high-quality bond yields in the applicable country where the benefits are being paid. In addition, we receive third-party advice about appropriate discount rates and these advisors may in some cases use their own market indices. We adjust these discount rates as of each valuation date to reflect then-current interest rates on such bonds. We use these discount rates to determine the actuarial present value of the OPEB obligations as of December 31 of that year. We also use these discount rates to determine the interest component of OPEB expense for the following year.

In estimating the health care cost trend rate, we consider our actual health care cost experience, future benefit structures, industry trends and advice from our third-party actuaries. During each of the past three years, we have assumed that the relative increase in health care costs will generally trend downward over the next several years, reflecting, among other things, assumed increases in efficiency in the health care system and industry-wide cost containment initiatives. For example, at December 31, 2012, the expected rate of increase in future health care costs ranges from 7.5% in 2013, declining to 5.0% in 2018 and thereafter.

Based on the actuarial assumptions described above and our current expectation for what actual average currency exchange rates will be during 2013, we expect our consolidated OPEB expense will approximate \$.7 million in 2013. In comparison, we expect to be required to make approximately \$.5 million of contributions to such plans during 2013.

We believe that all of the actuarial assumptions used are reasonable and appropriate. However, if we had lowered the assumed discount rate by 25 basis points for all plans as of December 31, 2012, our aggregate projected benefit obligations would have increased by approximately \$.7 million at that date and our OPEB cost would be expected to increase by approximately \$.1 million during 2012. If assumed a one percent change in assumed health care trend rates for all plans, our OPEB costs would be expected to increase by approximately \$.3 million during 2012.

Operations outside the United States

As discussed above, we have substantial operations located outside the United States for which the functional currency is not the U.S. dollar. As a result, the reported amount of our assets and liabilities related to our non-U.S. operations, and therefore our consolidated net assets, will fluctuate based upon changes in currency exchange rates. At December 31, 2012, we had substantial net assets denominated in the euro, Canadian dollar and Norwegian krone.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**General**

We are exposed to market risk from changes in interest rates, currency exchange rates and raw materials prices.

Interest rates

We are exposed to market risk from changes in interest rates, primarily related to indebtedness. At December 31, 2012, the majority of our aggregate indebtedness comprised variable-rate instruments. The following table presents principal amounts and weighted average interest rates for our aggregate outstanding indebtedness at December 31, 2012. Information shown below for our non-U.S. dollar denominated indebtedness is presented in its U.S. dollar equivalent at December 31, 2012 using an exchange rate of U.S. \$1.3174 per euro. See Note 9 to our Consolidated Financial Statements.

<u>Indebtedness</u>	<u>Amount</u>		<u>Interest Rate</u>	<u>Maturity date</u>
	<u>Carrying value</u>	<u>Fair value</u>		
(In millions)				
December 31, 2012:				
Variable rate indebtedness:				
Term loan—dollar denominated	\$ 384.5	\$396.8	5.75%	2018
European credit facility—euro denominated	<u>13.2</u>	<u>13.2</u>	2.01%	2017
	<u>\$ 397.7</u>	<u>\$410.0</u>		
December 31, 2011:				
Fixed-rate indebtedness—euro denominated:				
Senior Secured Notes	<u>\$ 360.6</u>	<u>\$362.6</u>	6.5%	2013

Currency exchange rates

We are exposed to market risk arising from changes in currency exchange rates as a result of manufacturing and selling our products worldwide. Earnings are primarily affected by fluctuations in the value of the U.S. dollar relative to the euro, the Canadian dollar, the Norwegian krone and the United Kingdom pound sterling.

As described above, at December 31, 2012, we had the equivalent of \$13.2 million of outstanding euro-denominated indebtedness. The potential increase in the U.S. dollar equivalent of the principal amount outstanding resulting from a hypothetical 10% adverse change in exchange rates at such date would be approximately \$1.3 million.

Certain of our sales generated by our non-U.S. operations are denominated in U.S. dollars. We periodically use currency forward contracts to manage a very nominal portion of currency exchange rate risk associated with trade receivables denominated in a currency other than the holder's functional currency or similar exchange rate risk associated with future sales. We have not entered into these contracts for trading or speculative purposes in the past, nor do we currently anticipate entering into such contracts for trading or speculative purposes in the future.

At December 31, 2012, we held currency forward contracts to exchange an aggregate of \$20.0 million for an equivalent value of Norwegian Kroner at exchange rates ranging from Kroner 5.57 to Kroner 5.60 per U.S. dollar. These contracts with DnB Nor Bank ASA mature from January 2013 through May 2013 at a rate of \$5.0 million per month, subject to early redemption provisions at our option.

The estimated fair value of such currency forward contracts at December 31, 2012 was a \$1.8 million net asset, which amount is recognized as part of accounts and other receivables in our Consolidated Balance Sheet and a corresponding \$1.8 million currency transaction gain in our Consolidated Statement of Operations. To the extent we held such contracts during 2010, 2011 and 2012, we did not use hedge accounting for any of our contracts.

See Note 16 to our Consolidated Financial Statements.

Marketable security prices

We are exposed to market risk due to changes in prices of the marketable securities which we own. The fair value of securities which includes investments in mutual funds and in publicly-traded shares of related parties was \$119.3 million and \$21.6 million, respectively, at December 31, 2011 and December 31, 2012. The potential change in the aggregate fair value of these investments, assuming a 10% change in prices, would be approximately \$12 million and \$2 million, respectively, at December 31, 2011 and December 31, 2012.

Raw materials

We are exposed to market risk from changes in commodity prices relating to our raw materials. As discussed in Item 1 we generally enter into long-term supply agreements for certain of our raw material requirements including TiO₂ feedstock. Many of our raw material contracts contain fixed quantities we are required to purchase, or specify a range of quantities within which we are required to purchase. Raw material pricing under these agreements is generally negotiated quarterly or semi-annually depending upon the suppliers. For certain raw material requirements we do not have long-term supply agreements either because we have assessed the risk of the unavailability of those raw materials and/or the risk of a significant change in the cost of those raw materials to be low, or because long-term supply agreements for those raw materials are generally not available.

Other

We believe there may be a certain amount of incompleteness in the sensitivity analyses presented above. For example, the hypothetical effect of changes in exchange rates discussed above ignores the potential effect on other variables which affect our results of operations and cash flows, such as demand for our products, sales volumes and selling prices and operating expenses. Accordingly, the amounts presented above are not necessarily an accurate reflection of the potential losses we would incur assuming the hypothetical changes in exchange rates were actually to occur.

The above discussion and estimated sensitivity analysis amounts include forward-looking statements of market risk which assume hypothetical changes in currency exchange rates. Actual future market conditions will likely differ materially from such assumptions. Accordingly, such forward-looking statements should not be considered to be projections by us of future events, gains or losses.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information called for by this Item is contained in a separate section of this Annual Report. See “Index of Financial Statements” (page F-1).

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None

ITEM 9A. CONTROLS AND PROCEDURES**Evaluation of Disclosure Controls and Procedures**

We maintain a system of disclosure controls and procedures. The term “disclosure controls and procedures,” as defined by Exchange Act Rule 13a-15(e), means controls and other procedures that are designed to ensure that information required to be disclosed in the reports that we file or submit to the SEC under the Securities Exchange Act of 1934, as amended (the Act), is recorded, processed, summarized and reported, within the time periods specified in the SEC’s rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information we are required to disclose in the reports we file or submit to the SEC under the Act is accumulated and communicated to our management, including our principal executive officer and our principal financial officer, or persons performing similar functions, as appropriate to allow timely decisions to be made regarding required disclosure. Each of Steven L. Watson, our Chief Executive Officer and Gregory M. Swalwell, our Executive Vice President and Chief Financial Officer, have evaluated the design and effectiveness of our disclosure controls and procedures as of December 31, 2012. Based upon their evaluation, these executive officers have concluded that our disclosure controls and procedures are effective as of December 31, 2012.

Scope of Management Report on Internal Control Over Financial Reporting

We also maintain internal control over financial reporting. The term “internal control over financial reporting,” as defined by Exchange Act Rule 13a-15(f) means a process designed by, or under the supervision of, our principal executive and principal financial officers, or persons performing similar functions, and effected by the board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP, and includes those policies and procedures that:

- Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of our assets,
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, and that receipts and expenditures are being made only in accordance with authorizations of management and directors and
- Provide reasonable assurance regarding prevention or timely detection of an unauthorized acquisition, use or disposition of assets that could have a material effect on our Consolidated Financial Statements.

Section 404 of the Sarbanes-Oxley Act of 2002 requires us to report on internal control over financial reporting in this Annual Report on Form 10-K for the year ended December 31, 2012. Our independent registered public accounting firm is also required to annually attest to our internal control over financial reporting.

As permitted by the SEC, our assessment of internal control over financial reporting excludes (i) internal control over financial reporting of equity method investees and (ii) internal control over the preparation of our financial statement schedules required by Article 12 of Regulation S-X. However, our assessment of internal control over financial reporting with respect to equity method investees did include controls over the recording of amounts related to our investment that are recorded in the consolidated financial statements, including controls over the selection of accounting methods for our investments, the recognition of equity method earnings and losses and the determination, valuation and recording of our investment account balances.

Changes in Internal Control Over Financial Reporting

There has been no change to our internal control over financial reporting during the quarter ended December 31, 2012 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Management’s Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Our evaluation of the effectiveness of internal control over financial reporting is based upon the criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (commonly referred to as the “COSO” framework). Based on our evaluation under that framework, we have concluded that our internal control over financial reporting was effective as of December 31, 2012.

PricewaterhouseCoopers LLP, the independent registered public accounting firm that has audited our consolidated financial statements included in this Annual Report, has audited the effectiveness of our internal control over financial reporting as of December 31, 2012, as stated in their report, which is included in this Annual Report on Form 10-K.

Certifications

Our chief executive officer is required to annually file a certification with the New York Stock Exchange, or NYSE, certifying our compliance with the corporate governance listing standards of the NYSE. During 2012, our chief executive officer filed such annual certification with the NYSE. The 2012 certification was unqualified.

Our chief executive officer and chief financial officer are also required to, among other things, file quarterly certifications with the SEC regarding the quality of our public disclosures, as required by Section 302 of the Sarbanes-Oxley Act of 2002. The certifications for the quarter ended December 31, 2012 have been filed as Exhibits 31.1 and 31.2 to this Annual Report on Form 10-K.

ITEM 9B. OTHER INFORMATION

Not applicable

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this Item is incorporated by reference to our 2013 definitive proxy statement to be filed with the SEC pursuant to Regulation 14A within 120 days after the end of the fiscal year covered by this report.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item is incorporated by reference to our 2013 proxy statement.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this Item is incorporated by reference to our 2013 proxy statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this Item is incorporated by reference to our 2013 proxy statement. See also Note 14 to our Consolidated Financial Statements.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by the Item is incorporated by reference to our 2013 proxy statement.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) and (c) Financial Statements and Schedule

The Registrant

The consolidated financial statements and schedule of the Registrant listed on the accompanying Index of Financial Statements and Schedules (see page F-1) are filed as part of this Annual Report.

(b) Exhibits

Included as exhibits are the items listed in the Exhibit Index. We will furnish a copy of any of the exhibits listed below upon payment of \$4.00 per exhibit to cover our costs to furnish the exhibits. Pursuant to Item 601(b)(4)(iii) of Regulation S-K, any instrument defining the rights of holders of long-term debt issues and other agreements related to indebtedness which do not exceed 10% of consolidated total assets as of December 31, 2010 will be furnished to the Commission upon request.

We will also furnish, without charge, a copy of our amended and restated Code of Business Conduct and Ethics, as adopted by the board of directors on February 9, 2012, upon request. Such requests should be directed to the attention of the Corporate Secretary at our corporate offices located at 5430 LBJ Freeway, Suite 1700, Dallas, TX 75240.

<u>Item No.</u>	<u>Exhibit Index</u>
3.1+	Restated First Amended and Restated Certificate of Incorporation of Kronos Worldwide, Inc., as amended on May 12, 2011 – incorporated by reference to Exhibit 3.1 of the Registrant’s Current Report on Form 8-K (File No. 001-31763) filed on May 12, 2011.
3.2	Amended and Restated Bylaws of Kronos Worldwide, Inc. as of October 25, 2007 – incorporated by reference to Exhibit 3.1 of the Registrant’s Current Report on Form 8-K (File No. 001-31763) filed with the U.S. Securities and Exchange Commission on October 31, 2007.
4.1	Satisfaction and Discharge of Indenture, Release, Assignment and Transfer, dated as of June 14, 2012, issued by The Bank of New York Mellon, formerly known as The Bank of New York, a New York banking corporation—incorporated by reference to Exhibit 10.4 to the Current Report on Form 8-K (File No. 001-31763) dated June 13, 2012 and filed by the registrant on June 18, 2012.
10.1**	Amended and Restated Tax Agreement between Valhi, Inc. and Kronos Worldwide, Inc. dated as of December 1, 2012.
10.2	Intercorporate Services Agreement by and between Contran Corporation and Kronos Worldwide, Inc., effective as of January 1, 2004 – incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q of the Registrant (File No. 001-31763) for the quarter ended March 31, 2004.

- 10.3* Kronos Worldwide, Inc. 2012 Director Stock Plan – incorporated by reference to Exhibit 4.4 of the Registration statement on Form S-8 of the Registrant (File No. 333-113425).
- 10.4 €80,000,000 Facility Agreement, dated June 25, 2002, among Kronos Titan GmbH & Co. OHG, Kronos Europe S.A./N.V., Kronos Titan A/S and Titania A/S, as borrowers, Kronos Titan GmbH & Co. OHG, Kronos Europe S.A./N.V. and Kronos Norge AS, as guarantors, Kronos Denmark ApS, as security provider, Deutsche Bank AG, as mandated lead arranger, Deutsche Bank Luxembourg S.A., as agent and security agent, and KBC Bank NV, as fronting bank, and the financial institutions listed in Schedule 1 thereto, as lenders—incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q of NL Industries, Inc. (File No. 001-00640) for the quarter ended June 30, 2002.
- 10.5 First Amendment Agreement, dated September 3, 2004, Relating to a Facility Agreement dated June 25, 2002 among Kronos Titan GmbH, Kronos Europe S.A./N.V., Kronos Titan AS and Titania A/S, as borrowers, Kronos Titan GmbH, Kronos Europe S.A./N.V. and Kronos Norge AS, as guarantors, Kronos Denmark ApS, as security provider, with Deutsche Bank Luxembourg S.A., acting as agent – incorporated by reference to Exhibit 10.1 of the Current Report on Form 8-K of the Registrant dated November 17, 2004 (File No. 333-119639).
- 10.6 Second Amendment Agreement Relating to a Facility Agreement dated June 25, 2002 executed as of June 14, 2005 by and among Deutsche Bank AG, as mandated lead arranger, Deutsche Bank Luxembourg S.A. as agent, the participating lenders, Kronos Titan GmbH, Kronos Europe S.A./N.V, Kronos Titan AS, Kronos Norge AS, Titania AS and Kronos Denmark ApS – incorporated by reference to Exhibit 10.3 to the Annual Report on Form 10-K of Kronos International, Inc.(File No. 333-100047) for the year ended December 31, 2009.
- 10.7 Third Amendment Agreement Relating to a Facility Agreement dated June 25, 2002 executed as of May 26, 2008 by and among Deutsche Bank AG, as mandated lead arranger, Deutsche Bank Luxembourg S.A., as agent, the participating lenders, Kronos Titan GmbH, Kronos Europe S.A./N.V, Kronos Titan AS, Kronos Norge AS, Titania AS and Kronos Denmark ApS – incorporated by reference to Exhibit 10.4 to the Annual Report on Form 10-K of Kronos International, Inc. (File No. 333-100047) for the year ended December 31, 2009.
- 10.8 Fourth Amendment Agreement Relating to a Facility Agreement dated June 25, 2002 executed as of September 15, 2009 by and among Deutsche Bank AG, as mandated lead arranger, Deutsche Bank Luxembourg S.A., as agent, the participating lenders, Kronos Titan GmbH, Kronos Europe S.A./N.V., Kronos Titan AS, Kronos Norge AS, Titania AS and Kronos Denmark ApS – incorporated by reference to Exhibit 10.5 to the Annual Report on Form 10-K of Kronos International, Inc. (File No. 333-1000947) for the year ended December 31, 2009.
- 10.9 Fifth Amendment Agreement Relating to a Facility Agreement dated June 25, 2002 executed as of October 28, 2010 by and among

- Deutsche Bank AG, as mandated lead arranger, Deutsche Bank Luxembourg S.A., as agent, the participating lenders, Kronos Titan GmbH, Kronos Europe S.A./N.V., Kronos Titan AS, Kronos Norge AS, Titania AS and Kronos Denmark ApS – incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K of Kronos International, Inc. dated October 28, 2010 (File No. 333-100047).
- 10.10 Sixth Amendment Agreement Relating to a Facility Agreement dated June 25, 2002 executed as of September 27, 2012 by and among Deutsche Bank AG, as mandated lead arranger, Deutsche Bank Luxembourg S.A., as agent, the participating lenders, Kronos Titan GmbH, Kronos Europe S.A./N.V., Kronos Titan AS, Titania AS, Kronos Norge AS, and Kronos Denmark ApS – incorporated by reference to Exhibit 10.1 to our Current Report on Form 8-K (File No. 001-31763) filed with the U.S. Securities and Exchange Commission on October 3, 2012.
- 10.11 Credit Agreement, dated June 13, 2012, by and among the registrant Kronos Worldwide, Inc. and Wells Fargo Bank, National Association - incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K (File No. 001-31763) dated June 13, 2012 and filed by the registrant on June 18, 2012.
- 10.12 Guaranty and Security Agreement, dated June 13, 2012, among Kronos Worldwide, Inc., Kronos Louisiana, Inc., Kronos (US), Inc., Kronos International, Inc. and Wells Fargo Bank, National Association—incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K (File No. 001-31763) dated June 13, 2012 and filed by the registrant on June 18, 2012.
- 10.13 Intercreditor Agreement dated as of June 18, 2012, by and between Wells Fargo Capital Finance and Wells Fargo Bank, National Association, and acknowledged by Kronos Worldwide, Inc., Kronos Louisiana, Inc. and Kronos (US), Inc.—incorporated by reference to Exhibit 10.3 to the Current Report on Form 8-K/A dated June 13, 2012 (File No. 001-31763) and filed by the registrant on June 19, 2012.
- 10.14 Lease Contract, dated June 21, 1952, between Farbenfabriken Bayer Aktiengesellschaft and Titangesellschaft mit beschränkter Haftung (German language version and English translation thereof)—incorporated by reference to Exhibit 10.14 to the Annual Report on Form 10-K (File No. 001-00640) of NL Industries, Inc. for the year ended December 31, 1985.
- 10.15 Master Technology Exchange Agreement, dated as of October 18, 1993, among Kronos Worldwide, Inc. (f/k/a Kronos, Inc.), Kronos Louisiana, Inc., Kronos International, Inc., Tioxide Group Limited and Tioxide Group Services Limited—incorporated by reference to Exhibit 10.8 to the Quarterly Report on Form 10-Q (File No. 001-00640) of NL Industries, Inc. for the quarter ended September 30, 1993.
- 10.16 Form of Assignment and Assumption Agreement, dated as of January 1, 1999, between Kronos Inc. (formerly known as Kronos (USA), Inc.) and Kronos International, Inc.—incorporated by reference to Exhibit 10.9 to Kronos International, Inc.’s Registration Statement on Form S-4 (File No. 333-100047).

- 10.17 Form of Cross License Agreement, effective as of January 1, 1999, between Kronos Inc. (formerly known as Kronos (USA), Inc.) and Kronos International, Inc.—incorporated by reference to Exhibit to Kronos International, Inc.’s Registration Statement on Form S-4 (File No. 333-100047).
- 10.18 Formation Agreement dated as of October 18, 1993 among Tioxide Americas Inc., Kronos Louisiana, Inc. and Louisiana Pigment Company, L.P.—incorporated by reference to Exhibit 10.2 to NL Industries, Inc.’s Quarterly Report on Form 10-Q (File No. 001-00640) for the quarter ended September 30, 1993.
- 10.19 Joint Venture Agreement dated as of October 18, 1993 between Tioxide Americas Inc. and Kronos Louisiana, Inc.—incorporated by reference to Exhibit 10.3 to NL Industries, Inc.’s Quarterly Report on Form 10-Q (File No. 001-00640) for the quarter ended September 30, 1993.
- 10.20 Kronos Offtake Agreement dated as of October 18, 1993 between Kronos Louisiana, Inc. and Louisiana Pigment Company, L.P. - incorporated by reference to Exhibit 10.4 to NL Industries, Inc.’s Quarterly Report on Form 10-Q (File No. 001-00640) for the quarter ended September 30, 1993.
- 10.21 Amendment No. 1 to Kronos Offtake Agreement dated as of December 20, 1995 between Kronos Louisiana, Inc. and Louisiana Pigment Company, L.P.—incorporated by reference to Exhibit 10.22 to NL Industries, Inc.’s Annual Report on Form 10-K (File No. 001-00640) for the year ended December 31, 1995.
- 10.22 Tioxide Americas Offtake Agreement dated as of October 18, 1993 between Tioxide Americas Inc. and Louisiana Pigment Company, L.P. – incorporated by reference to Exhibit 10.5 to NL Industries, Inc.’s Quarterly Report on Form 10-Q (File No. 001-00640) for the quarter ended September 30, 1993.
- 10.23 Amendment No. 1 to Tioxide Americas Offtake Agreement dated as of December 20, 1995 between Tioxide Americas Inc. and Louisiana Pigment Company, L.P. – incorporated by reference to Exhibit 10.24 to NL Industries, Inc.’s Annual Report on Form 10-K (File No. 001- 00640) for the year ended December 31, 1995.
- 10.24 Parents’ Undertaking dated as of October 18, 1993 between ICI American Holdings Inc. and Kronos Worldwide, Inc. (f/k/a Kronos, Inc.) – incorporated by reference to Exhibit 10.9 to NL Industries, Inc.’s Quarterly Report on Form 10-Q (File No. 001-00640) for the quarter ended September 30, 1993.
- 10.25 Allocation Agreement dated as of October 18, 1993 between Tioxide Americas Inc., ICI American Holdings, Inc., Kronos Worldwide, Inc. (f/k/a Kronos, Inc.) and Kronos Louisiana, Inc. – incorporated by reference to Exhibit 10.10 to NL Industries, Inc.’s Quarterly Report on Form 10-Q (File No. 001-00640) for the quarter ended September 30, 1993.

10.26	Insurance sharing agreement dated October 30, 2003 by and among CompX International Inc., Contran Corporation, Keystone Consolidated Industries, Inc., Titanium Metals Corp., Valhi, Inc., NL Industries, Inc. and Kronos Worldwide, Inc. – incorporated by reference to Exhibit 10.48 to NL Industries, Inc.’s Annual Report on Form 10-K (File No. 001-00640) for the year ended December 31, 2003.
10.27**	Fifth Amended and Restated Unsecured Revolving Demand Promissory Note dated December 31, 2012 in the original principal amount of \$100.0 million executed by Valhi, Inc. and payable to the order of Kronos Worldwide, Inc.
10.28	Unsecured Term Loan Promissory Note dated February 15, 2013 in the original principal amount of \$290 million executed by Kronos Worldwide, Inc. and payable to the order of Contran Corporation – incorporated by reference to Exhibit 10.2 of the Current Report on Form 8-K (File No. 001-31763) of the Registrant dated February 15, 2013.
21.1**	Subsidiaries.
23.1**	Consent of PricewaterhouseCoopers LLP.
31.1**	Certification.
31.2**	Certification.
32.1**	Certification.
101.INS**	XBRL Instance Document
101.SCH**	XBRL Taxonomy Extension Schema
101.CAL**	XBRL Taxonomy Extension Calculation Linkbase
101.DEF**	XBRL Taxonomy Extension Definition Linkbase
101.LAB**	XBRL Taxonomy Extension Label Linkbase
101.PRE**	XBRL Taxonomy Extension Presentation Linkbase

+ Exhibit 3.1 is restated for the purposes of the disclosure requirements of Item 601 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission and does not represent a restated certificate of incorporation that has been filed with the Delaware Secretary of State.

* Management contract, compensatory plan or arrangement

** Filed herewith

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Kronos Worldwide, Inc.
(Registrant)

By: /s/ Steven L. Watson
Steven L. Watson
March 12, 2013
(Vice Chairman and Chief Executive Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated:

/s/ Harold C. Simmons
Harold C. Simmons, March 12, 2013
(Chairman of the Board)

/s/ George E. Poston
George E. Poston, March 12, 2013 (Director)

/s/ C. H. Moore, Jr.
C. H. Moore, Jr., March 12, 2013 (Director)

/s/ C. Kern Wildenthal
C. Kern Wildenthal, March 12, 2013
(Director)

/s/ Tim C. Hafer
Tim C. Hafer, March 12, 2013
(Vice President, Controller,
Principal Accounting Officer)

/s/ Steven L. Watson
Steven L. Watson, March 12, 2013
(Vice Chairman and Chief Executive Officer)

/s/ Keith R. Coogan
Keith R. Coogan, March 12, 2013 (Director)

/s/ R. Gerald Turner
R. Gerald Turner, March 12, 2013
(Director)

/s/ Gregory M. Swalwell
Gregory M. Swalwell, March 12, 2013
(Executive Vice President and Chief
Financial Officer, Principal
Financial Officer)

KRONOS WORLDWIDE, INC.

Annual Report on Form 10-K

Items 8, 15(a) and 15(c)

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All financial statement schedules have been omitted either because they are not applicable or required, or the information that would be required to be included is disclosed in the Notes to the Consolidated Financial Statements.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors of Kronos Worldwide, Inc.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, of comprehensive income, of stockholders' equity and of cash flows present fairly, in all material respects, the financial position of Kronos Worldwide, Inc. and its subsidiaries at December 31, 2011 and 2012 and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2012 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2012, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on these financial statements and on the Company's internal control over financial reporting based on our audits (which were integrated audits in 2011 and 2012). We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP

Dallas, Texas
March 12, 2013

KRONOS WORLDWIDE, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

(In millions, except per share data)

	ASSETS	December 31,	
		2011	2012
Current assets:			
Cash and cash equivalents		\$ 82.5	\$ 282.7
Restricted cash		1.9	2.7
Marketable securities		20.9	—
Accounts and other receivables		270.3	285.8
Receivable from affiliate		29.6	—
Inventories, net		444.2	638.3
Prepaid expenses		5.7	9.8
Deferred income taxes		9.9	4.1
Total current assets		<u>865.0</u>	<u>1,223.4</u>
Other assets:			
Investment in TiO ₂ manufacturing joint venture		89.2	109.9
Note receivable from Valhi		136.1	—
Marketable equity securities		98.4	21.6
Deferred income taxes		133.0	120.5
Other		16.7	29.1
Total other assets		<u>473.4</u>	<u>281.1</u>
Property and equipment:			
Land		43.2	45.2
Buildings		226.6	238.9
Equipment		1,018.0	1,082.9
Mining properties		114.9	131.3
Construction in progress		27.0	37.3
		1,429.7	1,535.6
Less accumulated depreciation and amortization		944.2	1,013.1
Net property and equipment		<u>485.5</u>	<u>522.5</u>
Total assets		<u>\$1,823.9</u>	<u>\$2,027.0</u>

KRONOS WORLDWIDE, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS (CONTINUED)
(In millions, except per share data)

LIABILITIES AND STOCKHOLDERS' EQUITY	December 31,	
	2011	2012
Current liabilities:		
Current maturities of long-term debt	\$ 2.2	\$ 21.2
Accounts payable and accrued liabilities	285.8	231.6
Payables to affiliates	8.6	41.6
Income taxes	25.2	23.1
Deferred income taxes	6.2	10.9
Total current liabilities	328.0	328.4
Noncurrent liabilities:		
Long-term debt	362.9	378.9
Deferred income taxes	41.0	24.0
Accrued pension cost	127.6	189.2
Accrued postretirement benefits cost	12.7	14.1
Other	27.4	30.3
Total noncurrent liabilities	571.6	636.5
Stockholders' equity:		
Common stock, \$.01 par value; 240.0 shares authorized; 115.9 shares issued	1.2	1.2
Additional paid-in capital	1,399.0	1,399.1
Retained deficit	(290.1)	(141.1)
Accumulated other comprehensive loss	(185.8)	(197.1)
Total stockholders' equity	924.3	1,062.1
Total liabilities and stockholders' equity	\$1,823.9	\$2,027.0

Commitments and contingencies (Notes 10 and 15)

See accompanying notes to consolidated financial statements.

KRONOS WORLDWIDE, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF INCOME

(In millions, except per share data)

	<u>Years ended December 31,</u>		
	<u>2010</u>	<u>2011</u>	<u>2012</u>
Net sales	\$1,449.7	\$1,943.3	\$1,976.3
Cost of sales	1,104.4	1,194.9	1,415.9
Gross margin	345.3	748.4	560.4
Selling, general and administrative expense	166.7	195.0	183.4
Other operating income (expense):			
Currency transaction gains (losses), net	7.8	3.0	(1.0)
Disposition of property and equipment	(1.8)	(1.0)	(1.0)
Other income (expense), net	1.0	.1	(1.5)
Corporate expense	(7.2)	(9.0)	(13.9)
Income from operations	178.4	546.5	359.6
Other income (expense):			
Interest and dividend income	.7	7.0	9.0
Marketable securities transaction losses, net	—	(.6)	(3.9)
Loss on prepayment of debt, net	—	(3.1)	(7.2)
Interest expense	(38.8)	(32.7)	(26.7)
Income before income taxes	140.3	517.1	330.8
Provision for income taxes	9.7	196.1	112.3
Net income	<u>\$ 130.6</u>	<u>\$ 321.0</u>	<u>\$ 218.5</u>
Net income per basic and diluted share	<u>\$ 1.29</u>	<u>\$ 2.77</u>	<u>\$ 1.89</u>
Weighted average shares used in the calculation of net income per share	<u>100.8</u>	<u>115.9</u>	<u>115.9</u>

See accompanying notes to consolidated financial statements.

KRONOS WORLDWIDE, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In millions)

	Years ended December 31,		
	2010	2011	2012
Net income	\$ 130.6	\$ 321.0	\$ 218.5
Other comprehensive income (loss), net of tax:			
Marketable securities	—	5.1	(.9)
Currency translation	.1	(26.7)	28.3
Defined benefit pension plans	(8.0)	(10.2)	(38.1)
Other postretirement benefit plans	2.9	(1.7)	(.6)
Total other comprehensive loss, net	(5.0)	(33.5)	(11.3)
Comprehensive income	<u>\$ 125.6</u>	<u>\$ 287.5</u>	<u>\$ 207.2</u>

See accompanying notes to consolidated financial statements.

KRONOS WORLDWIDE, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
Years ended December 31, 2010, 2011 and 2012

(In millions)

	Common stock	Additional paid-in capital	Retained earnings (deficit)	Accumulated other comprehensive loss	Total
Balance at December 31, 2009	\$ 1.1	\$1,061.3	\$(602.6)	\$ (147.3)	\$ 312.5
Net income	—	—	130.6	—	130.6
Other comprehensive loss, net of tax	—	—	—	(5.0)	(5.0)
Issuance of common stock	.1	337.5	—	—	337.6
Dividends paid—\$.125 per share	—	—	(14.5)	—	(14.5)
Balance at December 31, 2010	1.2	1,398.8	(486.5)	(152.3)	761.2
Net income	—	—	321.0	—	321.0
Other comprehensive loss, net of tax	—	—	—	(33.5)	(33.5)
Issuance of common stock	—	.2	—	—	.2
Dividends paid—\$1.075 per share	—	—	(124.6)	—	(124.6)
Balance at December 31, 2011	1.2	1,399.0	(290.1)	(185.8)	924.3
Net income	—	—	218.5	—	218.5
Other comprehensive loss, net of tax	—	—	—	(11.3)	(11.3)
Issuance of common stock	—	.1	—	—	.1
Dividends paid—\$.60 per share	—	—	(69.5)	—	(69.5)
Balance at December 31, 2012	<u>\$ 1.2</u>	<u>\$1,399.1</u>	<u>\$(141.1)</u>	<u>\$ (197.1)</u>	<u>\$1,062.1</u>

See accompanying notes to consolidated financial statements.

KRONOS WORLDWIDE, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In millions)

	Years ended December 31,		
	2010	2011	2012
Cash flows from operating activities:			
Net income	\$ 130.6	\$ 321.0	\$ 218.5
Depreciation and amortization	44.7	47.5	47.8
Deferred income taxes	(23.8)	63.8	22.6
Loss on prepayment of debt, net	—	3.1	7.2
Call premium paid	—	(2.5)	(6.2)
Marketable security transaction losses, net	—	.6	3.9
Benefit plan expense greater (less) than cash funding:			
Defined benefit pension plans	(2.0)	.7	(3.5)
Other postretirement benefit plans	.7	(.2)	.2
Distributions from (contributions to) TiO ₂ manufacturing joint venture, net	2.4	3.8	(20.7)
Other, net	5.4	6.7	.5
Change in assets and liabilities:			
Accounts and other receivables	(52.4)	(48.2)	—
Inventories	7.1	(183.8)	(184.8)
Prepaid expenses	2.7	.3	(3.7)
Accounts payable and accrued liabilities	(9.0)	94.8	(56.2)
Income taxes	7.1	19.4	(18.5)
Accounts with affiliates	(.7)	(29.8)	67.2
Other noncurrent assets	(.4)	(3.2)	(11.4)
Other noncurrent liabilities	13.6	1.6	14.0
Net cash provided by operating activities	<u>126.0</u>	<u>295.6</u>	<u>76.9</u>
Cash flows from investing activities:			
Capital expenditures	(37.7)	(68.6)	(74.8)
Loan to Valhi:			
Loans	(114.8)	(214.7)	(178.7)
Collections	52.9	140.5	314.8
Proceeds from sale of marketable securities:			
TIMET common stock	—	—	70.0
Mutual funds	—	251.0	21.1
Purchase of marketable securities:			
TIMET common stock	(43.5)	(30.4)	—
Valhi common stock	(2.5)	(12.8)	—
Mutual funds	(.1)	(272.8)	—
Change in restricted cash	(1)	(5.2)	(2.6)
Other, net	—	(5.1)	—
Net cash provided by (used in) investing activities	<u>(145.8)</u>	<u>(218.1)</u>	<u>149.8</u>

KRONOS WORLDWIDE, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)
(In millions)

	Years ended December 31,		
	2010	2011	2012
Cash flows from financing activities:			
Indebtedness:			
Borrowings	229.0	113.3	572.4
Principal payments	(256.2)	(288.1)	(523.8)
Deferred financing fees	(.8)	—	(7.1)
Issuance of common stock	337.6	—	—
Dividends paid	(14.5)	(124.6)	(69.5)
Other, net	—	(.2)	(.1)
Net cash provided by (used in) financing activities	<u>295.1</u>	<u>(299.6)</u>	<u>(28.1)</u>
Cash and cash equivalents—net change from:			
Operating, investing and financing activities	\$ 275.3	\$(222.1)	\$ 198.6
Effect of exchange rate changes on cash	(1.7)	(.1)	1.6
Net change for the year	<u>273.6</u>	<u>(222.2)</u>	<u>200.2</u>
Balance at beginning of year	31.1	304.7	82.5
Balance at end of year	<u>\$ 304.7</u>	<u>\$ 82.5</u>	<u>\$ 282.7</u>
Supplemental disclosures – Cash paid for:			
Interest (including call premium), net of amounts capitalized	\$ 36.3	\$ 35.3	\$ 35.6
Income taxes	24.0	104.7	94.3
Accrual for capital expenditures	9.6	16.7	12.2

See accompanying notes to consolidated financial statements.

KRONOS WORLDWIDE, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 2012

Note 1—Summary of significant accounting policies:

Organization and basis of presentation—At December 31, 2012, (i) Valhi, Inc. (NYSE: VHI) held approximately 50% of our outstanding common stock (ii) NL Industries, Inc. (NYSE: NL) held approximately 30% of our common stock, (iii) Valhi owned approximately 83% of NL's outstanding common stock and (iv) Contran Corporation and its subsidiaries held approximately 93% of Valhi's outstanding common stock. Substantially all of Contran's outstanding voting stock is held by trusts established for the benefit of certain children and grandchildren of Harold C. Simmons (for which Mr. Simmons is the sole trustee), or is held by Mr. Simmons or other persons or entities related to Mr. Simmons. Consequently, Mr. Simmons may be deemed to control Contran, Valhi and us.

Unless otherwise indicated, references in this report to “we,” “us” or “our” refers to Kronos Worldwide, Inc. and its subsidiaries, taken as a whole.

Management's estimates—In preparing our financial statements in conformity with accounting principles generally accepted in the United States of America (GAAP) we are required to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amount of revenues and expenses during the reporting period. Actual results may differ significantly from previously-estimated amounts under different assumptions or conditions.

Principles of consolidation—The consolidated financial statements include our accounts and those of our majority-owned subsidiaries. We have eliminated all material intercompany accounts and balances.

Translation of currencies—We translate the assets and liabilities of our subsidiaries whose functional currency is other than the U.S. dollar at year-end exchange rates, while we translate our revenues and expenses at average exchange rates prevailing during the year. We accumulate the resulting translation adjustments in stockholders' equity as part of accumulated other comprehensive income (loss), net of related deferred income taxes. We recognize currency transaction gains and losses in income currently.

Derivatives and hedging activities—We recognize derivatives as either assets or liabilities measured at fair value. We recognize the effect of changes in the fair value of derivatives either in net income or other comprehensive income (loss), depending on the intended use of the derivative.

Cash and cash equivalents—We classify bank time deposits and U.S. Treasury securities purchased under short-term agreements to resell with original maturities of three months or less as cash equivalents.

Restricted cash and cash equivalents – We classify cash and cash equivalents that have been segregated or are otherwise limited in use as restricted. To the extent the restricted amount relates to a recognized liability, we classify such restricted amount as either a current or noncurrent asset to correspond with the classification of the liability. To the extent the restricted amount does not relate to a recognized liability, we classify restricted cash as a current asset. See Note 7.

Marketable securities and securities transactions—We carry marketable debt and equity securities at fair value. Accounting Standard Codification (ASC) Topic 820, *Fair Value Measurements and Disclosures*, establishes a consistent framework for measuring fair value and (with certain exceptions) this framework is generally applied to all financial statement items required to be measured at fair value. The standard requires fair value measurements to be classified and disclosed in one of the following three categories:

- Level 1 – Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities;
- Level 2 – Quoted prices in markets that are not active, or inputs which are observable, either directly or indirectly, for substantially the full term of the assets or liability; and
- Level 3 – Prices or valuation techniques that require inputs that are both significant to the fair value measurement and unobservable.

We classify all of our marketable securities as available-for-sale and unrealized gains or losses on these securities are recognized through other comprehensive income, net of deferred income taxes, except for any decline in value we conclude is other than temporary, which is accounted for as a realized loss as a component of net income. We base realized gains and losses upon the specific identification of the securities sold.

We evaluate our investments whenever events or conditions occur to indicate that the fair value of such investments has declined below their carrying amounts. If the carrying amount for an investment declines below its historical cost basis, we evaluate all available positive and negative evidence including, but not limited to, the extent and duration of the impairment, business prospects for the investee and our intent and ability to hold the investment for a reasonable period of time sufficient for the recovery of fair value. If we determine the decline in fair value is other than temporary, the carrying amount of the investment is written down to fair value.

See Notes 6, 11 and 16.

Accounts receivable—We provide an allowance for doubtful accounts for known and estimated potential losses arising from sales to customers based on a periodic review of these accounts.

Inventories and cost of sales—We state inventories at the lower of cost or market, net of allowance for obsolete and slow-moving inventories. We generally base inventory costs for all inventory categories on average cost that approximates the first-in, first-out method. Inventories include the costs for raw materials, the cost to manufacture the raw materials into finished goods and overhead. Depending on the inventory's stage of completion, our manufacturing costs can include the costs of packing and finishing, utilities, maintenance, depreciation, and salaries and benefits associated with our manufacturing process. We allocate fixed manufacturing overheads based on normal production capacity. Unallocated overhead costs resulting from periods with abnormally low production levels are charged to expense as incurred. As inventory is sold to third parties, we recognize the cost of sales in the same period that the sale occurs. We periodically review our inventory for estimated obsolescence or instances when inventory is no longer marketable for its intended use, and we record any write-down equal to the difference between the cost of inventory and its estimated net realizable value based on assumptions about alternative uses, market conditions and other factors.

Investment in TiO₂ manufacturing joint venture—We account for our investment in a 50%-owned manufacturing joint venture by the equity method. See Note 5.

Property and equipment and depreciation—We state property and equipment at cost, including capitalized interest on borrowings during the actual construction period of major capital projects. Capitalized interest costs were \$.9 million in 2010, \$1.0 million in 2011 and \$1.1 million in 2012. We compute depreciation of property and equipment for financial reporting purposes (including mining equipment) principally by the straight-line method over the estimated useful lives of the assets as follows:

<u>Asset</u>	<u>Useful lives</u>
Buildings and improvements	10 to 40 years
Machinery and equipment	3 to 20 years
Mine development costs	units-of-production

We use accelerated depreciation methods for income tax purposes, as permitted. Upon the sale or retirement of an asset, we remove the related cost and accumulated depreciation from the accounts and recognize any gain or loss in income currently.

We expense costs incurred for maintenance, repairs and minor renewals (including planned major maintenance) while we capitalize expenditures for major improvements.

We have a governmental concession with an unlimited term to operate our ilmenite mines in Norway. Mining properties consist of buildings and equipment used in our Norwegian ilmenite mining operations and costs associated with the development of a new mine area which commenced production prior to 2010. While we own the land and ilmenite reserves associated with the mining operations, such land and reserves were acquired for nominal value and we have no material asset recognized for the land and reserves related to our mining operations.

We perform impairment tests when events or changes in circumstances indicate the carrying value may not be recoverable. We consider all relevant factors. We perform the impairment test by comparing the estimated future undiscounted cash flows (exclusive of interest expense) associated with the asset to the asset's net carrying value to determine if a write-down to fair value or discounted cash flow value is required.

Long-term debt—We state long-term debt net of any unamortized original issue premium or discount. We classify amortization of deferred financing costs and any premium or discount associated with the issuance of indebtedness as interest expense and compute such amortization by either the interest method or the straight-line method over the term of the applicable issue.

Employee benefit plans—Accounting and funding policies for our retirement plans are described in Note 11.

Income taxes—We, Valhi and our qualifying subsidiaries are members of Contran’s consolidated U.S. federal income tax group (the Contran Tax Group) and we and certain of our qualifying subsidiaries also file consolidated income tax returns with Contran in various U.S. state jurisdictions. As a member of the Contran Tax Group, we are jointly and severally liable for the federal income tax liability of Contran and the other companies included in the Contran Tax Group for all periods in which we are included in the Contran Tax Group. See Note 15. As a member of the Contran Tax Group, we are a party to a tax sharing agreement which provides that we compute our provision for U.S. income taxes on a separate-company basis using the tax elections made by Contran. Pursuant to the tax sharing agreement, we make payments to or receive payments from Valhi in amounts we would have paid to or received from the U.S. Internal Revenue Service or the applicable state tax authority had we not been a member of the Contran Tax Group. We made net payments of income taxes to Valhi of \$13.6 million in 2010, \$43.5 million in 2011 and \$32.1 million in 2012.

We recognize deferred income tax assets and liabilities for the expected future tax consequences of temporary differences between the income tax and financial reporting carrying amounts of assets and liabilities, including investments in our subsidiaries and affiliates who are not members of the Contran Tax Group and undistributed earnings of non-U.S. subsidiaries which are not deemed to be permanently reinvested. The earnings of non-U.S. subsidiaries subject to permanent reinvestment plans aggregated \$978 million at December 31, 2011 and \$1.0 billion at December 31, 2012. It is not practical for us to determine the amount of the unrecognized deferred income tax liability related to such earnings due to the complexities associated with the U.S. taxation on earnings of non-U.S. subsidiaries repatriated to the U.S. We periodically evaluate our deferred tax assets in the various taxing jurisdictions in which we operate and adjust any related valuation allowance based on the estimate of the amount of such deferred tax assets that we believe does not meet the more-likely-than-not recognition criteria.

We record a reserve for uncertain tax positions for tax positions where we believe that it is more-likely-than-not our position will not prevail with the applicable tax authorities. The amount of the benefit associated with our uncertain tax positions that we recognize is limited to the largest amount for which we believe the likelihood of realization is greater than 50%. We accrue penalties and interest on the difference between tax positions taken on our tax returns and the amount of benefit recognized for financial reporting purposes. We classify our reserves for uncertain tax positions in a separate current or noncurrent liability, depending on the nature of the tax position. See Note 10.

Net sales—We record sales when products are shipped and title and other risks and rewards of ownership have passed to the customer, or when services are performed. Shipping terms of products shipped are generally FOB shipping point, although in some instances shipping terms are FOB destination point (for which we do not recognize sales until the product is received by the customer) or other standard shipping terms. We state sales net of price, early payment and distributor discounts and volume rebates. We report any tax assessed by a governmental authority that we collect from our customers that is both imposed on and concurrent with our revenue-producing activities (such as sales, use, value added and excise taxes) on a net basis (meaning we do not recognize these taxes either in our revenues or in our costs and expenses).

Selling, general and administrative expense; shipping and handling costs—Selling, general and administrative expense includes costs related to marketing, sales, distribution, shipping and handling, research and development, legal, and administrative functions such as accounting, treasury and finance, and includes costs for salaries and benefits not associated with our manufacturing process, travel and entertainment, promotional materials and professional fees. We include shipping and handling costs in selling, general and administrative expense and these costs were \$83 million in 2010, \$93 million in 2011 and \$89 million in 2012. We expense advertising costs as incurred and these costs were approximately \$1 million in each of 2010 and 2011 and approximately \$5 million in 2012. We expense research, development and certain sales technical support costs as incurred and these costs approximated \$13 million in 2010, \$20 million in 2011 and \$19 million in 2012.

Note 2—Geographic information:

Our operations are associated with the production and sale of titanium dioxide pigments (TiO₂). TiO₂ is used to impart whiteness, brightness, opacity and durability to a wide variety of products, including paints, plastics, paper, fibers and ceramics. Additionally, TiO₂ is a critical component of everyday applications, such as coatings, plastics and paper, as well as many specialty products such as inks, foods and cosmetics. At December 31, 2011 and 2012 the net assets of non-U.S. subsidiaries included in consolidated net assets approximated \$478.2 million and \$579.2 million, respectively.

For geographic information, we attribute net sales to the place of manufacture (point of origin) and to the location of the customer (point of destination); we attribute property and equipment to their physical location.

	Years ended December 31,		
	2010	2011	2012
	(In millions)		
Net sales – point of origin:			
Germany	\$ 714.2	\$1,039.7	\$ 977.7
United States	564.7	749.6	1,042.8
Canada	245.4	301.7	339.1
Belgium	209.1	301.8	272.9
Norway	188.3	245.1	284.0
Eliminations	(472.0)	(694.6)	(940.2)
Total	<u>\$1,449.7</u>	<u>\$1,943.3</u>	<u>\$1,976.3</u>
Net sales – point of destination:			
Europe	\$ 822.2	\$1,141.4	\$1,011.4
North America	417.8	498.5	652.5
Other	209.7	303.4	312.4
Total	<u>\$1,449.7</u>	<u>\$1,943.3</u>	<u>\$1,976.3</u>

	December 31,	
	2011	2012
	(In millions)	
Identifiable assets – net property and equipment:		
Germany	\$229.5	\$243.9
Norway	96.6	104.7
Canada	68.0	70.8
Belgium	83.2	94.8
Other	8.2	8.3
Total	<u>\$485.5</u>	<u>\$522.5</u>

Note 3—Accounts and other receivables:

	December 31,	
	2011	2012
	(In millions)	
Trade receivables	\$247.2	\$229.7
Recoverable VAT and other receivables	22.3	38.9
Refundable income taxes	2.0	18.3
Allowance for doubtful accounts	(1.2)	(1.1)
Total	<u>\$270.3</u>	<u>\$285.8</u>

Note 4—Inventories, net:

	December 31,	
	2011	2012
	(In millions)	
Raw materials	\$ 89.6	\$151.5
Work in process	17.3	27.3
Finished products	280.7	394.8
Supplies	56.6	64.7
Total	<u>\$444.2</u>	<u>\$638.3</u>

Note 5—Investment in TiO₂ manufacturing joint venture:

We own a 50% interest in Louisiana Pigment Company, L.P. (LPC). LPC is a manufacturing joint venture whose other 50%-owner is Tioxide Americas Inc. (Tioxide). Tioxide is a wholly-owned subsidiary of Huntsman Corporation. LPC owns and operates a chloride-process TiO₂ plant in Lake Charles, Louisiana.

We and Tioxide are both required to purchase one-half of the TiO₂ produced by LPC, unless we and Tioxide agree otherwise (such as in 2012, when we purchased approximately 52% of the production from the plant). LPC operates on a break-even basis and, accordingly, we report no equity in earnings of LPC. Each owner's acquisition transfer price for its share of the TiO₂ produced is equal to its share of the joint venture's production costs and interest expense, if any. Our share of net cost is reported as cost of sales as the related TiO₂ acquired from LPC is sold. We report

distributions we receive from LPC, which generally relate to excess cash generated by LPC from its non-cash production costs, and contributions we make to LPC, which generally relate to cash required by LPC when it builds working capital, as part of our cash flows from operating activities in our Consolidated Statements of Cash Flows. The components of our net distributions from LPC are shown in the table below.

	Years ended December 31,		
	2010	2011	2012
	(In millions)		
Distributions from LPC	\$ 26.1	\$ 29.7	\$ 79.5
Contributions to LPC	(23.7)	(25.9)	(100.2)
Net distributions (contributions)	<u>\$ 2.4</u>	<u>\$ 3.8</u>	<u>\$ (20.7)</u>

Summary balance sheets of LPC are shown below:

	December 31,	
	2011	2012
	(In millions)	
ASSETS		
Current assets	\$ 108.5	\$ 139.8
Property and equipment, net	140.7	126.0
Total assets	<u>\$ 249.2</u>	<u>\$ 265.8</u>
LIABILITIES AND PARTNERS' EQUITY		
Other liabilities, primarily current	\$ 68.0	\$ 43.2
Partners' equity	181.2	222.6
Total liabilities and partners' equity	<u>\$ 249.2</u>	<u>\$ 265.8</u>

Summary income statements of LPC are shown below:

	Years ended December 31,		
	2010	2011	2012
	(In millions)		
Revenues and other income:			
Kronos	\$ 133.7	\$ 144.8	\$ 250.2
Tioxide	134.5	145.7	227.5
	<u>268.2</u>	<u>290.5</u>	<u>477.7</u>
Cost and expenses:			
Cost of sales	267.7	290.1	477.3
General and administrative	.5	.4	.4
	<u>268.2</u>	<u>290.5</u>	<u>477.7</u>
Net income	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>

Note 6 — Marketable securities:

At December 31, 2012, our marketable securities consist of investments in the publicly-traded shares of related parties: Valhi, NL and CompX International Inc. At December 31, 2012, Valhi and NL own 50% and 30%, respectively, of our outstanding common stock and NL owns the majority of CompX's outstanding common stock. All of our marketable securities are accounted for as available-for-sale securities, which are carried at fair value using quoted market prices in active markets for each marketable security and represent a Level 1 input within the fair value hierarchy. See Note 16. Because we have classified all of our marketable securities as available-for-sale, any unrealized gains or losses on the securities are recognized through other comprehensive income, net of deferred income taxes.

<u>Marketable security</u>	<u>Fair value measurement level</u>	<u>Market value</u>	<u>Cost basis</u>	<u>Unrealized gains (losses)</u>
December 31, 2011:				
Current assets:				
Mutual funds	1	\$ 20.9	\$21.1	\$ (.2)
Noncurrent assets:				
TIMET common stock	1	63.6	73.9	(10.3)
Valhi common stock	1	34.7	15.3	19.4
NL and CompX common stocks	1	.1	.1	—
Total		\$ 98.4	\$89.3	\$ 9.1
December 31, 2012:				
Noncurrent assets:				
Valhi common stock	1	\$ 21.5	\$15.3	\$ 6.2
NL and CompX common stocks	1	.1	.1	—
Total		\$ 21.6	\$15.4	\$ 6.2

At December 31, 2011 and 2012, we held approximately 1.7 million shares of Valhi's common stock, which we purchased during 2010 and 2011. We also held a nominal number of shares of CompX and NL common stocks. At December 31, 2011 and 2012, the quoted per share market price of Valhi's common stock was \$20.16 and \$12.50, respectively. In May 2012, Valhi implemented a 3-for-1 split of its common stock. We have adjusted all share and per-share disclosures related to our investment in Valhi stock for all periods prior to May 2012 to give effect to the stock split. The stock split had no financial statement impact to us, and our ownership interest in Valhi did not change as a result of the split.

At December 31, 2011, we held approximately 4.2 million shares, or 2.4%, of Titanium Metals Corporation's (TIMET) outstanding common stock, which we purchased during 2010 and 2011. At December 31, 2011, the quoted market price was \$14.98 per share. Prior to December 2012, TIMET was also an affiliate of ours, as Contran, Mr. Harold Simmons and persons and other entities related to Mr. Simmons (including us) owned a majority of TIMET's outstanding common stock. In December 2012, we sold all of our shares of TIMET common stock for \$70.0 million (\$16.50 per share) pursuant to a cash tender offer by a third party, and all of our affiliates also sold their shares of TIMET common stock for the same price. Securities transactions in 2012 consist of a \$3.9 million pre-tax loss we recognized on the sale of these TIMET shares.

The Valhi, CompX and NL common stocks we own are subject to the restrictions on resale pursuant to certain provisions of the Securities and Exchange Commission (SEC) Rule 144. In addition, as a majority-owned subsidiary of Valhi we cannot vote our shares of Valhi common stock under Delaware Corporation Law, but we do receive dividends from Valhi on these shares, when declared and paid.

At December 31, 2011, we held investments in various mutual funds which have a primary investment objective of holding corporate and government debt securities from U.S. and other markets. These funds were liquidated for cash proceeds in the first quarter of 2012.

Note 7—Other noncurrent assets:

	December 31,	
	2011	2012
	(In millions)	
Deferred financing costs, net	\$ 2.0	\$ 7.0
Restricted cash	5.4	7.5
Pension asset	—	5.1
Other	9.3	9.5
Total	<u>\$16.7</u>	<u>\$29.1</u>

Note 8—Accounts payable and accrued liabilities:

	December 31,	
	2011	2012
	(In millions)	
Accounts payable	\$ 186.6	\$ 161.3
Employee benefits	35.3	29.6
Accrued sales discounts and rebates	11.9	14.9
Accrued interest	5.0	.2
Other	47.0	25.6
Total	<u>\$285.8</u>	<u>\$231.6</u>

Note 9—Long-term debt:

	December 31,	
	2011	2012
	(In millions)	
Term Loan	\$ —	\$384.5
Kronos International, Inc. 6.5% Senior Secured Notes	360.6	—
Revolving European credit facility	—	13.2
Other	4.5	2.4
Total debt	365.1	400.1
Less current maturities	2.2	21.2
Total long-term debt	<u>\$362.9</u>	<u>\$378.9</u>

Term Loan—In June 2012, we entered into a \$400 million term loan. We used a portion of the net proceeds of the term loan to redeem the remaining outstanding 6.5% Senior Secured Notes (€279.2 million principal amount outstanding), as discussed below. The term loan was issued at 98.5% of the principal amount, or an aggregate of \$394 million. The term loan provides for an additional \$100 million of term loan borrowings in the future under certain conditions. The remaining net proceeds of the term loan, plus any additional term loan which might be borrowed in the future, are available for our general corporate purposes. The term loan permits the continued payment of regular quarterly dividends as well as the payment of special dividends, if any. The term loan:

- bears interest, at our option, at LIBOR (with LIBOR no less than 1.0%) plus 4.75%, or the base rate, as defined in the agreement, plus 3.75%. The average interest rate on these borrowings at December 31, 2012, and for the period from issuance to December 31, 2012, was 5.75% and 5.82%, respectively;
- requires quarterly principal repayments of \$5.0 million commencing in September 2012, other mandatory principal repayments of formula-determined amounts under specified conditions with all remaining principal balance due in June 2018. Voluntary principal prepayments are permitted at any time (without penalty);
- is collateralized by, among other things, a first priority lien on (i) 100% of the common stock of certain of our U.S. wholly-owned subsidiaries, (ii) 65% of the common stock or other ownership interest of our Canadian subsidiary (Kronos Canada, Inc.) and certain first-tier European subsidiaries (Kronos Titan GmbH and Kronos Denmark ApS) and (iii) a \$362.1 million unsecured promissory note issued by our wholly-owned subsidiary, Kronos International, Inc. (KII) to us;
- is also collateralized by a second priority lien on all of the U.S. assets which collateralize our new North American revolving facility, as discussed below;
- contains a number of covenants and restrictions which, among other things, restrict our ability to incur additional debt, incur liens, pay dividends or merge or consolidate with, or sell or transfer substantially all of our assets to, another entity, contains other provisions and restrictive covenants customary in lending transactions of this type and requires the maintenance of a specified financial covenant (leverage to EBITDA, as defined) to be less than or equal to 3.5 to 1.0; and
- contains customary default provisions, including a default under any of our other indebtedness in excess of \$50 million.

The carrying amount of the term loan includes unamortized original issue discount of \$5.5 million at December 31, 2012.

In February 2013, we voluntarily prepaid an aggregate \$290 million principal amount of the term loan. Funds for such prepayment were provided by \$100 million of our cash on hand as well as borrowings of \$190 million under a new loan from Contran. Such new loan from Contran contains terms and conditions substantially identical to the terms and conditions of the term loan, except that the loan from Contran is unsecured and contains no financial maintenance covenant. As a result of this prepayment, the remaining \$100 million principal amount of the term loan is not repayable until final maturity of the term loan in June 2018. It is possible we might borrow additional amounts from Contran in the future to voluntarily prepay the remaining \$100 million principal amount outstanding under the term loan. The independent members of our board of directors approved the terms and conditions of the new loan from Contran.

Senior Secured Notes—In March 2011, we redeemed €80 million of our €400 million 6.5% Senior Secured Notes at 102.17% of the principal amount for an aggregate of \$115.7 million, including a \$2.5 million call premium. During the third and fourth quarters of 2011, we repurchased in open market transactions an aggregate of €40.8 million principal amount of the Senior Notes for an aggregate of €40.6 million (an aggregate of \$57.6 million when repurchased). Following such partial redemption and repurchases, €279.2 million principal amount of Senior Notes remained outstanding. We recognized a \$3.3 million pre-tax interest charge related to the redemption of €80 million of the 6.5% Senior Secured Notes consisting of the call premium, the write-off of unamortized deferred financing costs and original issue discount associated with the redeemed Senior Notes. We recognized a \$2 million net gain on the €40.8 million principal amount of Senior Notes repurchased in open market transactions. We borrowed under our European revolving credit facility, as discussed below, in order to fund the redemption in March 2011, while we used cash on hand to fund the open market repurchases.

Immediately upon the June 2012 issuance of the term loan as discussed above, we sent a request to the trustee under the indenture for the Senior Notes, asking that all remaining Senior Notes be called for redemption on July 20, 2012. We also directed that a portion of the proceeds from the new term loan be irrevocably sent to the trustee, in an amount sufficient to pay the principal, call premium at 1.01083% of the principal amount and all accrued and unpaid interest due through the July 20, 2012 redemption date. Upon the trustee's confirmation of receipt of such funds on June 14, 2012, the trustee discharged our obligations under the indenture and released the liens on all collateral thereunder. Because we were released as being the primary obligor under the indenture as of June 14, 2012, the Senior Notes were derecognized as of that date along with the funds irrevocably sent to the trustee to effect the July 20, 2012 redemption. We recognized an aggregate \$7.2 million pre-tax charge related to the early extinguishment of debt in the second quarter of 2012, consisting of the call premium paid, interest from the June 14, 2012 indenture discharge date to the July 20, 2012 redemption date and the write-off of unamortized deferred financing costs and original issue discount associated with the redeemed Senior Notes.

Revolving credit facilities

Revolving North American credit facility—Also in June 2012, we entered into a \$125 million revolving bank credit facility which matures June 2017. Borrowings under the revolving credit facility are available for our general corporate purposes. Available borrowings on this facility are based on formula-determined amounts of eligible trade receivables and inventories, as defined in the agreement, of certain of our North American subsidiaries less any outstanding letters of credit up to \$15 million issued under the facility (with revolving borrowings by our Canadian subsidiary limited to \$25 million). Any amounts outstanding under the revolving credit facility bear interest, at our option, at LIBOR plus a margin ranging from 1.5% to 2.0% or at the applicable base rate, as defined in the agreement, plus a margin ranging from .5% to 1.0%. The credit facility is collateralized by, among other things, a first priority lien on the borrowers' trade receivables and inventories. The facility contains a number of covenants and restrictions which, among other things, restricts the borrowers' ability to incur additional debt, incur liens, pay dividends or merge or consolidate with, or sell or transfer all or substantially all of their assets to, another entity, contains other provisions and restrictive covenants customary in lending transactions of this type and under certain conditions requires the maintenance of a specified financial covenant (fixed charge coverage ratio, as defined) to be at least 1.0 to 1.0. During December 2012, we borrowed and repaid \$71 million under this facility at an average interest rate of 3.75%. At December 31, 2012, we had no outstanding borrowings under this revolving credit facility and approximately \$125 million was available for borrowing.

Revolving European credit facility—Our operating subsidiaries in Germany, Belgium, Norway and Denmark have a €120 million secured revolving bank credit facility that, as amended in September 2012, matures in September 2017. We may denominate borrowings in Euros, Norwegian kroner or U.S. dollars. Outstanding borrowings bear interest at LIBOR plus 1.90%. The facility is collateralized by the accounts receivable and inventories of the borrowers, plus a limited pledge of all of the other assets of the Belgian borrower. The facility contains certain restrictive covenants that, among other things, restrict the ability of the borrowers to incur debt, incur liens, pay dividends or merge or consolidate with, or sell or transfer all or substantially all of the assets to, another entity, and requires the maintenance of certain financial ratios. In addition, the credit facility contains customary cross-default provisions with respect to other debt and obligations of the borrowers, KII and its other subsidiaries.

During 2012, we borrowed €80 million (\$107.4 million when borrowed) under our European credit facility, and subsequently repaid €70 million (\$88.6 million when repaid). The average interest rate on these borrowings as of and for the year ended December 31, 2012 was 1.88% and 2.01%, respectively. As of December 31, 2012, the equivalent of \$144.9 million was available for borrowing under this facility.

Canada – In December 2011, our Canadian subsidiary entered into a Cdn. \$10.0 million loan agreement with the Bank of Montreal for the limited purpose of issuing letters of credit. The facility renews annually. Letters of credit are collateralized by restricted deposits at the Bank of Montreal (\$7.5 million at December 31, 2012). See Note 7. The facility contains certain restrictive covenants which, among other things, restrict the subsidiary from incurring additional indebtedness in excess of Cdn. \$35 million. At December 31, 2012, an aggregate of Cdn. \$7.5 million letters of credit were outstanding under this facility.

In December 2011, our Canadian subsidiary entered into an agreement with an economic development agency of the Province of Quebec, Canada pursuant to which we may borrow up to Cdn. \$7.1 million from such agency. Borrowings may only be used to fund capital improvements at our Canadian plant and are limited to a specified percentage of such capital improvements. Borrowings are non-interest bearing, with monthly payments commencing in 2017. The agreement contains certain restrictive covenants, which, among other things, restricts the subsidiary's ability to sell assets or enter into mergers, and requires our subsidiary to maintain certain financial ratios and maintain specified levels of employment. At December 31, 2012, we had no borrowings under this agreement.

Note payable to affiliate—From time to time, companies related to Contran will have loans and advances outstanding between them and various related parties pursuant to term and demand notes. In this regard, in April 2010 we entered into an unsecured revolving credit note with Contran pursuant to which we could borrow up to \$40 million from Contran. Our loans from Contran bore interest, payable quarterly, at the prime rate minus 0.5%, with all outstanding principal due on demand and in any event no later than December 31, 2011. The principal amount borrowed at any time was solely at the discretion of Contran. This facility terminated upon its maturity in December 2011. See Note 14.

Restrictions and other—Aggregate maturities of long-term debt at December 31, 2012 are:

<u>Years ending December 31,</u>	<u>Amount</u> <u>(In millions)</u>
2013	\$ 21.2
2014	20.5
2015	20.4
2016	20.3
2017	33.2
2018 and thereafter	290.0
Gross maturities	405.6
Less original issue discount	5.5
Total	<u>\$ 400.1</u>

We are in compliance with all of our debt covenants at December 31, 2012.

Note 10 — Income taxes:

	<u>Years ended December 31,</u>		
	<u>2010</u>	<u>2011</u>	<u>2012</u>
	<u>(In millions)</u>		
Pre-tax income:			
U.S.	\$ 58.1	\$ 105.1	\$ 115.9
Non-U.S.	82.2	412.0	214.9
Total	<u>\$ 140.3</u>	<u>\$ 517.1</u>	<u>\$ 330.8</u>
Expected tax expense, at U.S. federal statutory income tax rate of 35%	\$ 49.1	\$ 181.0	\$ 115.8
Non-U.S. tax rates	(3.9)	(17.3)	(11.9)
German tax attribute adjustments	(35.2)	—	—
Incremental U.S. tax on earnings of non-U.S. companies	.2	28.8	1.0
U.S. state income taxes, net	1.2	2.1	2.0
Adjustment to the reserve for uncertain tax positions, net	.7	1.6	4.3
Tax rate changes	(1.7)	.1	(.1)
French dividend surtax	—	—	.3
Other, net	(.7)	(.2)	.9
Provision for income taxes	<u>\$ 9.7</u>	<u>\$ 196.1</u>	<u>\$ 112.3</u>

	Years ended December 31,		
	2010	2011	2012
	(In millions)		
Components of income tax expense:			
Currently payable (refundable):			
U.S. federal and state	\$ 16.7	\$ 52.0	\$ 45.8
Non-U.S.	16.2	78.7	42.6
	<u>32.9</u>	<u>130.7</u>	<u>88.4</u>
Deferred income taxes (benefit):			
U.S. federal and state	(3.4)	3.9	(4.2)
Non-U.S.	(19.8)	61.5	28.1
	<u>(23.2)</u>	<u>65.4</u>	<u>23.9</u>
Provision for income taxes	<u>\$ 9.7</u>	<u>\$ 196.1</u>	<u>\$ 112.3</u>

	Years ended December 31,		
	2010	2011	2012
	(In millions)		
Comprehensive provision for income taxes (benefit) allocable to:			
Net income	\$ 9.7	\$ 196.1	\$ 112.3
Other comprehensive income (loss):			
Pension plans	(2.8)	(3.3)	(18.6)
OPEB plans	1.3	(.7)	(.2)
Currency translation	—	—	4.9
Marketable securities	—	3.1	(.9)
Total	<u>\$ 8.2</u>	<u>\$ 195.2</u>	<u>\$ 97.5</u>

The components of our net deferred income taxes at December 31, 2011 and 2012 are summarized in the following table.

	December 31,			
	2011		2012	
	Assets	Liabilities	Assets	Liabilities
	(In millions)			
Tax effect of temporary differences related to:				
Inventories	\$ 7.5	\$ (6.4)	\$ 2.7	\$ (10.1)
Property and equipment	—	(67.3)	—	(70.5)
Accrued OPEB costs	3.7	—	4.0	—
Accrued pension cost	10.9	—	28.3	—
Other accrued liabilities and deductible differences	12.5	—	9.4	—
Other taxable differences	—	(6.7)	—	(11.8)
Tax on unremitted earnings of non-U.S. subsidiaries	—	(14.4)	—	(7.6)
Tax loss and tax credit carryforwards	156.1	—	145.4	—
Valuation allowance	(.2)	—	(.1)	—
Adjusted gross deferred tax assets (liabilities)	190.5	(94.8)	189.7	(100.0)
Netting by tax jurisdiction	(47.6)	47.6	(65.1)	65.1
	142.9	(47.2)	124.6	(34.9)
Less net current deferred tax asset (liability)	9.9	(6.2)	4.1	(10.9)
Net noncurrent deferred tax asset (liability)	<u>\$133.0</u>	<u>\$ (41.0)</u>	<u>\$120.5</u>	<u>\$ (24.0)</u>

Our provision for income taxes in 2011 includes \$17.2 million for U.S. incremental income taxes on current earnings repatriated from our German subsidiary, which earnings were used to fund a portion of the repurchases of our Senior Secured Notes discussed in Note 9. In addition, we accrue U.S. incremental income taxes on the earnings of our Canadian subsidiary, which earnings we previously determined are not permanently reinvested.

In the third quarter of 2012, France enacted certain changes in their income tax laws, including a 3% nondeductible surtax on all dividend distributions on which tax is assessed at the time of the distribution against the company making such distribution. Consequently, our French subsidiary will be required to pay an additional 3% tax on all future dividend distributions. Our undistributed earnings in France are deemed to be permanently reinvested and such tax will be recognized as part of our income tax expense if and when a dividend is declared and at that time the related tax will be remitted to the French government in accordance with the applicable tax law. During 2012, our French subsidiary distributed an \$8.9 million dividend. At December 31, 2012, our French subsidiary has undistributed earnings of approximately \$10.8 million that, if distributed, would be subject to the 3% surtax.

As a consequence of a European Court ruling that resulted in a favorable resolution of certain income tax issues in Germany, during the first quarter of 2010 the German tax authorities agreed to an increase in our German net operating loss carryforwards. Accordingly, we recognized a non-cash income tax benefit of \$35.2 million in the first quarter of 2010.

Tax authorities are examining certain of our U.S. and non-U.S. tax returns and have or may propose tax deficiencies, including penalties and interest. Because of the inherent uncertainties involved in settlement initiatives and court and tax proceedings, we cannot guarantee that these tax matters will be resolved in our favor, and therefore our potential exposure, if any, is also uncertain. In 2011 and 2012 we received notices of re-assessment from the Canadian federal and provincial tax authorities related to the years 2002 through 2004. We object to the re-assessments and believe the position is without merit. Accordingly, we are appealing the re-assessments and in connection with such appeal we were required to post letters of credit aggregating Cdn. \$7.5 million (see Note 9). If the full amount of the proposed adjustment were ultimately to be assessed against us the cash tax liability would be approximately \$16.0 million. We believe we have adequate accruals for additional taxes and related interest expense which could ultimately result from tax examinations. We believe the ultimate disposition of tax examinations should not have a material adverse effect on our consolidated financial position, results of operations or liquidity.

We accrue interest and penalties on our uncertain tax positions as a component of our provision for income taxes. The amount of interest and penalties we accrued during 2010, 2011 and 2012 was not material, and at December 31, 2010, 2011 and 2012, we had \$2.7 million, \$3.1 million and \$3.4 million, respectively, accrued for interest and penalties for our uncertain tax positions.

The following table shows the changes in the amount of our uncertain tax positions (exclusive of the effect of interest and penalties) during 2010, 2011 and 2012:

	<u>Years ended December 31,</u>		
	<u>2010</u>	<u>2011</u>	<u>2012</u>
	(In millions)		
Changes in unrecognized tax benefits:			
Unrecognized tax benefits at beginning of year	\$ 7.0	\$ 7.9	\$ 8.8
Net increase (decrease):			
Tax positions taken in prior periods	(.1)	.3	(.2)
Tax positions taken in current period	.6	1.0	4.3
Settlements with taxing authorities - cash paid	—	—	(.1)
Lapse due to applicable statute of limitations	—	—	(.1)
Change in currency exchange rates	.4	(.4)	.3
Unrecognized tax benefits at end of year	<u>\$ 7.9</u>	<u>\$ 8.8</u>	<u>\$ 13.0</u>

If our uncertain tax positions were recognized, a benefit of \$10.6 million, \$11.9 million and \$16.4 million would affect our effective income tax rates for 2010, 2011 and 2012 respectively. We currently estimate that our unrecognized tax benefits will change by \$3 million during the next twelve months related to certain adjustments to our prior year returns.

We file income tax returns in various U.S. federal, state and local jurisdictions. We also file income tax returns in various non-U.S. jurisdictions, principally in Germany, Canada, Belgium and Norway. Our U.S. income tax returns prior to 2009 are generally considered closed to examination by applicable tax authorities. Our non-U.S. income tax returns are generally considered closed to examination for years prior to 2008 for Germany, 2009 for Belgium, 2007 for Canada and 2003 for Norway.

At December 31, 2012, we had the equivalent of \$744 million and \$100 million of net operating loss carryforwards for German corporate and trade tax purposes, respectively. At December 31, 2012, we have concluded that no deferred income tax asset valuation allowance is required to be recognized with respect to such carryforwards, principally because (i) such carryforwards have an indefinite carryforward period, (ii) we have utilized a portion of such carryforwards during the most recent three-year period and (iii) we currently expect to utilize the remainder of such carryforwards over the long term. However, prior to the complete utilization of these carryforwards, particularly if the economic recovery were to be short-lived or we generate operating losses in our German operations for an extended period of time, it is possible we might conclude the benefit of the carryforwards would no longer meet the more-likely-than-not recognition criteria, at which point we would be required to recognize a valuation allowance against some or all of the then-remaining tax benefit associated with the carryforwards.

Note 11 — Employee benefit plans:

Defined contribution plans—We maintain various defined contribution pension plans with our contributions based on matching or other formulas. Defined contribution plan expense approximated \$1.2 million in 2010, \$1.5 million in 2011 and \$1.6 million in 2012.

Accounting for defined benefit and postretirement benefits other than pensions (OPEB) plans—We recognize an asset or liability for the over or under funded status of each of our individual defined benefit pension plans on our Consolidated Balance Sheets. Changes in the funded status of these plans are recognized either in net income (loss), to the extent they are reflected in periodic benefit cost, or through other comprehensive income (loss).

Defined benefit plans—We sponsor various defined benefit pension plans. Non-U.S. employees are covered by plans in their respective countries and a majority of U.S. employees are eligible to participate in a contributory savings plan. The benefits under our plans are based upon years of service and employee compensation. Our funding policy is to contribute annually the minimum amount required under ERISA (or equivalent non-U.S.) regulations plus additional amounts as we deem appropriate.

We expect to contribute the equivalent of approximately \$26.9 million to all of our defined benefit pension plans during 2013. Benefit payments to plan participants out of plan assets are expected to be the equivalent of:

<u>Years ending December 31,</u>	<u>Amount</u> <u>(In millions)</u>
2013	\$ 24.4
2014	24.9
2015	24.8
2016	24.7
2017	25.4
Next 5 years	142.5

The funded status of our non-U.S. defined benefit pension plans is presented in the table below.

	December 31,	
	2011	2012
(In millions)		
Change in projected benefit obligations (PBO):		
Benefit obligations at beginning of the year	\$ 446.0	\$ 460.3
Service cost	11.2	10.4
Interest cost	23.6	22.3
Participant contributions	1.9	1.8
Actuarial losses	18.0	96.4
Change in currency exchange rates	(13.4)	15.0
Benefits paid	(27.0)	(24.1)
Benefit obligations at end of the year	<u>460.3</u>	<u>582.1</u>
Change in plan assets:		
Fair value of plan assets at beginning of the year	327.3	336.2
Actual return on plan assets	18.3	47.9
Employer contributions	25.2	27.7
Participant contributions	1.9	1.8
Change in currency exchange rates	(9.5)	11.2
Benefits paid	(27.0)	(24.1)
Fair value of plan assets at end of year	<u>336.2</u>	<u>400.7</u>
Funded status	<u>\$(124.1)</u>	<u>\$(181.4)</u>
Amounts recognized in the balance sheet:		
Noncurrent pension asset	\$ —	\$ 5.1
Accrued pension costs:		
Current	(1.3)	(1.9)
Noncurrent	(122.8)	(184.6)
Total	<u>\$(124.1)</u>	<u>\$(181.4)</u>
Accumulated other comprehensive loss:		
Actuarial losses	\$ 128.8	\$ 187.1
Prior service cost	6.5	5.4
Net transition obligations	1.7	1.3
Total	<u>\$ 137.0</u>	<u>\$ 193.8</u>
Accumulated benefit obligations (ABO)	<u>\$ 428.1</u>	<u>\$ 536.5</u>

The components of our net periodic defined benefit pension cost for our non-U.S. defined benefit pension plans are presented in the table below. During 2011, certain eligible participants elected to take lump sum distributions upon their retirement, resulting in a nominal settlement charge in 2011. The amounts shown below for the amortization of prior service cost, net transition obligations and recognized actuarial losses for 2010, 2011 and 2012 were recognized as components of our accumulated other comprehensive income (loss) at December 31, 2009, 2010 and 2011, respectively, net of deferred income taxes.

	Years ended December 31,		
	2010	2011	2012
	(In millions)		
Net periodic pension cost:			
Service cost benefits	\$ 10.4	\$ 11.2	\$ 10.4
Interest cost on PBO	21.9	23.6	22.3
Expected return on plan assets	(16.5)	(17.6)	(17.0)
Settlement losses	—	.5	—
Recognized actuarial losses	5.5	6.6	7.9
Amortization of prior service cost	.9	1.2	1.1
Amortization of net transition obligations	.5	.5	.4
Total	<u>\$ 22.7</u>	<u>\$ 26.0</u>	<u>\$ 25.1</u>

Certain information concerning our non-U.S. defined benefit pension plans is presented in the table below.

	December 31,	
	2011	2012
	(In millions)	
Plans for which the ABO exceeds plan assets:		
PBO	\$460.3	\$520.0
ABO	428.1	482.1
Fair value of plan assets	336.2	333.5

The weighted-average rate assumptions used in determining the actuarial present value of benefit obligations for our non-U.S. defined benefit pension plans as of December 31, 2011 and 2012 are presented in the table below.

Rate	December 31,	
	2011	2012
Discount rate	4.9%	3.7%
Increase in future compensation levels	3.2%	3.1%

The weighted-average rate assumptions used in determining the net periodic pension cost for our non-U.S. defined benefit pension plans for 2010, 2011 and 2012 are presented in the table below.

Rate	Years ended December 31,		
	2010	2011	2012
Discount rate	5.5%	5.1%	4.9%
Increase in future compensation levels	3.1%	3.1%	3.2%
Long-term return on plan assets	5.5%	5.5%	5.2%

Variances from actuarially assumed rates will result in increases or decreases in accumulated pension obligations, pension expense and funding requirements in future periods.

The funded status of our U.S. defined benefit pension plan is presented in the table below.

	December 31,	
	2011	2012
	(In millions)	
Change in PBO:		
Benefit obligations at beginning of the year	\$15.9	\$17.8
Interest cost	.9	.8
Actuarial losses	1.8	1.4
Benefits paid	(.8)	(.9)
Benefit obligations at end of the year	<u>17.8</u>	<u>19.1</u>
Change in plan assets:		
Fair value of plan assets at beginning of the year	14.0	12.9
Actual return on plan assets	(.4)	1.9
Employer contributions	.1	.5
Benefits paid	(.8)	(.9)
Fair value of plan assets at end of year	<u>12.9</u>	<u>14.4</u>
Funded status	<u>\$ (4.9)</u>	<u>\$ (4.7)</u>
Amounts recognized in the balance sheet:		
Accrued pension costs:		
Current	\$ (.1)	\$ (.1)
Noncurrent	(4.8)	(4.6)
Total	<u>\$ (4.9)</u>	<u>\$ (4.7)</u>
Accumulated other comprehensive loss- actuarial losses	<u>\$10.4</u>	<u>\$10.7</u>
ABO	<u>\$17.8</u>	<u>\$19.1</u>

The components of our net periodic defined benefit pension cost for our U.S. defined benefit pension plan is presented in the table below. The amounts shown below for recognized actuarial losses for 2010, 2011 and 2012 were recognized as components of our accumulated other comprehensive income (loss) at December 31, 2009, 2010 and 2011 respectively, net of deferred income taxes.

	Years ended December 31,		
	2010	2011	2012
	(In millions)		
Net periodic pension cost (income):			
Interest cost on PBO	\$.9	\$.9	\$.8
Expected return on plan assets	(1.0)	(1.4)	(1.3)
Recognized actuarial losses	.2	.3	.5
Total	<u>\$.1</u>	<u>\$ (.2)</u>	<u>\$ —</u>

The discount rate assumptions used in determining the actuarial present value of the benefit obligation for our U.S. defined benefit pension plan as of December 31, 2011 and 2012 are 4.2% and 3.6%, respectively. The impact of assumed increases in future compensation levels does not have an effect on the benefit obligation as the plan is frozen with regards to compensation.

The weighted-average rate assumptions used in determining the net periodic pension cost for our U.S. defined benefit pension plan for 2010, 2011 and 2012 are presented in the table below. The impact of assumed increases in future compensation levels does not have an effect on the periodic pension cost as the plan is frozen with regards to compensation.

Rate	Years ended December 31,		
	2010	2011	2012
Discount rate	5.7%	5.1%	4.2%
Long-term return on plan assets	10.0%	10.0%	10.0%

Variances from actuarially assumed rates will result in increases or decreases in accumulated pension obligations, pension expense and funding requirements in future periods.

The amounts shown in the above tables for actuarial losses, prior service cost and net transition obligations at December 31, 2011 and 2012 have not yet been recognized as components of our periodic defined benefit pension cost as of those dates. These amounts will be recognized as components of our periodic defined benefit cost in future years and are recognized, net of deferred income taxes, in our accumulated other comprehensive income (loss) at December 2011 and 2012. We expect approximately \$12.5 million, \$1.1 million and \$.4 million of the unrecognized actuarial losses, prior service costs and net transition obligations, respectively, will be recognized as components of our consolidated net periodic defined benefit pension cost in 2013.

The table below details the changes in our consolidated other comprehensive income (loss) during 2010, 2011 and 2012.

	Years ended December 31,		
	2010	2011	2012
	(In millions)		
Changes in plan assets and benefit obligations recognized in other comprehensive income (loss):			
Current year:			
Net actuarial gain (loss)	\$ (13.9)	\$ (19.8)	\$ (66.9)
Plan amendments	(3.8)	—	—
Settlements	—	.5	—
Amortization of unrecognized:			
Net actuarial losses	5.7	6.9	8.3
Prior service cost	.9	1.2	1.1
Net transition obligations	.5	.5	.4
Total	<u>\$ (10.6)</u>	<u>\$ (10.7)</u>	<u>\$ (57.1)</u>

At December 31, 2011 and 2012, substantially all of the assets attributable to our U.S. plan were invested in the Combined Master Retirement Trust (CMRT), a collective investment trust sponsored by Contran to permit the collective investment by certain master trusts that fund certain employee benefits plans sponsored by Contran and certain of its affiliates. The CMRT's long-term investment objective is to provide a rate of return exceeding a composite of broad market equity and fixed income indices (including the S&P 500 and certain Russell indices) while utilizing both third-party investment managers as well as investments directed by Mr. Simmons. Mr. Simmons is the sole trustee of the CMRT. The trustee of the CMRT, along with the CMRT's investment committee, of which Mr. Simmons is a member, actively manage the investments of the CMRT.

The CMRT trustee and investment committee do not maintain a specific target asset allocation in order to achieve their objectives, but instead they periodically change the asset mix of the CMRT based upon, among other things, advice they receive from third-party advisors and their expectations regarding potential returns for various investment alternatives and what asset mix will generate the greatest overall return. Prior to December 2012, the CMRT had an investment in TIMET common stock; however, in December 2012 the CMRT sold its shares of common stock in conjunction with the tender offer discussed in Note 6. During the history of the CMRT from its inception in 1988 through December 31, 2012, the average annual rate of return has been 14%. For the years ended December 31, 2010, 2011 and 2012, the assumed long-term rate of return for plan assets invested in the CMRT was 10%. In determining the appropriateness of the long-term rate of return assumption, we primarily rely on the historical rates of return achieved by the CMRT, although we consider other factors as well including, among other things, the investment objectives of the CMRT's managers and their expectation that such historical returns will in the future continue to be achieved over the long-term.

The CMRT unit value is determined semi-monthly, and the plans have the ability to redeem all or any portion of their investment in the CMRT at any time based on the most recent semi-monthly valuation. However, the plans do not have the right to individual assets held by the CMRT and the CMRT has the sole discretion in determining how to meet any redemption request. For purposes of our plan asset disclosure, we consider the investment in the CMRT as a Level 2 input because (i) the CMRT value is established semi-monthly and the plans have the right to redeem their investment in the CMRT, in part or in whole, at anytime based on the most recent value and (ii) observable inputs from Level 1 or Level 2 were used to value approximately 83% of the assets of the CMRT at each of December 31, 2011 and 2012, as noted below. The aggregate fair value of all of the CMRT assets, including funds of Contran and its other affiliates that also invest in the CMRT, and supplemental asset mix details of the CMRT are as follows:

	December 31,	
	2011	2012
	(In millions)	
CMRT asset value	\$659.5	\$726.4
CMRT fair value input:		
Level 1	82%	82%
Level 2	1	1
Level 3	17	17
	<u>100%</u>	<u>100%</u>
CMRT asset mix:		
Domestic equities, principally publicly traded	75%	43%
International equities, publicly traded	2	2
Fixed income securities, publicly traded	14	12
Privately managed limited partnerships	8	8
Other, primarily cash	1	35
	<u>100%</u>	<u>100%</u>

The increase in the relative portion of the CMRT invested in cash and other assets at December 31, 2012 is the result of the CMRT's December 2012 disposition of its shares of TIMET common stock, which generated aggregate proceeds to the CMRT of \$254.7 million (or approximately 35% of the CMRT's total asset value at December 31, 2012), and which funds were invested in a cash equivalent at the end of 2012. Subsequently in January 2013, the CMRT redeployed such proceeds into other investments.

In determining the expected long-term rate of return on non-U.S. plan asset assumptions, we consider the long-term asset mix (e.g. equity vs. fixed income) for the assets for each of our plans and the expected long-term rates of return for such asset components. In addition, we receive third-party advice about appropriate long-term rates of return. Such assumed asset mixes are summarized below:

- In Germany, the composition of our plan assets is established to satisfy the requirements of the German insurance commissioner. Our German pension plan assets represent an investment in a large collective investment fund established and maintained by Bayer AG in which several pension plans, including our German pension plan and Bayer's pension plans, have invested. Our plan assets represent a very nominal portion of the total collective investment fund maintained by Bayer. These plan assets are a Level 3 input because there is not an active market that approximates the value of our investment in the Bayer investment fund. We determine the fair value of the Bayer plan assets based on periodic reports we receive from the managers of the Bayer plan. These periodic reports are subject to audit by the German pension regulator.
- In Canada, we currently have a plan asset target allocation of 46% to equity securities, 45% to fixed income securities, 9% to other investments and the remainder to cash. We expect the long-term rate of return for such investments to average approximately 125 basis points above the applicable equity or fixed income index. The Canadian assets are Level 1 input because they are traded in active markets.

- In Norway, we currently have a plan asset target allocation of 12% to equity securities, 78% to fixed income securities, 9% to real estate and the remainder primarily to other investments and liquid investments such as money markets. The expected long-term rate of return for such investments is approximately 8%, 4%, 6% and 7%, respectively. The majority of Norwegian plan assets are Level 1 inputs because they are traded in active markets; however approximately 10% of our Norwegian plan assets are invested in real estate and other investments not actively traded and are therefore a Level 3 input.
- We also have plan assets in Belgium and the United Kingdom. The Belgian plan assets are invested in certain individualized fixed income insurance contracts for the benefit of each plan participant as required by the local regulators and are therefore a Level 3 input. The United Kingdom plan assets consist of marketable securities which are Level 1 inputs because they trade in active markets.

We regularly review our actual asset allocation for each plan, and will periodically rebalance the investments in each plan to more accurately reflect the targeted allocation and/or maximize the overall long-term return when considered appropriate.

The composition of our December 31, 2011 and 2012 pension plan assets by fair value level is shown in the table below. The amounts shown for plan assets invested in the CMRT include a nominal amount of cash held by our U.S. pension plan which is not part of the plan's investment in the CMRT.

	Fair Value Measurements at December 31, 2011			
	Total	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
	(In millions)			
Germany	\$ 187.2	\$ —	\$ —	\$ 187.2
Canada:				
Local currency equities	18.1	18.1	—	—
Non local currency equities	28.0	28.0	—	—
Local currency fixed income	33.8	33.8	—	—
Cash and other	2.4	2.4	—	—
Norway:				
Local currency equities	2.0	2.0	—	—
Non local currency equities	3.7	3.7	—	—
Local currency fixed income	35.9	35.9	—	—
Non local currency fixed income	4.3	4.3	—	—
Real estate	5.1	—	—	5.1
Cash and other	6.3	4.9	—	1.4
U.S.				
CMRT	12.8	.1	12.7	—
Other	9.4	2.5	—	6.9
Total	<u>\$ 349.0</u>	<u>\$ 135.7</u>	<u>\$ 12.7</u>	<u>\$ 200.6</u>

	Fair Value Measurements at December 31, 2012			
	Total	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
	(In millions)			
Germany	\$224.8	\$ —	\$ —	\$ 224.8
Canada:				
Local currency equities	22.4	22.4	—	—
Non local currency equities	30.3	30.3	—	—
Local currency fixed income	38.0	38.0	—	—
Global mutual fund	5.6	5.6	—	—
Cash and other	2.1	2.1	—	—
Norway:				
Local currency equities	3.2	3.2	—	—
Non local currency equities	5.2	5.2	—	—
Local currency fixed income	40.9	40.9	—	—
Non local currency fixed income	4.8	4.8	—	—
Real estate	5.5	—	—	5.5
Cash and other	7.6	7.0	—	.6
U.S.				
CMRT	14.4	—	14.4	—
Other	10.3	3.1	—	7.2
Total	<u>\$415.1</u>	<u>\$ 162.6</u>	<u>\$ 14.4</u>	<u>\$ 238.1</u>

A rollforward of the change in fair value of Level 3 assets follows.

	2011	2012
	(In millions)	
Fair value at beginning of year	\$214.9	\$200.6
Gain on assets held at end of year	18.8	33.0
Gain on assets sold during the year	1.8	.1
Assets purchased	18.6	15.1
Assets sold	(18.1)	(14.3)
Transfers out	(29.2)	(1.0)
Currency exchange rate fluctuations	(6.2)	4.6
Fair value at end of year	<u>\$200.6</u>	<u>\$238.1</u>

Postretirement benefits other than pensions (OPEB)—We provide certain health care and life insurance benefits for eligible retired employees. Certain of our Canadian employees may become eligible for such postretirement health care and life insurance benefits if they reach retirement age while working for us. In the U.S., employees who retired after 1998 are not entitled to any such benefits. The majority of all retirees are required to contribute a portion of the cost of their benefits and certain current and future retirees are eligible for reduced health care benefits at age 65. We have no OPEB plan assets, rather, we fund medical claims as they are paid. Contribution to our OPEB plans to cover benefit payments are expected to be the equivalent of:

Years ending December 31,	<u>Amount</u> <u>(In millions)</u>
2013	.5
2014	.5
2015	.5
2016	.5
2017	.5
Next 5 years	2.7

The funded status of our OPEB plans is presented in the table below:

	<u>December 31,</u>	
	<u>2011</u>	<u>2012</u>
	<u>(In millions)</u>	
Change in accumulated OPEB obligations:		
Obligations at beginning of the year	\$ 11.2	\$ 13.2
Service cost	.2	.3
Interest cost	.6	.6
Actuarial losses	1.9	.5
Change in currency exchange rates	(.3)	.4
Benefits paid from employer contributions	(.4)	(.4)
Obligations at end of the year	13.2	14.6
Fair value of plan assets	—	—
Funded status	<u>\$(13.2)</u>	<u>\$(14.6)</u>
Amounts recognized in the balance sheet:		
Current accrued pension costs	\$ (.5)	\$ (.5)
Noncurrent accrued pension costs	(12.7)	(14.1)
Total	<u>\$(13.2)</u>	<u>\$(14.6)</u>
Accumulated other comprehensive income:		
Net actuarial losses	\$ 4.9	\$ 5.1
Prior service credit	(5.3)	(4.7)
Total	<u>\$(.4)</u>	<u>\$.4</u>

The amounts shown in the table above for net actuarial losses and prior service credit at December 31, 2011 and 2012 have not yet been recognized as components of our periodic OPEB cost as of those dates. These amounts will be recognized as components of our periodic OPEB cost in future years and are recognized, net of deferred income taxes, in our accumulated other comprehensive income (loss). We expect to recognize approximately \$.3 million of unrecognized actuarial losses and \$.6 million of prior service credit as components of our periodic OPEB cost in 2013.

At December 31, 2012, the accumulated OPEB obligations for all OPEB plans was comprised of \$1.1 million related to U.S. plans and \$13.5 million related to our Canadian plan (2011—\$1.2 million and \$12.0 million, respectively).

In the fourth quarter of 2010, we amended our benefit formula for most participants of our plans effective January 1, 2011, resulting in a prior service credit of approximately \$5.8 million as of December 31, 2010. Key assumptions including the health care cost trend rate as of December 31, 2010 now reflect these plan revisions to the benefit formula.

The components of our periodic OPEB costs are presented in the table below. The amounts shown below for amortization of prior service credit and recognized actuarial losses for 2010, 2011 and 2012 were recognized as components of our accumulated other comprehensive income (loss) at December 31, 2009, 2010 and 2011, respectively, net of deferred income taxes.

	Years ended December 31,		
	2010	2011	2012
	(In millions)		
Net periodic OPEB cost (income):			
Service cost	\$.4	\$.2	\$.3
Interest cost	.8	.6	.6
Amortization of prior service credit	(.2)	(.8)	(.6)
Recognized actuarial losses	.2	.3	.3
Total	<u>\$ 1.2</u>	<u>\$.3</u>	<u>\$.6</u>

The table below details the changes in benefit obligations recognized in accumulated other comprehensive income (loss) during 2010, 2011 and 2012.

	Years ended December 31,		
	2010	2011	2012
	(In millions)		
Changes in benefit obligations recognized in other comprehensive income (loss):			
Current year:			
Net actuarial loss	\$ (1.6)	\$ (2.0)	\$ (.5)
Plan amendments	5.8	—	—
Amortization of unrecognized:			
Prior service credit	(.2)	(.8)	(.6)
Net actuarial loss	.2	.3	.3
Total	<u>\$ 4.2</u>	<u>\$ (2.5)</u>	<u>\$ (.8)</u>

A summary of our key actuarial assumptions used to determine the net benefit obligation as of December 31, 2011 and 2012 are presented in the table below. The weighted average discount rate was determined using the projected benefit obligation as of such dates. The impact of assumed increases in future compensation levels does not have a material effect on the actuarial present value of the benefit obligation as substantially all of such benefits relate solely to eligible retirees, for which compensation is not applicable.

	2011	2012
Healthcare inflation:		
Initial rate	8.0%	7.0%
Ultimate rate	5.0%	5.0%
Year of ultimate rate achievement	2018	2018
Weighted average discount rate	4.1%	3.9%

Assumed health care cost trend rates affect the amounts we report for health care plans. A one percent change in assumed health care trend rates would not have a material effect on the net periodic OPEB cost for 2012 or on the accumulated OPEB obligation at December 31, 2012.

The weighted average discount rate used in determining the net periodic OPEB cost for 2012 was 4.1% (2011 – 5.1%; 2010 – 5.8%). Such weighted average rate was determined using the projected benefit obligation as of the beginning of each year. The impact of assumed increases in future compensation levels does not have a material effect on the net periodic OPEB cost as substantially all of such benefits relate solely to eligible retirees, for which compensation is not applicable. The impact of the assumed rate of return on plan assets also does not have a material effect on the net periodic OPEB cost as there were no plan assets as of December 31, 2011 or 2012.

Variances from actuarially-assumed rates will result in additional increases or decreases in accumulated OPEB obligations, net periodic OPEB cost and funding requirements in future periods.

Note 12 – Other noncurrent liabilities:

	December 31,	
	2011	2012
	(In millions)	
Reserve for uncertain tax positions	\$ 11.9	\$ 13.4
Employee benefits	10.2	11.3
Insurance claims and expenses	.3	.3
Other	5.0	5.3
Total	<u>\$27.4</u>	<u>\$30.3</u>

Note 13 – Stockholders' equity:

Secondary public offering of common stock—In November 2010, we completed a secondary public offering of 17.94 million shares of our common stock in an underwritten offering for net proceeds of \$337.6 million. The price to the public was \$20.00 per share, and the underwriting discount was 5.75% (or \$1.15 per share). Costs of the offering (exclusive of the underwriting discount) were approximately \$.7 million. The offering took place in two parts, and the first closing occurred on November 2, 2010 of 15.6 million shares of common stock that generated net proceeds of \$293.5 million. The second closing (upon exercise of the underwriters' over-allotment option) occurred on November 9, 2010 for an additional 2.34 million shares of common stock that generated additional net proceeds of \$44.1 million. The shares of common stock issued in the secondary offering are identical to the previously issued outstanding shares in all respects, including par value, liquidation and dividend preference. All shares were sold to third-party investors; none of our affiliated companies purchased any shares in the offering. Upon completion of the offering, the Valhi consolidated aggregate ownership of Kronos was reduced from 95.2% (59.2% held by Valhi directly and 36.0% held by NL directly) to 80.4% (50.0% is held by Valhi directly and 30.4% is held by NL directly).

NL common stock options held by our employees—Certain of our employees were granted nonqualified options to purchase NL common stock under the terms of certain option plans sponsored by NL. Generally, the stock options were granted at a price equal to or greater than 100% of the market price of NL's common stock at the date of grant, vested over a five-year period and expired ten years from the date of grant. At December 31, 2012, no options were outstanding as all outstanding options expired or were exercised in 2011. During 2010 and 2011, 10,350 and 25,950 options were exercised, respectively. No options were issued during 2012.

Long-term incentive compensation plan—Prior to 2012, we had a long-term incentive compensation plan that provided for the discretionary grant of, among other things, qualified incentive stock options, nonqualified stock options, restricted common stock, stock awards and stock appreciation rights. Up to 150,000 shares of our common stock could be issued pursuant to this plan. During 2010, 2011 and 2012 we awarded an aggregate of 7,000, 3,500 and 4,500 shares, respectively, of our common stock pursuant to this plan to members of our board of directors. In February 2012, our board of directors voted to replace the existing long-term incentive plan with a new plan that would provide for the award of stock to our board of directors, and up to a maximum of 200,000 shares could be awarded. The new plan was approved at our May 2012 shareholder meeting and shortly thereafter the prior long-term incentive compensation plan terminated. No shares were awarded under this new plan in 2012, and 200,000 shares are available for future award under this new plan.

Stock split—In May 2011, we amended our certificate of incorporation to increase the authorized number of shares of our common stock from 60 million to 240 million. Also in May 2011, we implemented a 2-for-1 split of our common stock effected in the form of a stock dividend. Other than the disclosure of the authorized number of shares of our common stock discussed in this paragraph, we have adjusted all share and per-share disclosures for all periods presented in our consolidated financial statements to give effect to the stock split.

Special dividend—Cash dividends in 2011 include a \$.50 per share special dividend paid to stockholders in the first quarter of 2011.

Stock repurchase program—In December 2010, our board of directors authorized the repurchase of up to 2.0 million shares of our common stock in open market transactions, including block purchases, or in privately-negotiated transactions at unspecified prices and over an unspecified period of time. We may repurchase our common stock from time to time as market conditions permit. The stock repurchase program does not include specific price targets or timetables and may be suspended at any time. Depending on market conditions, we may terminate the program prior to its completion. We would use cash on hand or other sources of liquidity to acquire the shares. Repurchased shares will be added to our treasury and cancelled. To date, we have not made any repurchases under the plan and all 2.0 million shares are available for repurchase.

Accumulated other comprehensive loss—Changes in accumulated other comprehensive income for 2010, 2011 and 2012 are presented in the table below.

	Years ended December 31,		
	2010	2011	2012
	(In millions)		
Accumulated other comprehensive loss, net of tax:			
Marketable securities:			
Balance at beginning of year	\$ —	\$ —	\$ 5.1
Other comprehensive income (loss):			
Unrealized gains (losses) arising during the year	—	5.1	(5.5)
Less reclassification adjustment for amounts included in realized loss	—	—	4.6
Balance at end of year	<u>\$ —</u>	<u>\$ 5.1</u>	<u>\$ 4.2</u>
Currency translation:			
Balance at beginning of year	\$ (65.2)	\$ (65.1)	\$ (91.8)
Other comprehensive income (loss)	.1	(26.7)	28.3
Balance at end of year	<u>\$ (65.1)</u>	<u>\$ (91.8)</u>	<u>\$ (63.5)</u>
Defined benefit pension plans:			
Balance at beginning of year	\$ (81.0)	\$ (89.0)	\$ (99.2)
Other comprehensive income (loss):			
Amortization of prior service cost and net losses included in net periodic pension cost	4.9	6.5	7.0
Net actuarial loss arising during year	(10.2)	(16.7)	(45.1)
Plan amendments	(2.7)	—	—
Balance at end of year	<u>\$ (89.0)</u>	<u>\$ (99.2)</u>	<u>\$ (137.3)</u>
OPEB plans:			
Balance at beginning of year	\$ (1.1)	\$ 1.8	\$.1
Other comprehensive income (loss):			
Amortization of prior service credit and net losses included in net periodic OPEB cost	—	(.3)	(.2)
Net actuarial loss arising during year	(1.2)	(1.4)	(.4)
Plan amendments	4.1	—	—
Balance at end of year	<u>\$ 1.8</u>	<u>\$.1</u>	<u>\$ (.5)</u>
Total accumulated other comprehensive loss:			
Balance at beginning of year	\$(147.3)	\$(152.3)	\$(185.8)
Other comprehensive loss	(5.0)	(33.5)	(11.3)
Balance at end of year	<u>\$(152.3)</u>	<u>\$(185.8)</u>	<u>\$(197.1)</u>

The marketable securities reclassification adjustment in 2012, all of which was reclassified into net income, consists principally of the securities transaction loss related to the sale of TIMET common stock discussed in Note 6. See Note 11 for amounts related to our defined benefit pension plans and OPEB plans.

Note 14—Related party transactions:

We may be deemed to be controlled by Harold C. Simmons. See Note 1. Corporations that may be deemed to be controlled by or affiliated with Mr. Simmons sometimes engage in (a) intercorporate transactions such as guarantees, management and expense sharing arrangements, shared fee arrangements, joint ventures, partnerships, loans, options, advances of funds on open account, and sales, leases and exchanges of assets, including securities issued by both related and unrelated parties and (b) common investment and acquisition strategies, business combinations, reorganizations, recapitalizations, securities repurchases, and purchases and sales (and other acquisitions and dispositions) of subsidiaries, divisions or other business units, which transactions have involved both related and unrelated parties and have included transactions which resulted in the acquisition by one related party of a publicly-held noncontrolling interest in another related party. While no transactions of the type described above are planned or proposed with respect to us other than as set forth in these financial statements, we continuously consider, review and evaluate, and understand that Contran and related entities consider, review and evaluate such transactions. Depending upon the business, tax and other objectives then relevant, it is possible that we might be a party to one or more such transactions in the future.

Current receivables from and payables to affiliates are summarized in the table below.

	December 31,	
	2011	2012
	(In millions)	
Current receivable from affiliate—LPC	\$ 29.6	\$ —
Noncurrent note receivable from Valhi	\$ 136.1	\$ —
Current payables to affiliates:		
LPC	\$ —	\$ 23.5
Income taxes payable to Valhi	8.6	18.1
Total	\$ 8.6	\$ 41.6

From time to time, we will have loans and advances outstanding between us and various related parties pursuant to term and demand notes. We generally enter into these loans and advances for cash management purposes. When we loan funds to related parties, we are generally able to earn a higher rate of return on the loan than we would earn if we invested the funds in other instruments, and when we borrow from related parties, we are generally able to pay a lower rate of interest than we would pay if we had incurred third-party indebtedness. While certain of these loans to affiliates may be of a lesser credit quality than cash equivalent instruments otherwise available to us, we believe we have considered the credit risks in the terms of the applicable loans. In this regard:

- In November 2010, we entered into an unsecured revolving demand promissory note with Valhi whereby, as amended, we have agreed to loan Valhi up to \$100 million (\$225 million at December 31, 2011). Our loan to Valhi bears interest at prime plus 1.00%, payable quarterly, with all principal due on demand, but in any event no earlier than December 31, 2014. The amount of our outstanding loans to Valhi at any time is at our discretion. As of December 31, 2012, we had no outstanding loans to Valhi under this promissory note (2011—\$136.1 million);

- In April 2010, we entered into an unsecured revolving credit note with Contran pursuant to which we could borrow up to \$40 million from Contran. Such revolving credit note terminated upon its maturity in December 2011; and
- In February 2013, we borrowed \$190 million from Contran under the provisions of a new loan described in Note 9.

Interest income on our loan to Valhi was \$.5 million in 2010, \$3.7 million in 2011 and \$7.1 million in 2012. Interest expense on our loans from Contran was \$.2 million in 2010 and nil in 2011.

Amounts payable to LPC are generally for the purchase of TiO₂, while amounts receivable from LPC are generally from the sale of TiO₂ feedstock. See Note 5. Purchases of TiO₂ from LPC were \$133.7 million in 2010, \$144.8 million in 2011 and \$250.2 million in 2012. Sales of feedstock to LPC were \$5.2 million in 2010, \$93.0 million in 2011 and \$143.7 million in 2012.

Under the terms of various intercorporate services agreements (ISAs) entered into between us and various related parties, including Contran, employees of one company will provide certain management, tax planning, financial and administrative services to the other company on a fee basis. Such charges are based upon estimates of the time devoted by the employees of the provider of the services to the affairs of the recipient, and the compensation and associated expenses of such persons. Because of the large number of companies affiliated with Contran, we believe we benefit from cost savings and economies of scale gained by not having certain management, financial and administrative staffs duplicated at each entity, thus allowing certain individuals to provide services to multiple companies but only be compensated by one entity. The net ISA fee charged to us, approved by the independent members of our board of directors, is included in selling, general and administrative expense and corporate expense and was \$8.3 million in 2010, \$9.6 million in 2011 and \$11.2 million in 2012. This agreement is renewed annually and we expect to pay approximately \$12.9 million under the ISA during 2013.

Tall Pines Insurance Company and EWI RE, Inc. provide for or broker certain insurance policies for Contran and certain of its subsidiaries and affiliates, including ourselves. Tall Pines and EWI are subsidiaries of Valhi. Consistent with insurance industry practices, Tall Pines and EWI receive commissions from insurance and reinsurance underwriters and/or assess fees for the policies that they provide or broker. The aggregate premiums paid to Tall Pines and EWI by us and our joint venture were \$8.0 million in 2010, \$9.5 million in 2011 and \$12.0 million in 2012. These amounts principally included payments for insurance and reinsurance premiums paid to third parties, but also included commissions paid to Tall Pines and EWI. Tall Pines purchases reinsurance from third-party insurance carriers with an A.M. Best Company rating of generally at least A- (excellent) for substantially all of the risks it underwrites. We expect these relationships with Tall Pines and EWI will continue in 2013.

Contran and certain of its subsidiaries and affiliates, including us, purchase certain of their insurance policies as a group, with the costs of the jointly-owned policies being apportioned among the participating companies. With respect to certain of such policies, it is possible that unusually large losses incurred by one or more insureds during a given policy period could leave the other participating companies without adequate coverage under that policy for the balance of the policy period. As a result, Contran and certain of its subsidiaries and affiliates, including us, have entered into a loss sharing agreement under which any uninsured loss is shared by those entities who have submitted claims under the relevant policy.

We believe the benefits, in the form of reduced premiums and broader coverage associated with the group coverage for such policies, justifies the risk associated with the potential for any uninsured loss.

Note 15—Commitments and contingencies:

Environmental matters—Our operations are governed by various environmental laws and regulations. Certain of our operations are and have been engaged in the handling, manufacture or use of substances or compounds that may be considered toxic or hazardous within the meaning of applicable environmental laws and regulations. As with other companies engaged in similar businesses, certain of our past and current operations and products have the potential to cause environmental or other damage. We have implemented and continue to implement various policies and programs in an effort to minimize these risks. Our policy is to maintain compliance with applicable environmental laws and regulations at all of our facilities and to strive to improve our environmental performance. From time to time, we may be subject to environmental regulatory enforcement under U.S. and non-U.S. statutes, resolution of which typically involves the establishment of compliance programs. It is possible that future developments, such as stricter requirements of environmental laws and enforcement policies thereunder, could adversely affect our production, handling, use, storage, transportation, sale or disposal of such substances. We believe all of our plants are in substantial compliance with applicable environmental laws.

Litigation matters—We are involved in various environmental, contractual, product liability, patent (or intellectual property), employment and other claims and disputes incidental to our business. We currently believe the disposition of all claims and disputes, individually or in the aggregate, should not have a material adverse effect on our consolidated financial condition, results of operations or liquidity.

In March 2010, we were served with two complaints which were subsequently consolidated as *Haley Paint et al. v. E.I. Du Pont de Nemours and Company, et al.* (United States District Court, for the District of Maryland, Case No. 1:10-cv-00318-RDB). A third plaintiff intervened into the current case in July 2011. The defendants include us, E.I. Du Pont de Nemours & Company, Huntsman International LLC, Millennium Inorganic Chemicals, Inc. and the National Titanium Dioxide Company Limited (d/b/a Cristal). Plaintiffs seek to represent a class consisting of all persons and entities that purchased titanium dioxide in the United States directly from one or more of the defendants on or after March 1, 2002. The complaint alleges that the defendants conspired and combined to fix, raise, maintain, and stabilize the price at which titanium dioxide was sold in the United States and engaged in other anticompetitive conduct. In May 2010, defendants filed a motion to dismiss, which plaintiffs opposed. In March 2011, the court denied the motion to dismiss. In February 2012, the plaintiffs submitted their motion for class certification, which defendants opposed. In August 2012, the court granted the plaintiffs' motion for class certification and trial is currently set for September 2013. The case is proceeding in the trial court. We believe the action is without merit, have denied all allegations of wrongdoing and liability and intend to defend against the action vigorously.

Concentrations of credit risk—Sales of TiO₂ accounted for approximately 90% of our sales in 2010, 92% in 2011 and 90% in 2012. The remaining sales result from the mining and sale of ilmenite ore (a raw material used in the sulfate pigment production process), and the manufacture and sale of iron-based water treatment chemicals and certain titanium chemical products (derived from co-products of the TiO₂ production processes). TiO₂ is generally sold to the paint, plastics and paper industries. Such

markets are generally considered “quality-of-life” markets whose demand for TiO₂ is influenced by the relative economic well-being of the various geographic regions. We sell TiO₂ to over 4,000 customers, with the top ten customers approximating 27% of net sales in 2010, 30% in 2011 and 34% in 2012. We did not have sales to a single customer comprising over 10% of our net sales in 2010 or 2011. In 2012, one customer, Behr Process Corporation, did account for approximately 10% of our net sales. The table below shows the approximate percentage of our TiO₂ sales by volume for our significant markets, Europe and North America, for the last three years.

	<u>2010</u>	<u>2011</u>	<u>2012</u>
Europe	53%	53%	47%
North America	33%	32%	35%

Long-term contracts—We have long-term supply contracts that provide for certain of our TiO₂ feedstock requirements through 2016. The agreements require us to purchase certain minimum quantities of feedstock with minimum purchase commitments aggregating approximately \$1.8 billion over the life of the contracts in years subsequent to December 31, 2012. In addition, we have other long-term supply and service contracts that provide for various raw materials and services. These agreements require us to purchase certain minimum quantities or services with minimum purchase commitments aggregating approximately \$122 million at December 31, 2012.

Operating leases—Our principal German operating subsidiary leases the land under its Leverkusen TiO₂ production facility pursuant to a lease with Bayer AG that expires in 2050. The Leverkusen facility itself, which we own and which represents approximately one-third of our current TiO₂ production capacity, is located within Bayer’s extensive manufacturing complex. We periodically establish the amount of rent for the land lease associated with the Leverkusen facility by agreement with Bayer for periods of at least two years at a time. The lease agreement provides for no formula, index or other mechanism to determine changes in the rent for such land lease; rather, any change in the rent is subject solely to periodic negotiation between Bayer and us. We recognize any change in the rent based on such negotiations as part of lease expense starting from the time such change is agreed upon by both parties, as any such change in the rent is deemed “contingent rentals” under GAAP. Under various supply and services agreements certain majority-owned subsidiaries of Bayer provide raw materials, including chlorine, auxiliary and operating materials, utilities and services necessary to operate the Leverkusen facility. In March 2013 we anticipate entering into a new long-term master agreement expiring in 2017 with a majority-owned subsidiary of Bayer which agreement will set forth the master terms and conditions for the separate supply and services agreements.

We also lease various other manufacturing facilities and equipment. Some of the leases contain purchase and/or various term renewal options at fair market and fair rental values, respectively. In most cases we expect that, in the normal course of business, such leases will be renewed or replaced by other leases. Net rent expense approximated \$11 million in 2010, \$13 million in 2011 and \$16 million in 2012. At December 31, 2012, future minimum payments under noncancellable operating leases having an initial or remaining term of more than one year were as follows:

<u>Years ending December 31,</u>	<u>Amount</u> <u>(In millions)</u>
2013	\$ 12.2
2014	8.5
2015	5.5
2016	3.5
2017	2.6
2018 and thereafter	23.6
Total	<u>\$ 55.9</u>

Approximately \$18 million of the \$55.9 million aggregate future minimum rental commitments at December 31, 2012 relates to our Leverkusen facility lease discussed above. The minimum commitment amounts for such lease included in the table above for each year through the 2050 expiration of the lease are based upon the current annual rental rate as of December 31, 2012. As discussed above, any change in the rent is based solely on negotiations between Bayer and us, and any such change in the rent is deemed “contingent rentals” under GAAP which is excluded from the future minimum lease payments disclosed above.

Income taxes—We and Valhi have agreed to a policy providing for the allocation of tax liabilities and tax payments as described in Note 1. Under applicable law, we, along with every other member of the Contran Tax Group, are each jointly and severally liable for the aggregate federal income tax liability of Contran and the other companies included in the Contran Tax Group for all periods in which we are included in the Contran Tax Group. Valhi has agreed, however, to indemnify us for any liability for income taxes of the Contran Tax Group in excess of our tax liability computed in accordance with the tax allocation policy.

Note 16—Financial instruments:

The following table summarizes the valuation of our financial instruments recorded on a fair value basis as of December 31, 2011 and 2012:

	<u>Fair Value Measurements</u>			
	<u>Quoted</u> <u>Prices in</u> <u>Active</u> <u>Markets</u> <u>(Level 1)</u>	<u>Significant</u> <u>Other</u> <u>Observable</u> <u>Inputs</u> <u>(Level 2)</u>	<u>Significant</u> <u>Unobservable</u> <u>Inputs</u> <u>(Level 3)</u>	
<u>Total</u>	<u>(In millions)</u>			
Asset (liability)				
December 31, 2011				
Currency forward contracts	\$ (.8)	\$ (.8)	\$ —	\$ —
Current marketable securities (See Note 6)	20.9	20.9	—	—
Noncurrent marketable securities (See Note 6)	98.4	98.4	—	—
December 31, 2012				
Currency forward contracts	\$ 1.8	\$ 1.8	\$ —	\$ —
Noncurrent marketable securities (See Note 6)	21.6	21.6	—	—

Certain of our sales generated by our non-U.S. operations are denominated in U.S. dollars. We periodically use currency forward contracts to manage a very nominal portion of currency exchange rate risk associated with trade receivables denominated in a currency other than the holder's functional currency or similar exchange rate risk associated with future sales. We have not entered into these contracts for trading or speculative purposes in the past, nor do we currently anticipate entering into such contracts for trading or speculative purposes in the future. Derivatives used to hedge forecasted transactions and specific cash flows associated with financial assets and liabilities denominated in currencies other than the U.S. dollar and which meet the criteria for hedge accounting are designated as cash flow hedges. Consequently, the effective portion of gains and losses is deferred as a component of accumulated other comprehensive income and is recognized in earnings at the time the hedged item affects earnings. Contracts that do not meet the criteria for hedge accounting are marked-to-market at each balance sheet date with any resulting gain or loss recognized in income currently as part of net currency transactions. The fair value of the currency forward contracts is determined using Level 1 inputs based on the currency spot forward rates quoted by banks or currency dealers.

At December 31, 2012, we had currency forward contracts to exchange an aggregate \$20.0 million for an equivalent value of Norwegian kroner at exchange rates ranging from kroner 6.02 to kroner 6.13 per U.S. dollar. These contracts with DnB Nor Bank ASA mature at a rate of \$5.0 million per month in certain months from January 2013 through May 2013. At December 31, 2011, we had currency forward contracts to exchange an aggregate of \$48.0 million for an equivalent value of Canadian dollars at exchange rates ranging from Cdn. \$.9969 to Cdn. \$1.0283 per U.S. dollar. These contracts with Wells Fargo Bank, National Association matured from January 2012 to December 2012 at a rate of \$4.0 million per month, subject to early redemption at our option.

The estimated fair value of such currency forward contracts at December 31, 2012 was a \$1.8 million net asset, which is recognized as part of Accounts and Other Receivables in our Consolidated Balance Sheet with a corresponding \$1.8 million currency transaction gain in our Consolidated Statement of Operations (2011—\$.8 million net liability, recognized as part of Accounts Payable and Accrued Liabilities, with a corresponding \$.8 million currency transaction loss in our Consolidated Statement of Operations). We did not use hedge accounting for any of our contracts to the extent we held such contracts during 2010, 2011 and 2012.

The following table presents the financial instruments that are not carried at fair value but which require fair value disclosure as of December 31, 2011 and 2012.

	December 31, 2011		December 31, 2012	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
	(In millions)			
Cash, cash equivalents and restricted cash	\$ 89.8	\$ 89.8	\$ 292.9	\$ 292.9
Notes payable and long-term debt:				
Fixed rate with market quotes - 6.5% Senior Secured Notes	360.6	362.6	—	—
Variable rate:				
European credit facility	—	—	13.2	13.2
Term loan	—	—	384.5	396.8
Common stockholders' equity	924.3	2,090.9	1,062.1	2,260.2

At December 31, 2011, the estimated market price of the 6.5% Notes was approximately €1,004 per €1,000 principal amount. At December 31, 2012, the estimated market price of our term loan was \$1,017.5 per \$1,000 principal amount. The fair value of our 6.5% Notes and term loan is based on quoted market prices; however, these quoted market prices represent Level 2 inputs because the markets in which the Notes and term loan trade were not active. The fair value of our European credit facility represents a Level 2 input, and is deemed to approximate book value. The fair value of our common stockholders' equity is based upon quoted market prices at each balance sheet date, which represent Level 1 inputs. Due to their near-term maturities, the carrying amounts of accounts receivable and accounts payable are considered equivalent to fair value. See Notes 1 and 6.

Note 17 – Recent accounting standards:

In June 2011 the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2011-05, *Presentation of Comprehensive Income*. ASU 2011-05 eliminates the option of presenting comprehensive income as a component of the Consolidated Statement of Stockholders' Equity and instead requires comprehensive income to be presented as a component of the Consolidated Statement of Income or in a separate Consolidated Statement of Comprehensive Income immediately following the Consolidated Statement of Income. In accordance with ASU 2011-05, we now present our comprehensive income in a separate Consolidated Statement of Comprehensive Income. Additionally, ASU 2011-05 would have required us to present on the face of our financial statements the effect of reclassifications out of accumulative other comprehensive income on the components of net income and other comprehensive income. However, in December 2011 the FASB issued ASU 2011-12, *Comprehensive Income (Topic 220): Deferral of the Effective Date for Amendments to the Presentation of Reclassifications of Items Out of Accumulated Other Comprehensive Income in Accounting Standards Update No. 2011-05*. ASU 2011-12 defers the effective date for the requirement to present on the face of our financial statements the effects of reclassifications out of accumulated other comprehensive income on the components of net income and other comprehensive income. Adoption of ASU 2011-05, as amended by ASU 2011-12, did not have a material effect on our Consolidated Financial Statements.

In February 2013 the FASB issued ASU 2013-02, *Reporting of Amounts Reclassified out of Accumulated Other Comprehensive Income*. ASU 2013-02 does not change current financial reporting requirements, instead an entity is required to cross-reference to other required disclosures that provide additional detail about amounts reclassified out of accumulated other comprehensive income. In addition, ASU 2013-02 requires an entity to present significant amounts reclassified out of accumulated other comprehensive income by line item of net income if the amount reclassified is required to be reclassified to net income in its entirety in the same reporting period. Adoption of this standard is required for periods beginning after December 15, 2013; however, as permitted by the standard, we have elected to adopt ASU 2013-02 beginning with this report, see Note 13. The adoption of ASU 2013-02 did not have a material effect on our Consolidated Financial Statements.

Note 18—Quarterly results of operations (unaudited):

	Quarter ended			
	March 31	June 30	September 30	December 31
	(In millions, except per share data)			
Year ended December 31, 2011				
Net sales	\$ 420.4	\$ 537.5	\$ 548.0	\$ 437.4
Gross margin	146.4	197.0	210.9	194.1
Net income	60.3	89.0	85.9	85.8
Basic and diluted earnings per common share	\$.52	\$.77	\$.74	\$.74
Year ended December 31, 2012				
Net sales	\$ 561.3	\$ 545.3	\$ 472.9	\$ 396.8
Gross margin	261.5	163.3	86.0	49.6
Net income (loss)	136.9	64.5	35.2	(18.1)
Basic and diluted earnings (loss) per common share	\$ 1.18	\$.56	\$.30	\$ (.16)

In the second quarter of 2011, we recognized a \$3.3 million pre-tax interest charge related to the partial redemption of our Senior Secured Notes. See Note 9.

Our provision for income taxes in the third and fourth quarters of 2011 includes \$13.2 million and \$4.0 million, respectively, for U.S. incremental income taxes on current earnings repatriated from our German subsidiary, which earnings were used to fund a portion of the repurchases of our Senior Secured Notes discussed in Note 9.

In the second quarter of 2012, we recognized a \$7.2 million pre-tax interest charge related to the June redemption of our outstanding Senior Secured Notes. See Note 9.

In the fourth quarter of 2012, we recognized a \$3.9 million pre-tax loss on the sale of TIMET stock. See Note 6.

Our provision for income taxes in the third quarter of 2012 includes an incremental tax benefit of \$11.1 million as we determined during the third quarter that due to global changes in the business we would not remit certain dividends from non-U.S. jurisdictions. As a result, certain current year tax attributes were available for carryback to offset prior year tax expense. See Note 10.

Our provision for income taxes in the fourth quarter of 2012 includes an incremental tax of \$8.0 million. During the fourth quarter as a result of a change in circumstances related to our sale and the sale by certain of our affiliates of their shares of TIMET common stock, which sale provided an opportunity for us and other members of our consolidated U.S. federal income tax group to elect to claim foreign tax credits, we determined that we could tax-efficiently remit non-cash dividends from our non-U.S. jurisdictions before the end of the year that absent the TIMET sale would not have been considered. Such incremental income tax recognized in the fourth quarter is the incremental income tax on the non-cash dividends remitted in the fourth quarter. Our provision for income taxes in the fourth quarter of 2012 also includes a \$2.8 million expense related to a net increase in our reserve for uncertain tax positions. See Note 10. In addition, an aggregate \$3.5 million of such fourth quarter 2012 provision for income taxes is a correction of amounts that should have been recognized in the third quarter of 2011 and is not material to any current or prior periods.

The sum of the quarterly per share amounts may not equal the annual per share amounts due to relative changes in the weighted average number of shares used in the per share computations.

**AMENDED AND RESTATED
TAX AGREEMENT
Between
VALHI, INC.
and
KRONOS WORLDWIDE, INC.**

AMENDED AND RESTATED TAX AGREEMENT (the "Agreement") dated as of December 1, 2012 by and among Valhi, Inc. ("VHI"), a Delaware corporation having its principal executive offices at Three Lincoln Centre, 5430 LBJ Freeway, Suite 1700, Dallas, Texas 75240, Contran Corporation ("Contran"), a Delaware corporation having its principal executive offices at Three Lincoln Centre, 5430 LBJ Freeway, Suite 1700, Dallas, TX 75240 and Kronos Worldwide, Inc. ("KWI"), a Delaware corporation having its principal executive offices at Three Lincoln Centre, 5430 LBJ Freeway, Suite 1700, Dallas, TX 75240.

WHEREAS, VHI and KWI file consolidated returns of federal income taxes and, subject to certain jurisdictional limitations, are subject to combined state and local tax reporting;

WHEREAS, this Agreement supercedes and amends and restates the Tax Agreement dated December 8, 2003 previously entered into between VHI, Contran and KWI;

WHEREAS, VHI and KWI wish to provide for the allocation of liabilities, and procedures to be followed, with respect to federal income taxes of KWI and any subsidiaries of KWI and with respect to certain combined state and local taxes on the terms of this Agreement.

NOW, THEREFORE, in consideration of the promises and agreements herein contained, the parties hereto agree as follows:

1. **Definitions.** As used in this Agreement, the following terms have the meanings set forth below:

(a) **Code:** The Internal Revenue Code of 1986, as amended, and with respect to any section thereof any successor provisions under such Code or any successor Code.

(b) **Combined Foreign, State and Local Taxes:** For a taxable period, and with respect to a specified group of entities, the amount of all Foreign, State and Local Taxes, for which liability is computed on the basis of a combined, unitary or consolidated return (whether at the initiative of the tax authority or of the taxpayer).

(c) **Contran Corporation:** A Delaware corporation that is the common parent of a group of corporations, which group of corporations includes the KWI Group and VHI Group, electing to file a consolidated federal income tax return.

(d) Federal Taxes: All federal income taxes, together with all interest and penalties with respect thereto.

(e) Foreign, State and Local Taxes: All foreign, state and local taxes, including franchise and similar taxes, together with all interest and penalties with respect thereto.

(f) VHI Group: VHI and each of its direct and indirect subsidiaries which would be a member of an affiliated group, within the meaning of section 1504(a) of the Code, and eligible to file a combined, unitary or consolidated return of which Contran was the common parent (the "Contran Tax Group"), as such VHI Group is constituted from time to time. For purposes of this Agreement (to the extent related to the determination of Combined Foreign, State and Local Taxes for the VHI Group), the term "VHI Group" shall include all direct and indirect subsidiaries of VHI with reference to which Combined Foreign, State and Local Taxes are determined.

(g) KWI Group: KWI and each of its direct or indirect subsidiaries which would be a member of an affiliated group, within the meaning of section 1504(a) of the Code, and eligible to file a combined, unitary or consolidated return of which KWI was the common parent, as such KWI Group is constituted from time to time. For purposes of this Agreement (to the extent related to the determination of Combined Foreign, State and Local Taxes for the KWI Group), the term "KWI Group" shall include all direct and indirect subsidiaries of KWI with reference to which Combined, Foreign, State and Local taxes are determined.

(h) KWI Group Tax Liability: For a taxable period, the liability for Federal Taxes and Combined Foreign, State and Local taxes, as applicable, that the KWI Group would have had if it were not a member of the VHI Group or Contran Tax Group during such taxable period (or during any taxable period prior thereto including prior periods when the KWI Group was part of the consolidated federal income tax group of which NL Industries, Inc., a Delaware corporation, was the common parent ("NL Group")), and instead filed a separate consolidated or combined return, as applicable, for such taxable period; provided, however, that for purposes of determining such liability for a taxable period all tax elections shall be consistent with the tax elections made by Contran for such period. In making such tax elections it is understood Contran will make those tax elections which are beneficial to the Contran Tax Group on a consolidated basis. Nevertheless, Contran will use its best efforts in the case of those elections which affect the computation of the KWI Group Tax Liability, to make elections in a reasonable manner so as to minimize the KWI Group Tax Liability. For purposes of this Agreement, in determining the Combined Foreign, State and Local Taxes for the KWI Group, such determination shall be made based on a separate Foreign, State and Local Tax Calculation as if the KWI Group were a separate unitary filer with respect to states and other jurisdictions in which Contran is required to file on a unitary or combined basis.

(i) **Foreign, State and Local Tax Calculation:** For each reporting period, the Tax Calculation will be based on the estimated taxable income of the KWI Group for the taxable period that includes such reporting period, applied to current year tax rates and using the KWI Group's applicable apportionment factors and state, local or other applicable adjustments, in each case based on the applicable combined or unitary return most recently-filed as of each reporting period by the Contran Tax Group for each applicable tax jurisdiction (as modified for extraordinary, one-time event adjustments or tax law changes, if any, impacting the unitary calculation for the KWI Group).

2. **Contran as Agent.** Contran shall be the sole agent for the KWI Group in all matters relating to the KWI Group Tax Liability. The KWI Group shall not (a) terminate such agency or (b) without the consent of Contran, participate, or attempt to participate, in any matters related to the KWI Group Tax Liability, including, but not limited to, preparation or filing of, or resolution of disputes, protests or audits with the Internal Revenue Service, state or local taxing authorities concerning, the Contran Tax Group's consolidated returns of Federal Taxes, returns of Combined Foreign, State and Local Taxes or the KWI Group Tax Liability with respect thereto for any taxable period beginning after January 1, 2001. The KWI Group shall cooperate fully in providing Contran with all information and documents necessary or desirable to enable Contran to perform its obligations under this Section, including completion of Internal Revenue Service and state or local tax audits in connection with such KWI Group Tax Liability and determination of the proper liability for such KWI Group Tax Liability.

3. **Liability for Taxes; Refunds.**

(a) VHI, as the common parent of the KWI Group, shall be responsible for, and shall pay to Contran or a taxing authority, as applicable, the consolidated tax liability for Federal Taxes and Combined Foreign, State and Local Taxes for the VHI Group and has the sole right to any refunds received from Contran or a taxing authority, as applicable, subject to the provisions of Sections 5 and 6 of this Agreement.

(b) Notwithstanding any other provision of this Agreement, KWI and each subsidiary of KWI which is a member of the KWI Group shall be severally liable to VHI for the KWI Group Tax Liability.

(c) KWI shall indemnify VHI and hold it and the VHI Group other than the KWI Group, harmless from and against any deficiency in the KWI Group Tax Liability that may be due to VHI.

(d) VHI shall indemnify KWI and hold it and the KWI Group harmless from and against any Federal Taxes and Combined Foreign, State and Local Taxes attributable to the VHI Group or any other member of the Contran Tax Group, other than the KWI Group, as such taxes are determined under this and other tax sharing agreements.

4. **Tax Returns.** Contran shall file on behalf of the KWI Group any and all federal, foreign, state and local tax returns that are required as they pertain to the KWI Group Tax Liability. The KWI Group, at Contran's request, shall join in any applicable consolidated returns of Federal Taxes and any returns of Combined Foreign, State and Local Taxes (for which returns have not been theretofore filed) and execute its consent, if such consent has not

previously been executed, to each such filing on any form as may be prescribed for such consent if such consent is required. The decision of Contran's Vice President and Tax Director (or any other officer so designated by Contran) with responsibility for tax matters shall, subject to the provisions of this Agreement, be binding in any dispute between Contran, VHI and the KWI Group as to what tax position should be taken with respect to any item or transaction of the KWI Group. The preceding sentence is limited to the tax positions that affect the KWI Group Tax Liability and the combined VHI Group and Contran Tax Group. In addition, VHI and members of the VHI Group, including KWI and members of the KWI Group, shall provide each other with such cooperation, assistance and information as each of them may request of the other with respect to the filing of any tax return, amended return, claim for refund or other document with any taxing authority. KWI shall be solely responsible for all taxes due for the KWI Group with respect to tax returns filed by KWI or a member of the KWI Group that are required to be filed on a separate company basis, independent of Contran or VHI.

5. Payment of KWI Group Tax Liability for Federal Taxes and Foreign, State and Local Taxes. On or before each date, as determined under section 6655 of the Code (with respect to Federal Taxes) and the applicable tax provisions with respect to any Foreign, State and Local Taxes due pursuant to this Agreement, for payment of an installment of estimated Federal Taxes or any Foreign, State and Local Taxes, KWI shall pay to VHI an amount equal to the installment which the KWI Group would have been required to pay as an estimated payment of Federal Taxes to the Internal Revenue Service or any Foreign, State and Local Taxes to the applicable taxing authority if it were filing a separate consolidated, combined or unitary return in respect of the KWI Group Tax Liability. Any balance owed with respect to the KWI Group Tax Liability for such taxable period shall be paid to VHI on or before the 15th day of the third month after the close of such taxable period. If it is not possible to determine the amount of such balance on or before such day, (a) a reasonable estimate thereof shall be paid on or before such day, (b) the amount of such balance shall be finally determined on or before the earlier of; (i) the 15th day of the ninth month after the close of such taxable period (or the applicable due date for the Contran foreign, state or local combined or unitary return) and (ii) the date on which the Contran Group consolidated tax return for such period is filed with the Internal Revenue Service or the applicable tax authority, and (c) any difference between the amount so determined and the estimated amount paid shall; (i) in the case of an underpayment, be promptly paid to VHI and (ii) in the case of an overpayment, be promptly refunded or applied against the estimated KWI Group Tax Liability for the immediately following tax period, at the option of VHI. If the overpayment is not applied to the immediately following tax period, such overpayment shall be promptly refunded to the KWI Group. As between the parties to this Agreement, the KWI Group shall be solely responsible for the KWI Group Tax Liability and shall have no responsibility for Federal Taxes of the VHI Group or the Contran Group other than payment of the KWI Group Tax Liability in accordance with the terms of this Agreement. Notwithstanding the foregoing, VHI at its option may extend the payment due date for any of the payments referenced above.

6. Refunds for KWI Group Losses and Credits for Federal Taxes. If the calculation with respect to the KWI Group Tax Liability for Federal Taxes results in a net operating loss ("NOL") for the current tax period that, in the absence of a Code Section 172(b)(3) election made by Contran, is carried back under Code Sections 172 and 1502 to a prior taxable period or periods of the KWI Group with respect to which the KWI Group previously made payments to

VHI, then, in that event, VHI shall pay (or credit) KWI an amount equal to the tax refund to which the KWI Group would have been entitled had the KWI Group filed a separate consolidated federal income tax return for such year (but not in excess of the net aggregate amount of the KWI Group Tax Liability paid to VHI with respect to the preceding two taxable periods). If the calculation with respect to the KWI Group Tax Liability results in an NOL for the current tax period, that subject to the Code Section 172(b)(3) election made by Contran, is not carried back under Code Sections 172 and 1502 to a prior taxable period or periods of the KWI Group with respect to which KWI made payments to VHI or is not carried back because the Contran Tax Group does not have a consolidated net operating loss for the current tax period, then, in that event such NOL shall be an NOL carryover to be used in computing the KWI Group Tax Liability for future taxable periods, under the law applicable to NOL carryovers in general, as such law applies to the relevant taxable period. Payments made pursuant to this Section 6 shall be made on the date that Contran (or any successor common parent of a tax group to which the VHI Group is a member) files its consolidated federal income tax return for the taxable period involved. Principles similar to those discussed in this Section 6 shall apply in the case of the utilization of all KWI Group loss and credit carrybacks and carryovers.

7. Refunds for KWI Group Combined or Unitary Foreign, State and Local Losses and Credits. The foregoing principles contained in Section 6 shall apply in similar fashion to any consolidated, unitary or combined foreign, state or other local income tax returns, containing any member of the KWI Group, which may be filed based on the KWI Group Tax Liability for Foreign, State and Local Taxes.

8. Subsequent Adjustments. If any settlement with the Internal Revenue Service, foreign, state or local tax authority or court decision which has become final results in any adjustment to any item of income, deduction, loss or credit to the Contran Group in respect of any taxable period subject to this Agreement, which, in any such case, affects or relates to any member of the KWI Group as constituted during such taxable period, the KWI Tax Group Liability shall be redetermined to give effect to such adjustment as if it had been made as part of or reflected in the original computation of the KWI Tax Group Liability and proper adjustment of amounts paid or owing hereunder in respect of such liability and allocation shall be promptly made in light thereof.

9. Amendments. This Agreement may be amended, modified, superseded or cancelled, and any of the terms, covenants, or conditions hereof may be waived, only by a written instrument specifically referring to this Agreement and executed by all parties (or, in the case of a waiver, by or on behalf of the party waiving compliance). The failure of any party at any time or times to require performance of any provision of this Agreement shall in no manner affect the right at a later time to enforce the same. No waiver by any party of any condition, or of any breach of any term or covenant, contained in this Agreement, in any one or more instances, shall be deemed to be or construed as a further or continuing waiver of any such condition or breach, or a waiver of any other condition or of any breach of any other term or covenant.

10. Retention of Records. Contran shall retain all tax returns, tax reports, related workpapers and all schedules (along with all documents that pertain to any such tax returns, reports or workpapers) that relate to a taxable period in which the KWI Group is included in a consolidated or combined tax return with VHI and Contran. Contran shall make such documents available to KWI at KWI's request. Contran shall not dispose of such documents without the permission of KWI.

11. Headings. The headings of this Agreement are for convenience of reference only, and shall not in any way affect the meaning or interpretation of this Agreement.

12. Governing Law. This Agreement shall be construed and enforced in accordance with the laws of the State of Delaware without regard to conflicts of laws provisions.

13. Counterparts. This Agreement may be executed in multiple counterparts, each of which shall be an original, but all of which shall constitute but one agreement.

14. Successors. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective subsidiaries, and their respective successors and assigns.

15. Effective Date. This Agreement shall be effective as of December 1, 2012.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date first above written.

VALHI, INC.

By: _____
Bobby D. O'Brien
Vice President and Chief Financial Officer

CONTRAN CORPORATION

By: _____
Gregory M. Swalwell
Vice President and Controller

KRONOS WORLDWIDE, INC.

By: _____
Kelly D. Luttmer
Vice President and Tax Director

**FIFTH AMENDED AND RESTATED
UNSECURED REVOLVING
DEMAND PROMISSORY NOTE**

\$100,000,000.00

December 31, 2012

Section 1. Promise to Pay. For and in consideration of value received, the undersigned, VALHI, INC., a corporation duly organized under the laws of the state of Delaware (“*Borrower*”), promises to pay, in lawful money of the United States of America, to the order of KRONOS WORLDWIDE, INC., a corporation duly organized under the laws of the state of Delaware (“*Kronos Worldwide*”), or the holder hereof (as applicable, Kronos Worldwide or such holder shall be referred to as the “*Noteholder*”), the principal sum of ONE HUNDRED MILLION and NO/100ths United States Dollars (\$100,000,000.00) or such lesser amount as shall equal the unpaid principal amount of the loan made by the Noteholder to Borrower together with accrued and unpaid interest on the unpaid principal balance from time to time pursuant to the terms of this Fifth Amended and Restated Unsecured Revolving Demand Promissory Note, as it may be amended from time to time (this “*Note*”). This Note shall be unsecured and will bear interest on the terms set forth in **Section 7** below. Capitalized terms not otherwise defined shall have the meanings given to such terms in **Section 18** of this Note.

Section 2. Amendment and Restatement. This Note renews, replaces, amends and restates in its entirety the Fourth Amended and Restated Unsecured Revolving Demand Promissory Note dated December 19, 2012 in the original principal amount of \$235,000,000.00 payable to the order of the Noteholder and executed by the Borrower (the “*Fourth Amended Note*”). The Fourth Amended Note renewed, replaced, amended and restated the Third Amended and Restated Unsecured Revolving Demand Promissory Note dated December 31, 2011 in the original principal amount of \$225,000,000.00 payable to the order of the Noteholder and executed by the Borrower (the “*Third Amended Note*”). The Third Amended Note renewed, replaced, amended and restated the Second Amended and Restated Unsecured Revolving Demand Promissory Note dated June 30, 2011 in the original principal amount of \$175,000,000.00 payable to the order of the Noteholder and executed by the Borrower (the “*Second Amended Note*”). The Second Amended Note renewed, replaced, amended and restated the First Amended and Restated Unsecured Revolving Demand Promissory Note dated December 31, 2010 in the original principal amount of \$175,000,000.00 payable to the order of the Noteholder and executed by the Borrower (the “*First Amended Note*”). The First Amended Note renewed, replaced, amended and restated the Unsecured Revolving Demand Promissory Note dated November 10, 2010 in the original principal amount of \$100,000,000.00 payable to the order of the Noteholder and executed by the Borrower (the “*Original Note*”). This Note amends and restates in its entirety the Fourth Amended Note, the Third Amended Note, the Second Amended Note, the First Amended Note and the Original Note (collectively, the “*Prior Notes*”); *provided* that such amendment and restatement shall operate to renew, amend and modify the rights and obligations of the parties under each Prior Note, as provided herein, but shall not extinguish the obligations under each Prior Note, nor effect a novation thereof. As of the close of business on December 31, 2012, the unpaid principal balance of the Fourth Amended Note was nil, the accrued and unpaid interest thereon was nil and the accrued and unpaid commitment fee thereon was nil, which is the unpaid principal, accrued and unpaid interest and accrued and unpaid commitment fee owed under this Note as of the close of business on the date of this Note.

Section 3. Place of Payment. All payments will be made at Noteholder’s address at Three Lincoln Centre, 5430 LBJ Freeway, Suite 1700, Dallas, Texas 75240-2697, Attention: Treasurer, or such other place as the Noteholder may from time to time appoint in writing.

Section 4. Payments. The unpaid principal balance of this Note and any accrued and unpaid interest thereon shall be due and payable on the Final Payment Date. Prior to the Final Payment Date, any accrued and unpaid interest on an unpaid principal balance shall be paid in arrears quarterly on the last day of each March, June, September and December, commencing March 31, 2013. All payments on this Note shall be applied first to accrued and unpaid interest, next to accrued interest not yet payable and then to principal. If any payment of principal or interest on this Note shall become due on a day that is not a Business Day, such payment shall be made on the next succeeding Business Day and the payment shall be the amount owed on the original payment date.

Section 5. Prepayments. This Note may be prepaid in part or in full at any time without penalty.

Section 6. Borrowings. Prior to the Final Payment Date, Noteholder expressly authorizes Borrower to borrow, repay and re-borrow principal under this Note in increments of \$100,000 on a daily basis so long as:

- the aggregate outstanding principal balance does not exceed \$100,000,000.00; and
- no Event of Default has occurred and is continuing.

Notwithstanding anything else in this Note, in no event will Noteholder be required to lend money to Borrower under this Note and loans under this Note shall be at the sole and absolute discretion of Noteholder.

Section 7. Interest. The unpaid principal balance of this Note shall bear interest at the rate per annum of the Prime Rate plus one percent (1.00%). In the event that an Event of Default occurs and is continuing, the unpaid principal amount shall bear interest from the Event of Default at the rate per annum of the Prime Rate plus four percent (4.00%) until such time as the Event of Default is cured. Accrued interest on the unpaid principal of this Note shall be computed on the basis of a 365- or 366-day year for actual days (including the first, but excluding the last day) elapsed, but in no event shall such computation result in an amount of accrued interest that would exceed accrued interest on the unpaid principal balance during the same period at the Maximum Rate. Notwithstanding anything to the contrary, this Note is expressly limited so that in no contingency or event whatsoever shall the amount paid or agreed to be paid to the Noteholder exceed the Maximum Rate. If, from any circumstances whatsoever, the Noteholder shall ever receive as interest an amount that would exceed the Maximum Rate, such amount that would be excessive interest shall be applied to the reduction of the unpaid principal balance and not to the payment of interest, and if the principal amount of this Note is paid in full, any remaining excess shall be paid to Borrower, and in such event, the Noteholder shall not be subject to any penalties provided by any laws for contracting for, charging, taking, reserving or receiving interest in excess of the highest lawful rate permissible under applicable law. All sums paid or agreed to be paid to Noteholder for the use, forbearance or detention of the indebtedness of the Borrower to Noteholder shall, to the extent permitted by applicable law, be amortized, prorated, allocated and spread throughout the full term of such indebtedness until payment in full of the principal (including the period of any renewal or extension thereof) so that the interest on account of such indebtedness shall not exceed the Maximum Rate. If at any time the Contract Rate is limited to the Maximum Rate, any subsequent reductions in the Contract Rate shall not reduce the rate of interest on this Note below the Maximum Rate until the total amount of interest accrued equals the amount of interest that would have accrued if the Contract Rate had not been limited by the Maximum Rate. In the event that, upon the Final Payment Date, the total amount of interest paid or accrued on this Note is less than the amount of interest that would have accrued if the Contract Rate had not been limited by the Maximum Rate, then at such time, to the extent permitted by law, in addition to the principal and any other amounts Borrower owes to the Noteholder, the Borrower shall pay to the Noteholder an amount equal to the difference between: (i) the lesser of the amount of interest that would have accrued if the Contract Rate had not been limited by the Maximum Rate or the amount of interest that would have accrued if the Maximum Rate had at all times been in effect; and (ii) the amount of interest actually paid on this Note.

Section 8. Fees and Expenses. On the last day of each March, June, September and December, commencing March 31, 2013, and on the Final Payment Date, Borrower shall pay to Noteholder the Unused Commitment Fee for such period, *provided, however*, Borrower will not owe any Unused Commitment Fee for any part of such period (prorated as applicable) that the Noteholder is a net borrower of money from the Borrower. In addition, Borrower and any guarantor jointly and severally agree to pay on the Final Payment Date to Noteholder any other cost or expense reasonably incurred by Noteholder in connection with Noteholder's commitment to Borrower pursuant to the terms of this Note, including without limitation any other cost reasonably incurred by Noteholder pursuant to the terms of any credit facility of Noteholder.

Section 9. Remedy. Upon the occurrence and during the continuation of an Event of Default, the Noteholder shall have all of the rights and remedies provided in the applicable Uniform Commercial Code, this Note or any other agreement among Borrower and in favor of the Noteholder, as well as those rights and remedies provided by any other applicable law, rule or regulation. In conjunction with and in addition to the foregoing rights and remedies of the Noteholder, the Noteholder may declare all indebtedness due under this Note, although otherwise unmatured, to be due and payable immediately without notice or demand whatsoever. All rights and remedies of the Noteholder are cumulative and may be exercised singly or concurrently. The failure to exercise any right or remedy will not be a waiver of such right or remedy.

Section 10. Right of Offset. The Noteholder shall have the right of offset against amounts that may be due by the Noteholder now or in the future to Borrower against amounts due under this Note.

Section 11. Record of Outstanding Indebtedness. The date and amount of each repayment of principal outstanding under this Note or interest thereon shall be recorded by Noteholder in its records. The principal balance outstanding and all accrued or accruing interest owed under this Note as recorded by Noteholder in its records shall be the best evidence of the principal balance outstanding and all accrued or accruing interest owed under this Note; *provided* that the failure of Noteholder to so record or any error in so recording or computing any such amount owed shall not limit or otherwise affect the obligations of the Borrower under this Note to repay the principal balance outstanding and all accrued or accruing interest.

Section 12. Waiver. Borrower and each surety, endorser, guarantor, and other party now or subsequently liable for payment of this Note, severally waive demand, presentment for payment, notice of nonpayment, notice of dishonor, protest, notice of protest, notice of the intention to accelerate, notice of acceleration, diligence in collecting or bringing suit against any party liable on this Note, and further agree to any and all extensions, renewals, modifications, partial payments, substitutions of evidence of indebtedness, and the taking or release of any collateral with or without notice before or after demand by the Noteholder for payment under this Note.

Section 13. Costs and Attorneys' Fees. In addition to any other amounts payable to Noteholder pursuant to the terms of this Note, in the event the Noteholder incurs costs in collecting on this Note, this Note is placed in the hands of any attorney for collection, suit is filed on this Note or if proceedings are had in bankruptcy, receivership, reorganization, or other legal or judicial proceedings for the collection of this Note, Borrower and any guarantor jointly and severally agree to pay on demand to the Noteholder all expenses and costs of collection, including, but not limited to, reasonable attorneys' fees incurred in connection with any such collection, suit, or proceeding, in addition to the principal and interest then due.

Section 14. Time of Essence. Time is of the essence with respect to all of Borrower's obligations and agreements under this Note.

Section 15. Jurisdiction and Venue. THIS NOTE SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE DOMESTIC LAWS OF THE STATE OF TEXAS, WITHOUT GIVING EFFECT TO ANY CHOICE OF LAW OR CONFLICT OF LAW PROVISION OR RULE (WHETHER OF THE STATE OF TEXAS OR ANY OTHER JURISDICTION) THAT WOULD CAUSE THE APPLICATION OF THE LAWS OF ANY JURISDICTION OTHER THAN THE STATE OF TEXAS. BORROWER CONSENTS TO JURISDICTION IN THE COURTS LOCATED IN DALLAS, TEXAS

Section 16. Notice. Any notice or demand required by this Note shall be deemed to have been given and received on the earlier of **(i)** when the notice or demand is actually received by the recipient or **(ii)** 72 hours after the notice is deposited in the United States mail, certified or registered, with postage prepaid, and addressed to the recipient. The address for giving notice or demand under this Note **(i)** to the Noteholder shall be the place of payment specified in **Section 3** or such other place as the Noteholder may specify in writing to the Borrower and **(ii)** to Borrower shall be the address below the Borrower's signature or such other place as the Borrower may specify in writing to the Noteholder.

Section 17. Successors and Assigns. All of the covenants, obligations, promises and agreements contained in this Note made by Borrower shall be binding upon its successors and permitted assigns, as applicable. Notwithstanding the foregoing, Borrower shall not assign this Note or its performance under this Note without the prior written consent of the Noteholder.

Section 18. Definitions. For purposes of this Note, the following terms shall have the following meanings:

(a) "Basis Point" shall mean 1/100th of 1 percent.

(b) "Business Day" shall mean any day banks are open in the state of Texas.

(c) "Contract Rate" means the amount of any interest (including fees, charges or expenses or any other amounts that, under applicable law, are deemed interest) contracted for, charged or received by or for the account of Noteholder.

(d) “**Event of Default**” wherever used herein, means any one of the following events:

- (i) the Borrower fails to pay any amount due on this Note and/or any fees or sums due under or in connection with this Note after any such payment otherwise becomes due and payable and three Business Days after demand for such payment;
- (ii) the Borrower otherwise fails to perform or observe any other provision contained in this Note and such breach or failure to perform shall continue for a period of thirty days after notice thereof shall have been given to the Borrower by the Noteholder;
- (iii) a case shall be commenced against Borrower, or Borrower shall file a petition commencing a case, under any provision of the Federal Bankruptcy Code of 1978, as amended, or shall seek relief under any provision of any other bankruptcy, reorganization, arrangement, insolvency, readjustment of debt, dissolution or liquidation law of any jurisdiction, whether now or hereafter in effect, or shall consent to the filing of any petition against it under such law, or Borrower shall make an assignment for the benefit of its creditors, or shall admit in writing its inability to pay its debts generally as they become due, or shall consent to the appointment of a receiver, trustee or liquidator of Borrower or all or any part of its property; or
- (iv) an event occurs that, with notice or lapse of time, or both, would become any of the foregoing Events of Default.

(e) “**Final Payment Date**” shall mean the earlier of:

- written demand by the Noteholder for payment of all or part of the unpaid principal, the accrued and unpaid interest thereon and the accrued and unpaid commitment fee thereon, but in any event no earlier than December 31, 2014; or
- acceleration as provided herein.

(f) “**Maximum Rate**” shall mean the highest lawful rate permissible under applicable law for the use, forbearance or detention of money.

(g) “**Prime Rate**” shall mean the fluctuating interest rate per annum in effect from time to time equal to the base rate on corporate loans as reported as the Prime Rate in the Money Rates column of *The Wall Street Journal* or other reliable source.

(h) “**Unused Commitment Amount**” for any period on after the date of this Note shall mean the average on each day of such period of the difference between (A) \$100,000,000.00 and (B) the amount of the unpaid principal balance of this Note.

(i) “**Unused Commitment Fee**” shall mean the product of (A) 50 Basis Points per annum (pro rated to take into account that the fee is payable quarterly, or such shorter period if applicable) and (B) the Unused Commitment Amount.

BORROWER:

VALHI, INC.

By: _____
Gregory M. Swalwell
Vice President and Controller

Address:

5430 LBJ Freeway, Suite 1700
Dallas, Texas 75240-2697

As of the date hereof, Kronos Worldwide, Inc., as the Noteholder, hereby agrees that this Note renews, replaces, amends and restates in its entirety each Prior Note (but shall not extinguish the obligations under each Prior Note, nor effect a novation thereof), and that the unpaid principal of nil, the accrued and unpaid interest thereon of nil and the accrued and unpaid commitment fee thereon of nil that was owed under the Fourth Amended Note as of the close of business on December 31, 2012 are the unpaid principal, the accrued and unpaid interest thereon and the accrued and unpaid commitment fee thereon, respectively, owed under this Note as of the close of business on the date of this Note.

KRONOS WORLDWIDE, INC.

By: _____
Tim C. Hafer
Vice President and Controller

SUBSIDIARIES OF THE REGISTRANT

<u>NAME OF CORPORATION</u>	<u>Jurisdiction of incorporation or organization</u>	<u>% of Voting Securities Held at December 31, 2012(a)</u>
Kronos Canada, Inc.	Canada	100
Kronos International, Inc.	Delaware	100
Kronos Titan GmbH	Germany	100
Société Industrielle du Titane, S.A.	France	99
Kronos Limited	United Kingdom	100
Kronos Denmark ApS	Denmark	100
Kronos Europe S.A./N.V.	Belgium	100
Kronos B.V.	Netherlands	100
Kronos Norge A/S	Norway	100
Kronos Titan A/S	Norway	100
Titania A/S	Norway	100
The Jossingfjord Manufacturing Company A/S	Norway	100
Kronos Louisiana, Inc.	Delaware	100
Kronos (US), Inc.	Delaware	100
Louisiana Pigment Company, L.P.	Delaware	50

(a) Held by the Registrant or the indicated subsidiary of the Registrant

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 333-181793) of Kronos Worldwide, Inc. of our report dated March 12, 2013 relating to the consolidated financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

Dallas, Texas
March 12, 2013

CERTIFICATION

I, Steven L. Watson, certify that:

- 1) I have reviewed this annual report on Form 10-K of Kronos Worldwide, Inc.;
- 2) Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3) Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4) The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5) The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

- b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 12, 2013

/s/ Steven L. Watson

Steven L. Watson
Chief Executive Officer

CERTIFICATION

I, Gregory M. Swalwell, certify that:

- 1) I have reviewed this annual report on Form 10-K of Kronos Worldwide, Inc.;
- 2) Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3) Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4) The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5) The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

- a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
- b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 12, 2013

/s/ Gregory M. Swalwell

Gregory M. Swalwell
Chief Financial Officer

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Kronos Worldwide, Inc. (the Company) on Form 10-K for the period ended December 31, 2012 as filed with the Securities and Exchange Commission on the date hereof (the Report), I, Steven L. Watson, Chief Executive Officer of the Company, and I, Gregory M. Swalwell, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Steven L. Watson

Steven L. Watson
Chief Executive Officer

/s/ Gregory M. Swalwell

Gregory M. Swalwell
Chief Financial Officer

March 12, 2013

Note: The certification the registrant furnishes in this exhibit is not deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liabilities of that Section. Registration Statements or other documents filed with the Securities and Exchange Commission shall not incorporate this exhibit by reference, except as otherwise expressly stated in such filing.