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 EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2024

OR

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

For the transition period from to
Commission file number 1-31763

KRONOS WORLDWIDE, INC.

(Exact name of Registrant as specified in its charter)

DELAWARE	76-0294959
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification No.)

5430 LBJ Freeway, Suite 1700
Dallas, Texas 75240-2620
(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:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common stock	KRO	NYSE

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 every Interactive Data File required to be submitted 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 such files). Yes ☒ No ☐

Whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	**Accelerated filer**	☒
Non-accelerated filer	☐	**Smaller reporting company**	☐
Emerging growth company	☐		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

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

The aggregate market value of the 21.7 million shares of voting stock held by nonaffiliates of Kronos Worldwide, Inc. as of June 30, 2024 (the last business day of the Registrant's most recently-completed second fiscal quarter) approximated $272.2 million.

Number of shares of the registrant's common stock, $.01 par value per share, outstanding on February 28, 2025: 115,036,016.

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 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 our 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 and include, but are not limited to, the following:

- Future supply and demand for our products
- Our ability to realize expected cost savings from strategic and operational initiatives
- Our ability to integrate acquisitions, including Louisiana Pigment Company, L.P., into our operations and realize expected synergies and innovations
- The extent of the dependence of certain of our businesses on certain market sectors
- The cyclicality of our business
- Customer and producer 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 that harm the worldwide economy, disrupt our supply chain, increase material and energy costs or reduce demand or perceived demand for our titanium dioxide pigments ("TiO_2") products or impair our ability to operate our facilities (including changes in the level of gross domestic product in various regions of the world, tariffs, natural disasters, terrorist acts, global conflicts and public health crises)
- Operating interruptions (including, but not limited to, labor disputes, leaks, natural disasters, fires, explosions, unscheduled or unplanned downtime, transportation interruptions, certain regional and world events or economic conditions and public health crises)
- Technology related disruptions (including, but not limited to, cyber-attacks; software implementation, upgrades or improvements; technology processing failures; or other events) related to our technology infrastructure that could impact our ability to continue operations, or at key vendors which could impact our supply chain, or at key customers which could impact their operations and cause them to curtail or pause orders
- Competitive products and substitute products
- Competition from Chinese suppliers with less stringent regulatory and environmental compliance requirements
- Customer and competitor strategies
- Potential consolidation of our competitors
- Potential consolidation of our customers
- The impact of pricing and production decisions

- Competitive technology positions
- Potential difficulties in upgrading or implementing accounting and manufacturing software systems
- The introduction of new, or changes in existing, tariffs, trade barriers or trade disputes (including tariffs imposed by the U.S. federal government on imports from Canada, where we have a manufacturing facility)
- 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 and between the euro and the Norwegian krone), or possible disruptions to our business resulting from uncertainties associated with the euro or other currencies
- Our ability to renew or refinance credit facilities or other debt instruments in the future
- Changes in interest rates
- Our ability to comply with covenants contained in our revolving bank credit facility
- Our ability to maintain sufficient liquidity
- The ultimate outcome of income tax audits, tax settlement initiatives or other tax matters, including future tax reform
- Our ability to utilize income tax attributes, the benefits of which may or may not 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 including new environmental, sustainability, health and safety, or other regulations (such as those seeking to limit or classify TiO_2 or its use), and
- Pending or possible future litigation or other actions.

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"), incorporated in Delaware in 1989, is a leading global producer and marketer of value-added titanium dioxide pigments, or TiO_2, 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 approximately 3,000 customers in 100 countries with the majority of our sales in Europe, North America and the Asia Pacific region. We believe we have developed considerable expertise and efficiency in the manufacture, sale, shipment and service of our products in domestic and international markets. Effective July 16, 2024 ("Acquisition Date"), we acquired the 50% joint venture interest in Louisiana Pigment Company, L.P. ("LPC") held by Venator Investments, Ltd. ("Venator") for consideration of $185 million less a working capital adjustment. Prior to the acquisition, we held a 50% joint venture interest in LPC through a wholly-owned subsidiary. LPC was operated as a manufacturing joint venture between us and Venator. Following the acquisition, LPC became a wholly-owned subsidiary of ours. See Note 5 to our Consolidated Financial Statements.

TiO_2 is a white inorganic pigment used in a wide range of products for its exceptional durability and its ability to impart whiteness, brightness and opacity. TiO_2 is a critical component of everyday applications, such as coatings, plastics and paper, as well as many specialty products such as inks, cosmetics and pharmaceuticals. TiO_2 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. TiO_2 is designed, marketed and sold based on specific end-use applications.

TiO_2 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, TiO_2 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 TiO_2 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 TiO_2 in a number of end-use markets. However, these products are not able to duplicate the opacity performance characteristics of TiO_2 and we believe these products are unlikely to have a significant impact on the use of TiO_2.

TiO_2 is considered a "quality-of-life" product. Demand for TiO_2 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, TiO_2 consumption has grown at a compound annual growth rate of approximately 3% since 2000. Per capita consumption of TiO_2 in Western Europe and North America far exceeds that in other areas of the world, and these regions are expected to continue to be the largest consumers of TiO_2 on a per capita basis for the foreseeable future. We believe Western Europe and North America each account for approximately 15% of global TiO_2 consumption, respectively. Markets for TiO_2 are generally increasing in China, the Asia Pacific region, South America and Eastern Europe and we believe these are significant markets which will continue to grow as economies in these regions develop and quality-of-life products, including TiO_2, experience greater demand.

At December 31, 2024, approximately 50% of our common stock was owned by Valhi, Inc. (NYSE: VHI) and approximately 31% was owned by a wholly-owned subsidiary of NL Industries, Inc. (NYSE: NL). Valhi also owns approximately 83% of NL Industries' outstanding common stock. A wholly-owned subsidiary of Contran Corporation held approximately 91% of Valhi's outstanding common stock. As discussed in Note 1 to our Consolidated Financial Statements, Lisa K. Simmons and a trust established for the benefit of Ms. Simmons and her late sister and their children (the "Family Trust") may be deemed to control Contran, and therefore may be deemed to indirectly control the wholly-owned subsidiary of Contran, Valhi, NL and us.

Products and end-use markets

Including our predecessors, we have produced and marketed TiO_2 in North America and Europe, our primary markets, for over 100 years. We believe we are the largest chloride process TiO_2 producer in Europe with 44% of our 2024 sales volumes attributable to markets in Europe. The table below shows our estimated market share for our significant markets, Europe and North America, for the last three years.

	2022	2023	2024
Europe	14%	12%	**14%**
North America	17%	16%	**17%**

We believe we are the leading seller of TiO_2 in several countries, including Germany. Overall, we are one of the top five producers of TiO_2 in the world.

We offer our customers a broad portfolio of products that include over 50 different TiO_2 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 TiO_2 to our customers in either a dry or slurry form via rail, truck and/or ocean carrier. Sales of our core TiO_2 pigments represented approximately 90% of our net sales in 2024. We and our agents and distributors primarily sell our products in three major end-use markets: coatings, plastics and paper.

The following tables show our approximate TiO_2 sales volume by geographic region and end-use for the year ended December 31, 2024:

Sales volume percentages by geographic region	
Europe	44%
North America	40%
Asia Pacific	9%
Rest of World	7%

Sales volume percentages by end-use	
Coatings	60%
Plastics	27%
Paper	9%
Other	4%

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

TiO_2 for coatings – Our TiO_2 is used to provide opacity, durability, tinting strength and brightness in industrial coatings, as well as coatings for commercial and residential interiors and exteriors, automobiles, aircraft, machines, appliances, traffic paint and other special purpose coatings. The amount of TiO_2 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 TiO_2 content.

TiO_2 for plastics – We produce TiO_2 pigments that improve the optical and physical properties of plastics, including whiteness and opacity. TiO_2 is used to provide opacity to items such as containers and packaging materials, and vinyl products such as windows, door profiles and siding. TiO_2 also generally provides hiding power, neutral undertone, brightness and surface durability for housewares, appliances, toys, computer cases and food packages. TiO_2's high brightness along with its opacity, is used in some engineering plastics to help mask their undesirable natural color. TiO_2 is also used in masterbatch, which is a concentrate of TiO_2 and other additives and is one of the largest uses for TiO_2 in the plastics end-use market. In masterbatch, the TiO_2 is dispersed at high concentrations into a plastic resin and is then used by manufacturers of plastic containers, bottles, packaging and agricultural films.

TiO_2 for paper – Our TiO_2 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 TiO_2 to all segments of the paper end-use market, our primary focus is on the TiO_2 grades used in coated board and paper laminates, where several layers of paper are laminated together using melamine resin under high temperature and pressure. The top layer of paper contains TiO_2 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.

TiO_2 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.

TiO_2 for other applications – We produce TiO_2 to improve the opacity and hiding power of printing inks. TiO_2 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 TiO_2 is also used in textile applications where TiO_2 functions as an opacifying and delustering agent. In man-made fibers such as rayon and polyester, TiO_2 corrects an otherwise undesirable glossy and translucent appearance. Without the presence of TiO_2, these materials would be unsuitable for use in many textile applications.

We produce high-purity sulfate process anatase TiO_2 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. In pharmaceuticals, our TiO_2 is used commonly as a colorant in tablet 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 (United States Pharmacopoeia), BP (British Pharmacopoeia) and the FDA (United States Food and Drug Administration).

Our TiO_2 business is enhanced by the following three complementary businesses, which comprised approximately 10% of our net sales in 2024:

- We own and operate an ilmenite mine 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 TiO_2 plants. Along with supplying ilmenite ore to our sulfate plants in Europe, we also sell ilmenite ore to third parties, some of whom are our competitors. The mine has estimated ilmenite reserves that we expect, based on internal estimates, to last approximately 50 years.
- We manufacture and sell iron-based chemicals, which are co-products and processed co-products of the sulfate and chloride process TiO_2 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 other specialty chemicals, which are side-stream products from the production of TiO_2. These specialty chemicals are used in applications in the formulation of pearlescent pigments, production of electroceramic capacitors for cell phones and other electronic devices and natural gas pipe and other specialty applications.

Manufacturing, operations and properties

Manufacturing – We produce TiO_2 in two crystalline forms: rutile and anatase. Rutile TiO_2 is manufactured using both a chloride production process and a sulfate production process, whereas anatase TiO_2 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 TiO_2. 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 TiO_2 industry sales represented by chloride process pigments has remained stable relative to sulfate process pigments, and in 2024, chloride process production facilities represented approximately 41% of industry capacity. The sulfate process is preferred for use in selected paper products, ceramics, rubber tires, man-made fibers, pharmaceuticals and cosmetics. Once an intermediate TiO_2 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 TiO_2. 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, although the chloride process requires a higher-skilled labor force. The chloride process produces an intermediate base pigment with a wide range of

properties. The chloride process produces a product with a blueish undertone and is the preferred form to produce TiO_2 pigments for use in coatings and plastics, the two largest end-use markets.

- *Sulfate process* – The sulfate process is a batch process in which sulfuric acid is used to extract the TiO_2 from ilmenite or titanium slag. After separation from the impurities in the ore (mainly iron), the TiO_2 is precipitated and calcined to form an intermediate base pigment ready for sale or can be upgraded through finishing treatments. The sulfate process produces a warmer undertone and is preferred for use in selected paper products, ceramics, rubber tires, man-made fibers, food products, pharmaceuticals and cosmetics, some of which generate higher profit margins.

LPC – Prior to July 16, 2024, Kronos Louisiana, Inc., one of our subsidiaries, and Venator each owned a 50% interest in LPC, which was operated as a manufacturing joint venture. LPC owns and operates a chloride-process TiO_2 plant located near Lake Charles, Louisiana. On July 16, 2024, we acquired the 50% interest in LPC held by Venator for consideration of $185 million less a working capital adjustment.

Prior to the acquisition, we accounted for our interest in the joint venture by the equity method. The joint venture operated on a break-even basis, and therefore we did not have any equity in earnings of the joint venture. We were required to purchase one-half of the TiO_2 produced by the joint venture. All costs and capital expenditures were shared equally with Venator, with the exception of feedstock (purchased natural rutile ore or chlorine slag) and packaging costs for the pigment grades produced. Our share of net costs was reported as cost of sales as the TiO_2 was sold. See Notes 5 and 14 to our Consolidated Financial Statements.

As a result of the acquisition, for financial reporting purposes the assets acquired and liabilities assumed of LPC are included in our Consolidated Balance Sheet as of December 31, 2024, and the results of operations and cash flows of LPC are included in our Consolidated Statement of Operations and Cash Flows beginning as of the Acquisition Date. See Note 5 to our Consolidated Financial Statements.

Operations – We produced 492,000, 401,000 and 535,000 metric tons of TiO_2 in 2022, 2023 and 2024, respectively. Our production volumes for 2022, 2023 and 2024 through the Acquisition Date include our share of the output produced by our TiO_2 manufacturing joint venture. Subsequent to the Acquisition Date, our 2024 production volumes include 100% of the production volumes from the LPC facility.

Our average production capacity utilization rates were approximately 89% in 2022, 72% in 2023 and 96% in 2024. Beginning in the fourth quarter of 2022 and continuing throughout the first quarter of 2024, we adjusted production levels to correspond with reduced customer demand resulting from challenging economic conditions and geopolitical uncertainties. We increased production levels to align with higher overall customer demand in 2024.

Properties – We operate facilities throughout North America and Europe. We have four TiO_2 plants in Europe (one in each of Leverkusen, Germany; Nordenham, Germany; Langerbrugge, Belgium; and Fredrikstad, Norway). In North America, we have a TiO_2 plant in Varennes, Quebec, Canada and a TiO_2 plant near Lake Charles, Louisiana.

Our chloride process production and remaining sulfate production capacity has increased by approximately 5% over the past ten years due to debottlenecking programs with only moderate capital expenditures.

The following table presents the division of our expected 2025 manufacturing capacity by plant location and type of manufacturing process:

Facility	Description	% of capacity by TiO_2 manufacturing process	
		Chloride	Sulfate
Leverkusen, Germany (1)	TiO_2 production, chloride process, co-products	29 %	- %
Nordenham, Germany	TiO_2 production, sulfate process, co-products	-	10
Langerbrugge, Belgium	TiO_2 production, chloride process, co-products, titanium chemicals products	15	-
Fredrikstad, Norway (2)	TiO_2 production, sulfate process, co-products	-	5
Varennes, Canada (3)	TiO_2 production, chloride process, slurry facility, titanium chemicals products	15	-
Lake Charles, LA, US (4)	TiO_2 production, chloride process	26	-
Total		85 %	15 %

(1) The Leverkusen facility is located within a more extensive manufacturing complex. We own our Leverkusen facility, which represents approximately 29% of our current TiO_2 production capacity, but we lease the land under the facility under a long-term agreement which expires in 2050. Lease payments are periodically negotiated for periods of at least two years at a time. A third-party operator of the manufacturing complex 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 facility is located on public land and is leased until 2063.

(3) In the third quarter of 2024, we closed our sulfate process line at our plant in Varennes, Canada. See Note 18 to our Consolidated Financial Statements.

(4) Effective July 16, 2024, we acquired the 50% interest in LPC we did not already own. See Note 5 to our Consolidated Financial Statements.

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

We also operate an ilmenite mine in Norway pursuant to a governmental concession with an unlimited term. In addition, we operate a rutile slurry manufacturing plant near our Lake Charles, Louisiana facility, which converts dry pigment primarily manufactured for us at our Lake Charles TiO_2 facility into a slurry form that is then shipped to customers.

We have corporate and administrative offices located in the U.S., Germany, Norway, Canada, Belgium and France.

Raw materials

The primary raw materials used in chloride process TiO_2 are titanium-containing feedstock (purchased natural rutile ore or chlorine slag), chlorine and petroleum 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, Sierra Leone, Canada and India. We purchase feedstock for our chloride process TiO_2 from the following primary suppliers for certain contractually specified volumes for delivery extending, in some cases, through 2026:

Supplier	Product	Renewal Terms
Rio Tinto Iron and Titanium Ltd.	Chloride process grade slag	Auto-renews bi-annually
Rio Tinto Iron and Titanium Ltd.	Upgraded slag	Auto-renews annually
Sierra Rutile Limited	Rutile ore	Renewal terms upon negotiation
Iluka Resources Limited	Rutile ore	Renewal terms upon negotiation

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. We expect the raw materials purchased under these contracts, and contracts we may enter into, will meet our chloride process feedstock requirements over the next several years. Multi-year contracts generally may be terminated with a 12-month written notice or based on certain defaults by either party or failure to agree on pricing as noted in the agreements.

The primary raw materials used in sulfate process TiO_2 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 TiO_2, we operate a rock ilmenite mine in Norway, which provided all of the feedstock for our European sulfate process TiO_2 plants in 2024. We expect ilmenite production from our mine to meet our sulfate process feedstock requirements for the foreseeable future. We expect the raw materials purchased under this contract, and contracts that we may enter into, 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 or semi-annually.

The following table summarizes our raw materials purchased or mined in 2024.

Production process/raw material	Raw materials procured or mined (In thousands of metric tons)
Chloride process plants -	
Purchased slag or rutile ore	464
Sulfate process plants:	
Ilmenite ore mined and used internally	233
Purchased ilmenite ore (1)	11

(1) Relates to our Canadian sulfate production line, which was closed in the third quarter of 2024.

Sales and marketing

Our marketing strategy is aimed at developing and maintaining strong relationships with new and existing customers. Because TiO_2 represents a significant input 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 and frequent contact. We endeavor to extend these commercial and technical relationships to multiple levels within our customers' organizations using our direct sales force and technical service group to accomplish this objective. We believe this helps build customer loyalty and strengthens 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.

We also work directly with our customers to monitor the success of our products in their end-use applications, evaluate the need for improvements in our 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 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 in Europe and 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

TiO_2 products other than KRONOS® branded products. In North America, our sales are made primarily through our direct sales force and supported by a network of distributors. We have increased our marketing efforts over the last several years in export markets and our sales are now made through our direct sales force, sales agents and distributors. In addition to our direct sales force and sales agents, many of our sales agents also act as distributors to service our customers in all regions. We offer customer and technical service to customers who purchase our products through distributors as well as to our larger customers serviced by our direct sales force.

We sell to a diverse customer base with only one customer representing 10% or more of our net sales in 2024 (Behr Process Corporation – 10%). Our largest ten customers accounted for approximately 39% of net sales in 2024.

Neither our business as a whole nor any of our principal product groups is seasonal to any significant extent. However, TiO_2 sales are generally higher in the second and third quarters of the year, due in part to the increase in coatings production in the spring to meet demand during the spring and summer painting seasons. We normally 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 TiO_2 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 TiO_2 is not traded through a commodity market, its pricing is largely a product of negotiation between suppliers and their respective customers. Price and availability are the most significant competitive factors along with quality and customer service for the majority of our product grades. Increasingly, we are focused on providing pigments that are differentiated to meet specific customer requests and specialty grades that are differentiated from our competitors' products. During 2024, we had an estimated 7% share of worldwide TiO_2 sales volume, and based on sales volume, we believe we are the leading seller of TiO_2 in several countries, including Germany.

Our principal competitors are LB Group Co. Ltd., The Chemours Company, Tronox Holdings PLC and Venator Materials PLC. The top five TiO_2 producers (i.e., we and our four principal competitors) account for approximately 51% of the world's production capacity.

The following chart shows our estimate of worldwide production capacity in 2024:

Worldwide production capacity - 2024

LB Group	13%
Chemours	13%
Tronox	12%
Kronos	7%
Venator	6%
Other	49%

Chemours has approximately one-half of total North American TiO_2 production capacity and is our principal North American competitor. LB Group previously announced it plans to add an additional 200,000 tons of chloride process capacity which we expect will be added incrementally over the next several years. However, several of our competitors have recently closed or announced plans to close facilities or otherwise reduce capacity, including Chemours which closed its Taiwan facility with an estimated 160,000 tons of chloride process capacity in 2023 and Venator which announced plans in 2024 to close its Duisburg, Germany facility with an estimated 50,000 tons of sulfate process capacity. In addition, in 2024 we closed our sulfate production line in Varennes, Canada.

The TiO_2 industry is characterized by high barriers to entry consisting of high capital costs, proprietary technology and significant lead times required to construct new facilities or to expand existing capacity. Therefore, over the past ten years, we and our competitors increased industry capacity through debottlenecking projects; however, this increase only partly compensated for the shut-down of various TiO_2 plants throughout the world. Other than through debottlenecking projects and the LB Group expansion mentioned above, we do not expect any significant efforts will be

undertaken by us or our principal competitors to further increase capacity and we believe it is unlikely any new TiO_2 plants will be constructed in Europe or North America for the foreseeable future. If actual developments differ from our expectations, the TiO_2 industry and our performance could be unfavorably affected.

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 products and applications. Our expenditures for these activities were approximately $15 million in 2022, $18 million in 2023 and $14 million in 2024. We expect to spend approximately $15 million on research and development in 2025.

We continually seek to improve the quality of our grades and have been successful in developing new grades for existing and new applications to meet the needs of our customers and increase product life cycles. Since the beginning of 2020, we have added six new grades for pigments and other applications.

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 register, maintain and protect our trademark rights. We maintain the secrecy of our trade secret rights and protect them by means of security protocols and confidentiality agreements. In some instances, we 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 certain aspects of 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 from the time that they issue as patents and then extend 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 – Our trademarks, including KRONOS®, are covered by issued and/or pending registrations, including in Canada and the United States. We protect the trademarks 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.

Trade secrets – We conduct research activities in secret and we protect the confidentiality of our trade secrets through reasonable measures, including confidentiality agreements and security procedures, including data security. 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.

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 and overall sustainability. 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.

We have a history of identifying new ways to reduce consumption and waste by converting byproducts to co-products through our KRONOS ecochem® products. We have a published Safety, Environment, Energy and Quality Policy which is translated into local languages and distributed to all our employees and shared publicly via our website. We have implemented rigorous procedures for incident reporting and investigation, including root cause analysis of environmental and safety incidents and near misses. Because TiO_2 production requires significant energy input, we are focused on energy efficiency at all production locations. Four of our six production facilities maintain certifications to the ISO 50001:2018 Energy Management standard and all locations have local energy teams in place. These teams are responsible for maintaining ISO 50001:2018 certifications (where applicable), performing regular reviews of local energy consumption, making recommendations regarding capital projects that reduce energy consumption and associated Greenhouse Gas (GHG) emissions or enhance efficiency. When possible, we look for opportunities to partner with local government authorities through grant opportunities to reduce energy consumption and associated GHG emissions. We also actively manage potential water-related risks, including flooding and water shortages. Our manufacturing facilities are strategically located adjacent to sources of water, which we use for process operations and for shipping and receiving raw materials and finished products. Water-critical processes are identified and ongoing efforts to minimize water use are incorporated into environmental planning.

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 those of the EU.

From time to time, our facilities may be subject to environmental regulatory enforcement under local or national laws. Typically, we update our 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 all of our facilities are in substantial compliance with applicable environmental laws.

From time to time, new environmental, sustainability, health and safety regulations are passed or proposed in the countries in which we operate or sell our products, seeking to regulate our operations or to restrict, limit or classify TiO_2. We believe we are in substantial compliance with laws applicable to the regulation of TiO_2. However, increased regulatory scrutiny could affect consumer perception of TiO_2 or limit the marketability and demand for TiO_2 or products containing TiO_2 and increase Kronos' regulatory and compliance costs.

On October 1, 2021, EU Regulation No. 1272/2008 classifying dry TiO_2 and mixtures containing dry TiO_2 as a suspected carcinogen via inhalation went into force. Our dry TiO_2 products do not meet the criteria set forth in the regulation and therefore do not require classification labels. On November 23, 2022 the Court of Justice of the European Union annulled the classification of TiO_2 as a suspected carcinogen in its entirety, which decision is currently under appeal.

Our capital expenditures related to ongoing environmental compliance, protection and improvement programs, including capital expenditures which are primarily focused on increasing operating efficiency but also result in improved environmental protection such as lower emissions from our manufacturing facilities, were $17 million in 2024 and are currently expected to be approximately $24 million in 2025.

Environmental, Social and Governance (ESG)

We seek to operate our businesses in line with sound ESG principles that include corporate governance, social responsibility, sustainability and cybersecurity. We believe ESG means conducting operations with high standards of environmental and social responsibility, practicing exemplary ethical standards, focusing on safety as a top priority, respecting human rights and supporting our local communities, and continuously developing our employees. At our facilities, we undertake various environmental sustainability programs, and we promote social responsibility and volunteerism through programs designed to support and give back to the local communities in which we operate. Each of our locations maintains site-specific safety programs and disaster response and business continuity plans. All manufacturing facilities have detailed, site-specific emergency response procedures we believe adequately address regulatory compliance, vulnerability to potential hazards, emergency response and action plans, employee training, alarms and warning systems and crisis communication.

The U.S. government and various non-U.S. governmental agencies of countries in which we operate have adopted or are contemplating regulatory changes relating to certain ESG topics, such as the Corporate Social Responsibility Directive adopted by the European Union on November 28, 2022 (EU CSRD). We are evaluating and will continue to evaluate the applicability of the EU CSRD as regulatory guidance is issued and as the European countries in which we operate adopt implementing legislation and we will establish a compliance program to address any applicable requirements.

In an effort to align our non-employee directors' financial interests with those of our stockholders, our board of directors established share ownership guidelines for our non-management directors. In addition, we have adopted an insider trading policy that applies to both employees and non-employee directors.

We have taken steps to integrate ESG considerations into operating decisions with other critical business factors. We periodically publish an ESG Report, which is available on our public website. The primary purpose of our ESG Report is to describe our policies and programs in the area of ESG, including certain internal metrics and benchmarks related to various aspects of ESG. We voluntarily developed these internal metrics and benchmarks, which we use to identify progress and opportunities for improvement. These metrics are not intended to be directly comparable to similar metrics utilized by other companies to track ESG performance, as the standards, methodologies and assumptions used to determine these metrics vary by subsidiary and jurisdiction.

Human capital resources

Employees – Our operating results depend in part on our ability to successfully manage our human capital resources, including attracting, identifying and retaining key talent. We have a well-trained labor force with a substantial number of long-tenured employees. We provide competitive compensation and benefits to our employees, some of which are offered under collective bargaining agreements. In addition to salaries, these programs, which vary by country/region, can include annual bonuses, a defined benefit pension plan, a defined contribution plan with employer matching opportunities, healthcare and insurance benefits, health savings and flexible spending accounts, paid time off, family leave, family care resources, employee assistance programs and tuition assistance.

We recognize that everyone deserves respect and equal treatment. As a global company, we embrace diversity and collaboration in our workforce and our business initiatives. We are an equal opportunity employer and we base employment decisions on merit, competence and qualifications, without regard to race, color, national origin, gender, age, religion, disability, sex, sexual orientation or other characteristics protected by applicable law in the jurisdictions in which we operate. We promote a respectful, diverse and inclusive workplace in which all individuals are treated with respect and dignity.

As of December 31, 2024, we employed the following number of people:

Europe	1,813
Canada	364
United States	347
Total	2,524

Certain employees at each of our production facilities are organized by labor unions. We strive to maintain good relationships with all our employees, including the unions and workers' councils representing those employees. In Europe, our union employees are covered by master collective bargaining agreements for the chemical industry that are generally renewed annually. At December 31, 2024, approximately 75% of our worldwide workforce is organized under collective bargaining agreements. We did not experience any work stoppages during 2024, although 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.

Health and safety – Protecting the health and safety of our workforce, our customers, our business partners and the natural environment is one of our core values. We are committed to maintaining a strong safety culture where all workers meet or exceed required industry performance standards and continuously seek to improve occupational and process safety performance. We are conducting our businesses in ways that provide all personnel with a safe and healthy work environment and have established safety and environmental programs and goals to achieve such results. We expect our manufacturing facilities to produce our products safely and in compliance with local regulations, policies, standards and practices intended to protect the environment and people and have established global policies designed to promote such compliance. We require our employees to comply with such requirements. We provide our workers with the tools and training necessary to make the appropriate decisions to prevent accidents and injuries. Each of our operating facilities develops, maintains and implements safety programs encompassing key aspects of their operations. In addition, management reviews and evaluates safety performance throughout the year. We monitor conditions that could lead to a safety incident and keep track of injuries through reporting systems in accordance with laws in the jurisdictions in which we operate. With this data we calculate incident frequency rates to assess the quality of our safety performance. At the global level we also track overall safety performance. Each of our operating locations is subject to local laws and regulations that dictate what injuries are required to be recorded and reported, which may differ from location to location and result in different methods of injury rate calculation. For internal global tracking, benchmarking and identification of opportunities for improvement, we collect the location specific information and apply a U.S.-based injury rate calculation method to arrive at a global total frequency rate, which is expressed as the number of incidents at our operating locations per 200,000 hours. This internal safety metric may not be directly comparable to a recordable incident rate calculated under U.S. law. Our global total frequency rate aggregating information about employees and contractors was 1.01 in 2022 (0.86 of the aggregate represents employees only), 0.95 in 2023 (0.74 of the aggregate represents employees only) and 0.70 in 2024 (0.80 of the aggregate represents employees only).

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 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.

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. See also certain risk factors discussed in Item 7- "*Management's Discussion and Analysis of Financial Condition and Results of Operations – Critical Accounting Policies and Estimates*." In addition to the potential effect of these risk factors, 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.

Operational Risk Factors

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 in operating losses.

Our sales and profitability are largely dependent on the TiO_2 industry. In 2024, approximately 90% of our sales were attributable to sales of TiO_2. TiO_2 is used in many "quality of life" products for which demand historically has been linked to global, regional and local gross domestic product and discretionary spending, which can be negatively impacted by regional and world events or economic conditions. Such events are likely to cause a decrease in demand for our products and, as a result, may have an adverse effect on our results of operations and financial condition.

Pricing within the global TiO_2 industry over the long term is cyclical and changes in economic conditions worldwide 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 TiO_2 in advance of anticipated price increases or defer purchases of TiO_2 in advance of anticipated price decreases. Our ability to further increase capacity without additional investment in greenfield or brownfield capacity may be limited and as a result, our profitability may become even more dependent upon the selling prices of our products.

The TiO_2 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 TiO_2 producers accounting for approximately 51% 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. We face significant competition from international and regional competitors, including TiO_2 producers in China, who have significant sulfate production process capacity. Chinese producers have also continued to develop chloride process technology, and the risk of substitution of our products with products made by Chinese producers could increase if Chinese producers increase the use of chloride process technology and improve the quality of their sulfate and chloride products. Some of our competitors may be able to drive down prices for our products if their costs are lower than our costs, including our competitors with vertically integrated sources of raw materials for the chloride process who may have a competitive advantage during periods of high or rising raw material costs or who operate in regions with less stringent regulatory requirements. 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 our facilities are located. Titanium-containing feedstocks suitable for use in our TiO_2 facilities are available from a limited number of suppliers around the world. Political and economic instability or increased regulations in the countries

from which we purchase or mine our raw material supplies could adversely affect raw material availability. If we or our worldwide vendors are unable to meet our planned or contractual obligations and we are unable to obtain necessary raw materials, we could incur higher costs for raw materials or we may be required to reduce production levels. We experienced increases in feedstock costs in 2023 and 2024, for example, which affected our margins. We have also experienced higher operating costs such as energy costs. Future variations in the cost of energy, which primarily reflect market prices for oil and natural gas, and for raw materials may significantly affect our operating results and decrease liquidity as we may not always be able to increase our selling prices to offset the impact of any higher costs or reduced production levels.

We have supply contracts that provide for our TiO_2 feedstock requirements. While we believe we will be able to renew these contracts, as necessary, we do not know if we will be successful in renewing them or in obtaining long-term extensions to them prior to expiration. Our current agreements require us to purchase certain minimum quantities of feedstock with minimum purchase commitments aggregating approximately $542 million beginning in 2025 and extending through 2026. 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 $67 million at December 31, 2024. Our commitments under these contracts could adversely affect our financial results if we significantly reduce our production and we are unable to modify the contractual commitments.

Our recent acquisition of the remaining 50% interest in LPC may not generate benefits we anticipate and may otherwise affect our business and prospects.

We recently completed the LPC acquisition in which we purchased the 50% ownership interest in LPC we did not previously own. If we experience unforeseen technological, operational or other difficulties in managing the integration of LPC as our wholly-owned subsidiary, we may not be able to implement the process innovations at the facility that we expect. In addition, we may not be able to achieve the synergies or improve efficiency and product quality that we expect. With or without such difficulties, the integration of the LPC facility into our operations may divert significant management time and attention from our other operations. If we fail to successfully integrate LPC into our operations, or if the LPC acquisition does not provide expected synergies or sales increases, or if LPC has unexpected legal, regulatory, or financial liabilities, our business, financial condition, results of operations and prospects could be adversely affected.

Financial Risk Factors

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

We have a significant amount of debt, primarily related to our 9.50% Senior Secured Notes due 2029 and our 3.75% Senior Secured Notes due 2025, our term loan from Contran, and borrowings on our global revolving credit facility (the "Global Revolver"). As of December 31, 2024, our total consolidated debt was approximately $507.4 million. 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.

Indebtedness outstanding under our Global Revolver accrues interest at variable rates. To the extent market interest rates rise, the cost of our debt could increase, even if the amount borrowed remains the same, adversely affecting our financial condition, results of operations and cash flows.

In addition to our indebtedness, we are party to various lease and other agreements (including feedstock purchase contracts and other long-term supply and service contracts, as discussed above) pursuant to which, along with our indebtedness, we are committed to pay approximately $701 million in 2025. Our ability to make payments on and refinance our debt and to fund planned capital expenditures depends on our ability to generate cash flow in the future. 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 Global Revolver in the future, in some instances, will depend in part on our ability to maintain specified financial ratios and satisfy certain financial covenants contained in the credit agreement governing the Global Revolver.

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, as we have done in the past. 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.

Changes in currency exchange rates and interest rates can adversely affect our net sales, profits and cash flows.

We operate our businesses in several different countries and sell our products worldwide. For example, during both 2023 and 2024, approximately 44% of our sales volumes were sold into European markets. The majority (but not all) of our sales from our operations outside the United States are denominated in currencies other than the United States dollar, primarily the euro, other major European currencies and the Canadian dollar. Therefore, we are exposed to risks related to the need to convert currencies we receive from the sale of our products into the currencies required to pay for certain of our operating costs and expenses and other liabilities (including indebtedness), all of which could result in future losses depending on fluctuations in currency exchange rates and affect the comparability of our results of operations between periods.

Legal, Compliance and Regulatory Risk Factors

We may be subject to litigation, the disposition of which could have a material adverse effect on our results of operations.

The nature of our operations exposes us to possible litigation claims, including disputes with customers and suppliers and matters relating to, among other things, antitrust, product liability, intellectual property, employment and environmental claims. It is possible that judgments could be rendered against us in these or other types of cases for which we could be uninsured or not covered by indemnity, or which may be beyond the amounts that we currently have reserved or anticipate incurring for such matters. Some of the lawsuits may seek fines or penalties and damages in large amounts or seek to restrict our business activities. Because of the uncertain nature of litigation and coverage decisions, we cannot predict the outcome of these matters or whether insurance claims may mitigate any damages ultimately determined to be owed by us. Any liability we might incur in the future could be material. In addition, litigation is very costly, and the costs associated with defending litigation matters could have a material adverse effect on our results of operations.

Environmental, health and safety laws and regulations may result in increased regulatory scrutiny which could decrease demand for our products, increase our manufacturing and compliance costs or obligations and result in unanticipated losses which could negatively impact our financial results or limit our ability to operate our business.

From time to time, new environmental, health and safety regulations are passed or proposed in the countries in which we operate or sell our products, seeking to regulate our operations or to restrict, limit or classify TiO_2, or its use. Increased regulatory scrutiny could affect consumer perception of TiO_2 or limit the marketability and demand for TiO_2 or products containing TiO_2 or increase our manufacturing and regulatory compliance obligations and costs. Increased compliance obligations and costs or restrictions on operations, raw materials and certain TiO_2 applications

could negatively impact our future financial results through increased costs of production, or reduced sales which may decrease our liquidity, operating income and results of operations.

If some or all of our intellectual property were to be declared invalid, held to be unenforceable or copied by competitors or some or all of our confidential information become known to competitors, or if our competitors were to develop similar or superior intellectual property or technology, our ability to compete could be adversely impacted.

Protection of our intellectual property rights, including patents, copyrights, trade secrets, confidential information, trademarks and tradenames, is important to our business and our competitive position. We endeavor to protect our intellectual property rights in key jurisdictions in which our products are produced, sold or used and in jurisdictions into which our products are imported. However, we may be unable to obtain protection for our intellectual property in key jurisdictions. Although we own and have applied for numerous patents and trademarks throughout the world, we may have to engage in judicial enforcement in order to protect our patent rights and other proprietary rights. Our patents and other intellectual property rights may be challenged, invalidated, circumvented, rendered unenforceable or otherwise compromised. A failure to protect, defend or enforce our intellectual property could have an adverse effect on our financial condition and results of operations. Similarly, third parties may assert claims against us and our customers and distributors alleging our products infringe upon third-party intellectual property rights. In the event that any such third-party prevails against us on such claims, there could be an adverse effect on our financial condition and results of operations.

Although it is our practice to enter into confidentiality agreements with our employees and third parties to protect our proprietary expertise and other trade secrets, these agreements may not provide sufficient protection for our trade secrets or proprietary know-how, or adequate remedies for breaches of such agreements may not be available in the event of an unauthorized use or disclosure of such trade secrets and know-how. We also may not be able to readily detect breaches of such agreements. The failure of our confidentiality agreements to protect our proprietary technology, know-how or trade secrets could result in a material loss of our competitive position, which could lead to significantly lower revenues, reduced profit margins or loss of market share.

If we must take legal action to protect, defend or enforce our intellectual property rights, any suits or proceedings could result in significant costs, including attorney's fees and diversion of resources and management's attention, and we may not prevail in any such suits or proceedings.

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

We operate production facilities in several countries and many of our facilities require large amounts of energy, including electricity and natural gas, in order to conduct operations. The U.S. government and various non-U.S. governmental agencies of countries in which we operate have determined the consumption of energy derived from fossil fuels is a major contributor to climate change and have adopted or are contemplating regulatory changes in response to the potential impact of climate change, including laws and regulations requiring enhanced reporting (such as the Corporate Social Responsibility Directive adopted by the European Union on November 28, 2022) as well as legislation regarding carbon emission costs, GHG emissions and renewable energy targets. International treaties or agreements may also result in increasing regulation of GHG emissions, including emissions permits and/or energy taxes or the introduction of carbon emissions trading mechanisms. To date, the existing GHG laws and regulations in effect in the various countries in which we operate have not had a material adverse effect on our financial results. Until the timing, scope and extent of any new or future regulation becomes known, we cannot predict the effect on our business, results of operations or financial condition. However, if further GHG laws and regulations were to be enacted in one or more countries, it could negatively impact our future results of 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 on to our customers to compensate for increased production costs, which may decrease our liquidity, operating income and results of operations. In addition, any adopted future laws and regulations focused on climate change and/or GHG emissions could negatively impact our ability (or that of our customers and suppliers) to compete with companies situated in areas not subject to such laws and regulations.

General Risk Factors

Operating as a global business presents risks associated with global and regional economic, political and regulatory environments.

We manufacture and distribute our products globally. Revenue from non-U.S. markets accounted for approximately 68%, 66%, and 66% of our revenue for the years ended December 31, 2022, 2023, and 2024, respectively. We have significant international operations which, along with our customers and suppliers, could be substantially affected by a number of risks arising from operating a multi-national business, including:

- global or regional economic downturns;
- changes in tariffs, trade barriers, and regulatory requirements, such as the enactment of tariffs on goods imported into the U.S. including, but not limited to, the recently enacted tariff on goods imported from Canada where we manufacture a significant portion of the TiO_2 we sell in North America. Tariffs could make our products more expensive which would reduce demand or require us to absorb the increased costs reducing our operating margins;
- protectionist laws, policies, and business practices and nationalistic campaigns such as economic sanctions and exchange controls;
- U.S. relations with the governments of the other countries in which we operate;
- terrorism, armed conflict (such as the current conflicts between Russia and Ukraine and Israel and Hamas);
- natural disasters, pandemics or other health crises, climate change and other events beyond our control;
- difficulties enforcing agreements or other legal rights; and
- our effective tax rate may fluctuate based on the variability of geographic earnings and statutory rates.

TiO_2 production requires significant energy input, and economic sanctions or supply disruptions resulting from armed conflict could lead to additional volatility in global energy prices and energy supply disruptions. These risks, individually or in the aggregate, could have an adverse effect on our results of operations and financial condition.

We are experiencing increasing competition from China. Chinese competition generally has lower operating costs due to less stringent regulatory and environmental compliance requirements and less expensive energy prices. China has dumped lower cost sulfate process TiO_2 into the markets we serve. In some cases, the TiO_2 industry has been successful in getting anti-competitive duties enacted on Chinese imports such as the European duties enacted in 2024.

The U.S. federal government has recently implemented tariffs on certain foreign goods and may implement additional tariffs on foreign goods. For example, on March 4, 2025, the U.S. government implemented a 25% tariff on all imports from Mexico and Canada into the U.S. As we currently manufacture a significant portion of our North American TiO_2 in Canada, if sustained for an extended period of time, the 25% tariff on our imports into the U.S. from Canada, without exclusion, will make our products manufactured in Canada and sold into the U.S. more expensive. As a result, demand for these products could be reduced, or we could be required to absorb the increased costs or increase prices of such products. Such tariffs and, if enacted, any further legislation or actions taken by the U.S. government that restrict trade, such as additional tariffs, trade barriers and other protectionist or retaliatory measures taken in response, could adversely impact our ability to sell our products in the U.S. or reduce our revenues and gross margins. These measures may also increase our costs of Canadian feedstock imported into the U.S. and could adversely impact our gross margins or require us to raise prices thereby making our products less competitive. Additional tariffs imposed by the U.S or any retaliatory or reciprocal tariffs imposed by other countries could also increase the cost of feedstock and other raw materials that go into making TiO_2, the extent of which is unknown. The ultimate impact of any tariffs will depend on various factors, including the length of time tariffs are ultimately implemented and the amount, scope and nature of the tariffs.

Technology failures or cybersecurity breaches could have a material adverse effect on our operations.

We rely on integrated information technology systems to manage, process and analyze data, including to facilitate the manufacture and distribution of products to and from our facilities, receive, process and ship orders, manage the billing of and collections from customers and manage payments to vendors. Although we have systems and procedures in place to protect our information technology systems, there can be no assurance that such systems and procedures will be sufficiently effective. Therefore, any of our information technology systems may be susceptible to outages, disruptions or destruction from power outages, telecommunications failures, employee error, cybersecurity breaches or attacks and other similar events. This could result in a disruption of our business operations, injury to people, harm to the environment or our assets, and/or the inability to access our information technology systems and could adversely affect our results of operations and financial condition. We have in the past experienced, and we expect to continue to experience, cyber-attacks, including phishing and other attempts to breach, or gain unauthorized access to, our systems, and vulnerabilities introduced into our systems by trusted third-party vendors who have experienced cyber-attacks. To date we have not suffered breaches in our systems, either directly or through a trusted third-party vendor, which have led to material losses. Due to the increase in global cybersecurity incidents it has become increasingly difficult to obtain insurance coverage on reasonable pricing terms to mitigate some risks associated with technology failures or cybersecurity breaches, and we are experiencing such difficulties in obtaining insurance coverage.

Physical impacts of climate change could have a material adverse effect on our costs and operations.

Climate change may increase both the frequency and severity of extreme weather conditions and natural disasters, such as hurricanes, thunderstorms, tornadoes, drought and snow or ice storms. Extreme weather conditions may increase our costs or cause damage to our facilities, and any damage resulting from extreme weather may not be fully insured. Climate change has also been associated with rising sea levels and many of our facilities are located near coastal areas or waterways where rising sea levels or flooding could disrupt our operations or adversely impact our facilities. Furthermore, periods of extended inclement weather or associated droughts or flooding may inhibit our facility operations and delay or hinder shipments of our products to customers. Any such events could have a material adverse effect on our costs or results of operations.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None

ITEM 1C. CYBERSECURITY

We recognize the importance of proactively assessing, identifying and managing material risks associated with cybersecurity threats. These risks include, among other things: operational disruptions, intellectual property theft, fraud, extortion, harm to employees or customers and violation of data privacy or security laws. Our cybersecurity programs are built on both operational and compliance foundations. The operational component focuses on continuous detection, prevention, measurement, analysis and response to cybersecurity alerts and incidents, and on emerging threats. The compliance component establishes oversight of our cybersecurity programs by creating risk-based controls to protect the integrity, confidentiality, accessibility and availability of company data stored, processed or transferred. Our cybersecurity program is fully integrated into our enterprise-wide risk management framework.

Our cybersecurity program is led by our chief information officer (CIO), who is responsible for developing and executing our overall information security strategy, policy, security engineering, operations and cyber threat detection and response. Our CIO has extensive information technology (IT) and program management experience and leads a team that has many years of experience with our organization. Our cybersecurity risks are also reviewed and tested annually through third party assessments and internal and external information technology audits. Our information technology team reviews cybersecurity risks at least annually, integrating findings into strategic risk assessments. Our CIO reports to our chief executive officer.

We continually enhance our cyber defense strategy with the ultimate goal of preventing cybersecurity incidents to the extent feasible, while simultaneously bolstering our system resilience in an effort to minimize the business impact

should an incident occur. Third parties also play a role in our cybersecurity. We engage reputable third-party security firms for consultation on industry best practices and regulatory standards and to conduct routine evaluations of our cybersecurity, such as through penetration testing and security audits; these evaluations include testing both the design and operational effectiveness of security controls. All employees are required to complete cybersecurity training at least twice a year and have access to more frequent cybersecurity training through periodic updates. Employees in certain roles also receive additional role-based, specialized cybersecurity training.

We have a Cybersecurity Incident Disclosure and Controls Committee (CIDAC) which is central to our response and evaluation of cybersecurity incidents. Our CIDAC is comprised of our CIO and other senior executives including our chief financial officer, chief operating officer and general counsel. Security events and data incidents are evaluated, ranked by severity and prioritized for response and remediation. Our IT team is responsible for categorizing cybersecurity incidents, and those deemed high-risk or critical are escalated to the CIDAC for review and response coordination. Incidents are evaluated to determine materiality and for operational, financial and reputational impact. Our CIDAC performs simulations and tabletop exercises at a management level to evaluate our readiness and response to cybersecurity incidents. As needed, we collaborate with external cybersecurity experts and legal advisors to help ensure a robust response strategy.

Our board of directors oversees management's processes for identifying and mitigating risks, including cybersecurity risks, to help align our risk exposure with our strategic objectives. Senior leadership, including our CIO and chief financial officer, provides regular updates to the board of directors on our cybersecurity posture, emerging threats and our risk mitigation efforts. Our board of directors is apprised of cybersecurity incidents deemed to have significant business impact, even if they are not material to us. The board has delegated some of its primary risk oversight to board committees, including that our audit committee facilitates the board's process of oversight of our overall risk management approach. Our full board retains oversight of cybersecurity because of its importance to us and visibility with our customers.

In the event of an incident, we follow a structured incident response playbook, which outlines clear and defined steps to be followed from incident detection to mitigation, recovery and notification, including notifying functional areas (such as legal and human resources), senior leadership and the board, as appropriate. We also conduct post-incident reviews to identify lessons learned and implement continuous improvements.

We face a number of cybersecurity risks. To date, such risks have not materially affected us, including our business strategy, results of operations or financial condition. While we have not experienced any major breaches, we actively monitor and mitigate cyber threats, including phishing attempts, malware, and targeted attacks. Thus far all such incidents have been minor, isolated and promptly contained. For more information about the cybersecurity risks we face, see the risk factor entitled "**Technology failures or cybersecurity breaches could have a material adverse effect on our operations.**" in Item 1A- Risk Factors.

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 Notes 1 and 7 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 required for 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 REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

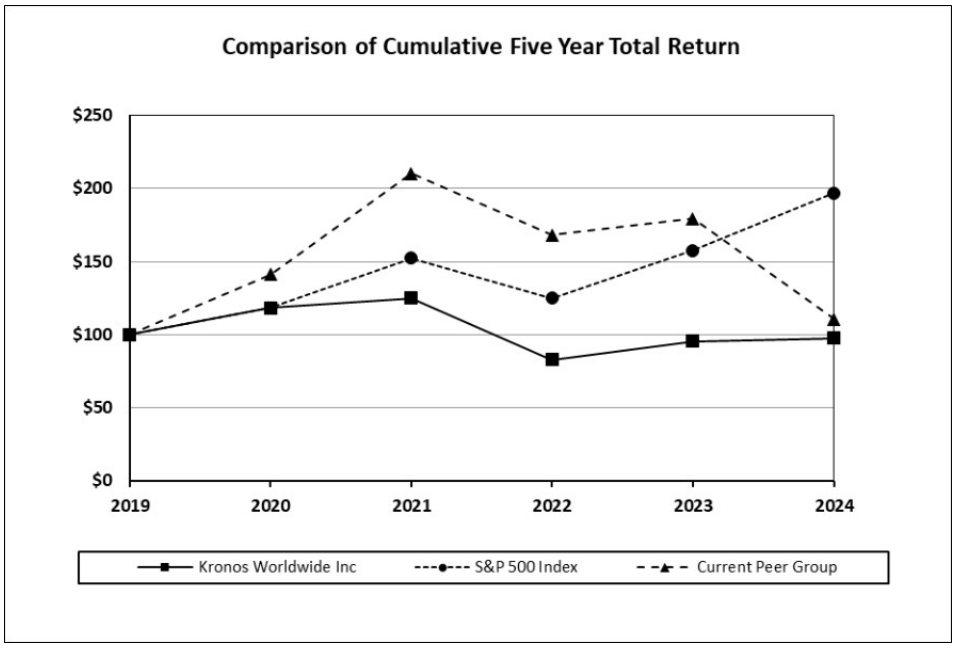
Our common stock is listed and traded on the New York Stock Exchange (symbol: KRO). As of February 28, 2025, there were approximately 1,500 holders of record of our common stock.

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 have 1,017,518 shares available for repurchase under the stock repurchase program at December 31, 2024 after repurchasing 313,814 shares in 2023 and none in 2024. 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 500 Composite Stock Index and an index of a self-selected peer group of companies. The peer group index is comprised of The Chemours Company and Tronox Holdings PLC. The graph shows the value at December 31 of each year, assuming an original investment of $100 at December 31, 2019 and reinvestment of cash dividends and other distributions to stockholders.

	2019	2020	2021	2022	2023	2024
Kronos Common Stock	$ 100	$ 118	$ 125	$ 83	$ 95	$ 98
S&P 500 Composite Stock Index	100	118	152	125	158	197
Peer Group	100	141	210	168	179	111



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, 2024, 87,800 shares are available for awards under this plan. See Note 13 to our Consolidated Financial Statements.

ITEM 6. RESERVED

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

RESULTS OF OPERATIONS

Business overview

We are a leading global producer and marketer of value-added TiO_2. TiO_2 is used for a variety of manufacturing applications, including paints, plastics, paper and other industrial and specialty products. During 2024, 44% of our sales volumes were sold into European markets. We believe we are the largest chloride process producer of TiO_2 in Europe with an estimated 14% share of European TiO_2 sales volumes in 2024. In addition, we estimate we have a 17% share of North American TiO_2 sales volumes in 2024. Our production facilities are located in Europe and North America.

We consider TiO_2 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 TiO_2 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 TiO_2 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 TiO_2 inventory levels of our customers. We believe our customers' inventory levels are influenced in part by their expectation for future changes in TiO_2 selling prices as well as their expectation for future availability of product. Although certain of our TiO_2 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 product quality and customer and technical support services.

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

- TiO_2 selling prices,
- TiO_2 sales and production volumes,
- Manufacturing costs, particularly raw materials such as third-party feedstock, maintenance and energy-related expenses, and
- Currency exchange rates (particularly the exchange rate for the U.S. dollar relative to the euro, the Norwegian krone and the Canadian dollar and the euro relative to the Norwegian krone).

Our key performance indicators are our TiO_2 average selling prices, our TiO_2 sales and production volumes and the cost of titanium-containing feedstock purchased from third parties. TiO_2 selling prices generally follow industry trends and selling prices will increase or decrease generally as a result of competitive market pressures.

Executive summary

As previously reported, effective the Acquisition Date of July 16, 2024, we acquired the 50% joint venture interest in LPC previously held by Venator. Prior to the acquisition, we held a 50% joint venture interest in LPC through a wholly-owned subsidiary. LPC was operated as a manufacturing joint venture between us and Venator. Following the acquisition, LPC became a wholly-owned subsidiary of ours. We acquired the 50% joint venture interest that we did not already own for consideration of $185 million less a working capital adjustment. An additional earn-out payment of up to $15 million based on our aggregate consolidated net income before interest expense, income taxes and depreciation and amortization expense, or EBITDA, during a two-year period comprising calendar years 2025 and 2026 may be required. The acquisition was financed through borrowings of $132.1 million under our Global Revolver and the remainder paid with cash on hand. We accounted for the acquisition of the interest in LPC as a business combination. For financial reporting purposes, the assets acquired and liabilities assumed of LPC are included in our Consolidated Balance Sheet as of December 31, 2024, and the results of operations and cash flows of LPC are included in our Consolidated Statement of Operations and Cash Flows beginning as of the Acquisition Date. See Note 5 to our Consolidated Financial Statements.

We reported net income of $86.2 million, or $.75 per share, in 2024 compared to a net loss of $49.1 million, or $.43 per share, in 2023. Net income increased in 2024 as compared to 2023 primarily due to higher income from operations as a result of the effects of higher sales and production volumes and lower production costs (primarily energy and raw materials), partially offset by lower average TiO_2 selling prices. Our results of operations in 2023 were significantly impacted by reduced demand for certain of our products occurring in all major markets and unabsorbed fixed production costs as a result of production curtailments in response to the sharp decline in demand. With improved demand in all of our major markets in 2024 compared to 2023 we increased production volumes, contributing to our improved profitability. Comparability of our results was also impacted by the effects of changes in currency exchange rates.

We reported a net loss of $49.1 million, or $.43 per share, in 2023 compared to net income of $104.5 million, or $.90 per share, in 2022. Net income decreased in 2023 as compared to 2022 primarily due to lower income from operations as a result of lower sales volumes, lower average TiO_2 selling prices and reduced production volumes. Beginning in the fourth quarter of 2022 and continuing through 2023, we implemented production curtailments in response to a sharp decline in demand for TiO_2 products occurring in all major markets. In addition, throughout 2023 we implemented cost reduction initiatives and other strategies designed to improve our long-term cost structure and preserve liquidity. Through these actions we successfully reduced our finished goods inventory levels and maintained significant liquidity, although our results of operations were negatively impacted by certain cost reduction initiatives and the significant unabsorbed fixed production costs incurred due to the curtailments. Comparability of our results was also impacted by the effects of changes in currency exchange rates.

Our net income in 2024 includes:

- a non-cash, pre-tax gain of $64.5 million ($50.9 million, or $.44 per share, net of income tax expense) resulting from the remeasurement of our investment in LPC recognized in the third quarter,
- a non-cash deferred income tax expense of $16.5 million ($.14 per share) related to final tax regulations on the treatment of certain currency translation gains and losses recognized in the fourth quarter,
- a non-cash deferred income tax expense of $8.2 million ($.07 per share) related to the recognition of a deferred income tax asset valuation allowance related to our Belgian net deferred tax assets recognized in the fourth quarter, and
- an aggregate charge of $1.5 million ($1.1 million, or $.01 per share, net of income tax benefit) related to a write-off of deferred financing costs.

Our net loss in 2023 includes:

- an aggregate $2.5 million ($2.0 million, or $.02 per share, net of income tax expense) pre-tax insurance settlement gain related to a business interruption insurance claim arising from Hurricane Laura in 2020, recognized in the first, second and third quarters,
- recognition in the second quarter of a $1.3 million ($.9 million, or $.01 per share, net of income tax expense) settlement loss related to the termination and buy-out of our pension plan in the United Kingdom,
- recognition in the fourth quarter of a $3.8 million ($2.8 million, or $.02 per share, net of income tax expense) fixed asset impairment related to the write-off of certain costs resulting from a capital project termination, and
- recognition, primarily in the fourth quarter, of $5.8 million ($4.3 million, or $.04 per share, net of income tax expense) of restructuring costs related to workforce reductions.

Our net income in 2022 includes the recognition of a pre-tax insurance settlement gain of $2.7 million recognized in the third quarter ($2.2 million, or $.02 per share, net of income tax expense) related to a business interruption insurance claim arising from Hurricane Laura in 2020.

Comparison of 2024 to 2023 Results of Operations

	Years ended December 31,			
	2023		2024	
	(Dollars in millions)			
Net sales	$ 1,666.5	100 %	**$ 1,887.1**	**100 %**
Cost of sales	1,501.6	90	**1,527.8**	**81**
Gross margin	164.9	10	**359.3**	**19**
Selling, general and administrative expense	211.2	13	**225.6**	**12**
Other operating income (expense):				
Currency transactions, net	1.4	-	**1.6**	-
Other operating expense, net	(11.1)	-	**(12.4)**	-
Income (loss) from operations	(56.0)	(3)	**122.9**	**7**
Corporate expense and trade interest income, net	16.2	1	**18.1**	**1**
Segment profit (loss) (1)	$ (39.8)	(2)%	**$ 141.0**	**8 %**
				% Change
TiO_2 operating statistics:				
Sales volumes*	419		**504**	**20 %**
Production volumes*	401		**535**	**33 %**
Percentage change in net sales:				
TiO_2 sales volumes				**20 %**
TiO_2 product pricing				**(5)**
TiO_2 product mix/other				**(2)**
Changes in currency exchange rates				**-**
Total				**13 %**

** Thousands of metric tons*

(1) The Company uses segment profit (loss) to assess the performance of the company's TiO_2 operations. Segment profit is defined as net income before income tax expense and certain general corporate items. These general corporate items include corporate expense and the components of other income (expense) except for trade interest income.

Industry conditions and 2024 overview – We and the TiO_2 industry experienced an extended period of significantly reduced demand reflected in our sales volumes beginning in the second half of 2022 and continuing throughout 2023. While demand improved in 2024 resulting in increased sales volumes across all major markets compared to the prior year, overall demand remained below average historical levels. After improving in the first half of 2024, demand moderated in the second half of the year, which placed downward pressure on our TiO_2 pricing with 2024 average TiO_2 selling prices approximately 5% below the average TiO_2 selling prices for 2023.

We operated our production facilities at 72% of practical capacity utilization in 2023 in response to decreased demand and higher production costs. As a result of the increase in demand experienced in the fourth quarter of 2023 and the first quarter of 2024, along with more favorable production costs, we began increasing our production rates during the first quarter of 2024 and we operated at near practical capacity in the second, third and fourth quarters of 2024 resulting in 96% of practical capacity utilization in 2024.

The following table shows our capacity utilization rates during 2023 and 2024.

	Production Capacity Utilization Rates	
	2023	2024
First Quarter	76%	**87%**
Second Quarter	64%	**99%**
Third Quarter	73%	**92%**
Fourth Quarter	75%	**97%**
Overall	72%	**96%**

Excluding the effect of changes in currency exchange rates, our cost of sales per metric ton of TiO_2 sold in 2024 was significantly lower as compared to 2023 primarily due to significant decreases in per metric ton production costs (primarily energy and raw materials).

In response to the extended period of reduced demand in 2023, discussed above, we took measures to reduce our operating costs and improve our long-term cost structure such as the implementation of certain voluntary and involuntary workforce reductions during the second half of 2023 that primarily impacted our European operations. A substantial portion of our workforce reductions were accomplished through voluntary programs, for which eligible workforce reduction costs are recognized at the time both the employee and employer are irrevocably committed to the terms of the separation. These workforce reductions impacted approximately 100 employees. We recognized a total of approximately $6 million in charges primarily in the fourth quarter of 2023 related to workforce reductions we implemented during the second half of 2023. In the third quarter of 2024, we closed our sulfate process production line at our plant in Varennes, Canada. As a result of the process line closure, we recognized charges to cost of sales of approximately $2 million during 2024 related to workforce reductions. We also recognized approximately $14 million in non-cash charges primarily related to accelerated depreciation in the second and third quarters of 2024.

Net sales – Our net sales in 2024 increased 13%, or $220.6 million, compared to 2023 primarily due to the effects of a 20% increase in sales volumes due to improved overall demand across all major markets (which increased net sales by approximately $333 million) partially offset by a 5% decrease in average TiO_2 selling prices (which decreased net sales by approximately $83 million). Changes in product mix negatively contributed to net sales, primarily due to changes in product sales mix in export markets in 2024 as compared to 2023. Additionally, we estimate that changes in currency exchange rates (primarily the euro) increased our net sales by approximately $5 million in 2024 as compared to 2023. TiO_2 selling prices will increase or decrease generally as a result of competitive market pressures and changes in the relative level of supply and demand as well as changes in raw material and other manufacturing costs. Incremental sales volumes resulting from the LPC acquisition did not significantly impact comparisons to the prior year.

Cost of sales and gross margin – Cost of sales increased $26.2 million, or 2%, in 2024 compared to 2023 due to the net effects of a 20% increase in sales volumes, a 33% increase in production rates resulting in reduced unabsorbed fixed production costs, and lower production costs of approximately $115 million (primarily energy and raw materials). Our unabsorbed fixed production costs in 2024 were $12 million (incurred in the first quarter) compared to $96 million in 2023 related to curtailments that began in 2022 and continued into the first quarter of 2024, as discussed above. Our cost of sales in 2024 include a charge of approximately $2 million related to workforce reductions and approximately $14 million in non-cash charges related to the closure of our sulfate process line in Canada discussed above. Sales and production volumes resulting from the LPC acquisition did not materially impact comparisons to the prior year.

Our cost of sales as a percentage of net sales decreased to 81% in 2024 compared to 90% in 2023 primarily due to the favorable effects of increased sales, lower production costs and higher production volumes resulting in increased coverage of fixed production costs.

Gross margin as a percentage of net sales increased to 19% in 2024 compared to 10% in 2023. As discussed and quantified above, our gross margin as a percentage of net sales increased primarily due to higher sales and production volumes as well as lower production costs, partially offset by lower average TiO_2 selling prices.

Selling, general and administrative expense – Selling, general and administrative expense increased $14.4 million, or 7%, in 2024 compared to 2023. This increase was primarily due to higher distribution costs related to higher overall sales volumes compared to 2023. Our selling, general and administrative expense in 2024 also includes $2.2 million of transaction costs incurred in connection with the LPC acquisition. Selling, general and administrative expense also decreased due to lower costs related to workforce reductions in 2024 compared to 2023.

Segment profit (loss) – We had segment profit of $141.0 million in 2024 compared to a segment loss of $39.8 million in 2023 as a result of the factors impacting gross margin discussed above. We recognized a gain of $2.5 million in 2023 related to cash received from the settlement of a business interruption insurance claim. See Note 17 to our Consolidated Financial Statements. We estimate that changes in currency exchange rates increased our segment profit by approximately $10 million in 2024 as compared to 2023, as further discussed below.

Other non-operating income (expense) – We recognized a gain on the remeasurement of our investment in LPC of $64.5 million in 2024 as a result of the acquisition. See Note 5 to our Consolidated Financial Statements. Interest expense in 2024 increased $25.8 million compared to 2023 primarily due to higher interest rates on the debt exchange and the issuance of new notes discussed below and higher average debt balances as a result of the LPC acquisition. As a result of the exchange, interest expense for 2024 also includes a charge of $1.5 million for the write-off of deferred financing costs. See Note 8 to our Consolidated Financial Statements. We recognized a gain of $1.2 million on the change in value of our marketable equity securities in 2024 compared to a loss of $1.0 million in 2023. See Note 6 to our Consolidated Financial Statements. Other components of net periodic pension and OPEB cost in 2024 decreased $4.1 million compared to 2023 primarily due to a higher expected return on plan assets, lower discount rates impacting interest costs and a non-recurring $1.3 million in settlement costs related to the termination and buy-out of our UK pension plan in the second quarter of 2023. See Note 10 to our Consolidated Financial Statements.

Income tax expense (benefit) – We recognized income tax expense of $63.4 million in 2024 compared to an income tax benefit of $23.8 million in 2023. The difference is primarily due to higher earnings in 2024 and the jurisdictional mix of such earnings. Our earnings are subject to income tax in various U.S. and non-U.S. jurisdictions, and the income tax rates applicable to the pre-tax earnings (losses) of our non-U.S. operations are generally higher than the income tax rates applicable to our U.S. operations. We would generally expect our overall effective tax rate, excluding the effect of any increase or decrease in our deferred income tax asset valuation allowance or changes in our reserve for uncertain tax positions, to be higher than the U.S. federal statutory tax rate of 21% primarily because of our sizeable non-U.S. operations.

Our income tax expense in 2024 includes a non-cash deferred income tax expense of $8.2 million, recognized in the fourth quarter, related to the recognition of a deferred income tax asset valuation allowance related to our Belgian net deferred tax assets. We continue to believe we will ultimately realize the full benefit of our Belgian NOL carryforwards, in part because of their indefinite carryforward period. However, our ability to reverse all or a portion of such valuation allowance in the future is dependent on the presence of sufficient positive evidence, such as the existence of cumulative profits in the most recent twelve consecutive quarters, and the ability to demonstrate future profitability for a sustainable period. Until such time as we are able to reverse the valuation allowance in full, to the extent we generate additional losses in Belgium in the intervening periods, our effective income tax rate will be negatively impacted because any further losses will effectively be recognized without the net income tax benefit. See Note 12 to our Consolidated Financial Statements.

On December 10, 2024, the Department of the Treasury and the Internal Revenue Service released final currency regulations under §987 and related rules (the "2024 Final Regulations"). The 2024 Final Regulations generally apply to tax years beginning after December 31, 2024, and include transition rules that require us to compute a pretransition gain or loss for currency translation related to the operations, assets and liabilities of our non-U.S. qualified business units. Pursuant to the 2024 Final Regulations, we have calculated a pretransition gain of $77.1 million and, accordingly, our income tax expense in 2024 includes a non-cash deferred income tax expense of $16.5 million recognized in the fourth quarter. See Note 12 to our Consolidated Financial Statements.

Comparison of 2023 to 2022 Results of Operations

	Years ended December 31,			
	2022		2023	
	(Dollars in millions)			
Net sales	$ 1,930.2	100 %	**$ 1,666.5**	**100 %**
Cost of sales	1,539.1	80	**1,501.6**	**90**
Gross margin	391.1	20	**164.9**	**10**
Selling, general and administrative expense	231.3	12	**211.2**	**13**
Other operating income (expense):				
Currency transactions, net	11.5	1	**1.4**	**-**
Other operating expense, net	(11.7)	(1)	**(11.1)**	**-**
Income (loss) from operations	159.6	8	**(56.0)**	**(3)**
Corporate expense and trade interest income, net	16.3	1	**16.2**	**1**
Segment profit (loss) (1)	$ 175.9	9 %	**$ (39.8)**	**(2)%**
				% Change
TiO_2 operating statistics:				
Sales volumes*	481		**419**	**(13)%**
Production volumes*	492		**401**	**(19)%**
Percentage change in net sales:				
TiO_2 product pricing				**(13)%**
TiO_2 sales volumes				**(4)**
TiO_2 product mix/other				**2**
Changes in currency exchange rates				**1**
Total				**(14)%**

* *Thousands of metric tons*

(1) The Company uses segment profit (loss) to assess the performance of the Company's TiO_2 operations. Segment profit is defined as net income before income tax expense and certain general corporate items. The general corporate items include corporate expense and the components of other income (expense) except for trade interest income.

Net sales – Our net sales in 2023 decreased 14%, or $263.7 million, compared to 2022 primarily due to a 13% decrease in sales volumes (which decreased net sales by approximately $251 million) and a 4% decrease in average TiO_2 selling prices (which decreased net sales by approximately $77 million). Changes in product mix positively contributed to net sales, primarily due to higher average selling prices and sales volumes in our complementary businesses which somewhat offset declines in TiO_2 sales volumes. In addition to the impact of sales volumes and average TiO_2 selling prices, we estimate that changes in currency exchange rates (primarily the euro) increased our net sales by approximately $10 million in 2023 as compared to 2022. TiO_2 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 13% in 2023 as compared to 2022 due to lower overall demand across all major markets noted above. The lower overall demand we began experiencing in the second half of 2022 continued throughout most of 2023. However, our sales volumes were 29% higher in the fourth quarter of 2023 as compared to the fourth quarter of 2022 due to strengthening demand for TiO_2 in our primary markets of Europe and North America.

Cost of sales and gross margin – Cost of sales decreased $37.5 million, or 2%, in 2023 compared to 2022 due to the net effects of a 13% decrease in sales volumes, a 19% decrease in production volumes at certain of our manufacturing facilities to align inventory levels to anticipated near-term customer demand (which resulted in $96 million of unabsorbed fixed production costs) and higher production costs of approximately $65 million (primarily raw materials). Our cost of sales as a percentage of net sales increased to 90% in 2023 compared to 80% in 2022 primarily due to the unfavorable effects of higher production costs (primarily raw materials) and unabsorbed fixed production costs due to lower production volumes.

Gross margin as a percentage of net sales decreased to 10% in 2023 compared to 20% in 2022. As discussed and quantified above, our gross margin as a percentage of net sales decreased primarily due to lower production and sales volumes, lower average TiO_2 selling prices, higher production costs and changes in currency exchange rates.

Selling, general and administrative expense – Selling, general and administrative expense decreased $20.1 million, or 9%, in 2023 compared to 2022 primarily due to lower distribution costs related to lower overall sales volumes during the year. Selling, general and administrative expense as a percentage of net sales increased in 2023 compared to 2022 as a result of lower net sales and $5.8 million in charges related to workforce reductions noted above. See Note 18 to our Consolidated Financial Statements.

Segment profit (loss) – We had a segment loss of $39.8 million in 2023 compared to segment profit of $175.9 million in 2022 as a result of the factors impacting gross margin discussed above. We recognized a gain of $2.5 million in 2023 and a gain of $2.7 million in 2022 related to cash received from the settlement of a business interruption insurance claim related to Hurricane Laura. See Note 17 to our Consolidated Financial Statements. We estimate changes in currency exchange rates decreased our segment loss by approximately $16 million in 2023 as compared to 2022, as discussed in the Effects of currency exchange rates section below.

Other non-operating income (expense) – We recognized unrealized losses of $1.0 million in each of 2023 and 2022 on the change in value of our marketable equity securities. See Note 6 to our Consolidated Financial Statements. Other components of net periodic pension and OPEB cost in 2023 decreased $7.2 million compared to 2022 primarily due to the net effects of higher discount rates impacting interest cost, previously unrecognized actuarial losses and $1.3 million in settlement costs related to the termination and buy-out of our pension plan in the United Kingdom during the second quarter of 2023. See Note 10 to our Consolidated Financial Statements. Interest expense in 2023 was comparable to interest expense in 2022. See Note 8 to our Consolidated Financial Statements.

Income tax expense (benefit) – We recognized an income tax benefit of $23.8 million in 2023 compared to income tax expense of $29.4 million in 2022. The difference is primarily due to lower earnings in 2023 and the jurisdictional mix of such earnings.

Our earnings are subject to income tax in various U.S. and non-U.S. jurisdictions, and the income tax rates applicable to the pre-tax earnings (losses) of our non-U.S. operations are generally higher than the income tax rates applicable to our U.S. operations. We would generally expect our overall effective tax rate to be higher than the U.S. federal statutory rate of 21% primarily because of our sizeable non-U.S. operations. See Note 12 to our Consolidated Financial Statements for a tabular reconciliation of our statutory income tax provision to our actual tax provision.

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 (and consequently our non-U.S. operations will generally hold U.S. dollars from time to time). Certain raw materials used in all our production facilities, primarily titanium-containing feedstocks, are purchased primarily in U.S. dollars, while labor and other production and administrative costs are incurred 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 (i) the difference between the currency exchange rates in effect when non-local currency sales or operating costs (primarily U.S. dollar denominated) are initially accrued and when such amounts are settled with the non-local currency and (ii) changes in currency exchange rates during time periods when our non-U.S. operations are holding non-local currency (primarily U.S. dollars).

Fluctuations in currency exchange rates had the following effects on our sales and income (loss) from operations for the periods indicated.

Impact of changes in currency exchange rates - 2024 vs. 2023

	Transaction gains recognized			Translation gains impact of rate changes	Total currency impact 2024 vs. 2023
	2023	2024	Change		
	(In millions)				
Impact on:					
Net sales	$ -	$ -	$ -	$ 5	$ 5
Income (loss) from operations	1	2	1	9	10

The $5 million increase in net sales (translation gains) was caused primarily by a weakening of the U.S. dollar relative to the euro, as our euro-denominated sales were translated into more U.S. dollars in 2024 as compared to 2023. The strengthening of the U.S. dollar relative to the Canadian dollar and the Norwegian krone in 2024 did not have a significant effect on our net sales, as a substantial portion of the sales generated by our Canadian and Norwegian operations is denominated in the U.S. dollar.

The $10 million increase in income from operations was comprised of the following:

- Higher net currency transaction gains of approximately $1 million primarily caused by relative changes in currency exchange rates at each applicable balance sheet date between the U.S. dollar and the euro, Canadian dollar and the Norwegian krone, and between the euro and the Norwegian krone, which causes increases or decreases, as applicable, in U.S. dollar-denominated receivables and payables and U.S. dollar currency held by our non-U.S. operations, and in Norwegian krone denominated receivables and payables held by our non-U.S. operations, and
- Approximately $9 million from net currency translation gains primarily caused by a strengthening of the U.S. dollar relative to the Canadian dollar and Norwegian krone, as local currency-denominated operating costs were translated into fewer U.S. dollars in 2024 as compared to 2023. The effect of the weakening of the U.S. dollar relative to the euro caused additional net translation gains as the positive effects of the weaker U.S. dollar on euro-denominated sales more than offset the unfavorable effects on euro-denominated operating costs being translated into more U.S. dollars in 2024 as compared to 2023.

Impact of changes in currency exchange rates - 2023 vs. 2022

	Transaction gains recognized			Translation gains impact of rate changes	Total currency impact 2023 vs. 2022
	2022	2023	Change		
	(In millions)				
Impact on:					
Net sales	$ -	$ -	$ -	$ 10	$ 10
Income (loss) from operations	12	1	(11)	27	16

The $10 million increase in net sales (translation gains) was caused primarily by a weakening of the U.S. dollar relative to the euro, as our euro-denominated sales were translated into more U.S. dollars in 2023 as compared to 2022. The strengthening of the U.S. dollar relative to the Canadian dollar and the Norwegian krone in 2023 did not have a significant effect on our net sales, as a substantial portion of the sales generated by our Canadian and Norwegian operations is denominated in the U.S. dollar.

The $16 million decrease in loss from operations was comprised of the following:

- Lower net currency transaction gains of approximately $11 million primarily caused by relative changes in currency exchange rates at each applicable balance sheet date between the U.S. dollar and the euro, Canadian dollar and the Norwegian krone, and between the euro and the Norwegian krone, which causes increases or decreases, as applicable, in U.S. dollar-denominated receivables and payables and U.S. dollar currency held by our non-U.S. operations, and in Norwegian krone denominated receivables and payables held by our non-U.S. operations, and
- Approximately $27 million from net currency translation gains primarily caused by a strengthening of the U.S. dollar relative to the Canadian dollar and Norwegian krone, as local currency-denominated operating costs were translated into fewer U.S. dollars in 2023 as compared to 2022. The effect of the weakening of the U.S. dollar relative to the euro was nominal in 2023 as compared to 2022.

Outlook

Overall customer demand improved in 2024 compared to the historical low demand we experienced during 2023, although demand levels remained below historical averages and customer demand moderated in the second half of the year as compared to the first half of the year across all major markets. We expect demand to improve in 2025, particularly in Europe where the European Commission enacted duties on Chinese imports of TiO_2 in mid-2024; however, we expect overall demand will remain below historical levels due to continued global economic uncertainty caused, in part, by the potential implementation of tariffs by the U.S. and other countries. We believe customer inventory levels were low at the end of 2024 due to customer hesitancy to build inventory late in the year, and we are receiving customer orders on shorter notice than we experienced early in 2024 indicating that customers have a cautious demand outlook and are carefully managing inventory levels. TiO_2 selling prices softened in the second half of 2024 in response to sluggish demand and competitive pressures. We expect these pricing pressures to be somewhat mitigated in 2025, particularly in Europe, as a result of the duties enacted on low-cost imports from China. We are operating our facilities at production rates in line with the current and expected near-term demand and believe our production rates for 2025 will be slightly above 2024 rates.

We are focused on cost reduction initiatives designed to improve our long-term cost structure. In 2023, we implemented targeted workforce reductions and certain ongoing process improvement initiatives. In the third quarter of 2024, we closed our Canadian sulfate process line to improve gross margins through the optimization of production of our purified grades. Raw material, energy and other input costs generally improved during 2024; however, energy costs in Europe have trended up in recent months and remain above historical levels. We expect raw material and other input costs will continue to moderate in 2025. Overall, primarily due to improved demand, we expect to report higher operating results for the full year of 2025 as compared to 2024, although we will need to achieve TiO_2 selling price increases in order to recognize margins more in-line with historical levels.

As noted above, we acquired full control of LPC in July 2024. We believe this acquisition is a unique opportunity to immediately add value to our customers and better serve the North American marketplace by allowing us to expand our product offerings and increase sales to new and existing customers while recognizing significant synergies, including commercial, overhead and supply chain optimization. We are in the process of fully integrating the additional LPC production capacity, and we expect the acquisition will have a positive impact on our earnings in 2025, although the potential positive impact will be limited by competitive pressures and by the additional debt service costs associated with the increase in borrowings to complete the transaction. With the increased borrowing availability under our Global Revolver, as well as cash on hand, we were able to finance the required working capital for the improvements needed to fully integrate the acquired LPC production capacity.

Our expectations for the TiO_2 industry and our operations are based on a number of factors outside our control. Our operations are affected by global and regional economic, political and regulatory factors, and we have experienced global market disruptions. As noted above, energy costs in Europe, which spiked when Russia invaded Ukraine, remain above historical levels. In addition, we operate a TiO_2 facility in Canada, and the majority of production from that facility is currently sold into the U.S. The U.S. federal government's recently enacted 25% tariff on our imports from Canada could harm our ability to compete and adversely impact our earnings and profitability if such tariffs are sustained for an

extended period of time without exclusion. We have begun to implement strategies to minimize the potential impacts. Future impacts on our operations will depend on, among other things, future energy costs, the effect newly enacted tariffs have on jurisdictions in which we or our customers and suppliers operate, our success in implementing mitigation strategies, and the impact economic conditions and geopolitical events have on our operations or our customers' and suppliers' operations, all of which remain uncertain and cannot be predicted.

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, 2024, we had substantial net assets denominated in the euro, Canadian dollar and Norwegian krone.

Critical accounting policies and estimates

Our significant accounting policies are more fully described in Note 1 to our Consolidated Financial Statements. Our Consolidated Financial Statements have been 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 disclosures 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.

We believe the most critical accounting policies and estimates involving significant judgment primarily relate to long-lived assets, defined benefit pension plans, income taxes and the acquisition of joint venture. We have discussed the development, selection and disclosure of our critical accounting estimates with the audit committee of our board of directors.

- *Long-lived assets* – The net book value of our property and equipment totaled $694.1 million at December 31, 2024. 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 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 are present. We did not evaluate any long-lived assets for impairment during 2024 because no such impairment indicators were present.
- *Defined benefit pension plans* – We participate in or maintain various defined benefit pension plans in the U.S., Europe and Canada. See Note 10 to our Consolidated Financial Statements. We recognized consolidated defined benefit pension plan expense of $24.1 million in 2022, $12.0 million in 2023 and $8.0 million in 2024. The funding requirements for these defined benefit pension plans are 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 $15.3 million in 2022, $16.1 million in 2023 and $15.4 million in 2024.

  Under defined benefit pension plan accounting, defined benefit pension plan expense, pension assets and accrued pension costs are each recognized based on certain actuarial assumptions. These assumptions are principally the assumed discount rate, the assumed long-term rate of return on plan assets, the fair value of 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) on our Consolidated Balance Sheets.

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, 2024, approximately 68%, 14%, 7% and 7% 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 or participate in 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, 2022 and expense in 2023	**Obligations at December 31, 2023 and expense in 2024**	**Obligations at December 31, 2024 and expense in 2025**
Germany	3.7%	3.2%	3.4%
Canada	5.1%	4.6%	4.6%
Norway	3.6%	3.6%	4.3%
U.S.	5.3%	5.0%	5.5%

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, 2024, approximately 58%, 18%, 10% and 11% of the plan assets related to our plans in 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. We regularly review our actual asset allocation for each of our U.S. and non-U.S. plans and

will periodically rebalance the investments in each plan to more accurately reflect the targeted allocation when considered appropriate.

Our assumed long-term rates of return on plan assets for 2022, 2023 and 2024 were as follows:

	2022	2023	2024
Germany	2.0%	4.8%	5.0%
Canada	3.8%	4.4%	4.9%
Norway	3.0%	4.8%	4.8%
U.S.	4.0%	5.0%	5.0%

Our long-term rate of return on plan asset assumptions in 2025 used for purposes of determining our 2025 defined benefit pension plan expense for Germany, Canada, Norway and the U.S. are 4.8%, 3.7%, 5.3% and 5.0%, respectively.

We follow ASC Topic 820, *Fair Value Measurements and Disclosures*, in determining the fair value of plan assets within our defined benefit pension plans. While we believe the valuation methods used to determine the fair value of plan assets are appropriate, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date.

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.

Based on the actuarial assumptions described above and our current expectation for what actual average currency exchange rates will be during 2025, we expect our defined benefit pension expense will approximate $8 million in 2025. In comparison, we expect to be required to contribute approximately $16 million to such plans during 2025. See Note 10 to our Consolidated Financial Statements for additional discussion of actuarial assumptions used in determining defined benefit pension assets, liabilities and expenses.

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, 2024, our aggregate projected benefit obligations would have increased by approximately $19.0 million at that date and our defined benefit pension expense would be expected to decrease by approximately $.1 million during 2025. 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 $1.2 million during 2025.

- *Income taxes* – We operate globally and the calculation of our provision for income taxes and our deferred tax assets and liabilities involves the interpretation and application of complex tax laws and regulations in a multitude of jurisdictions across our global operations. Our effective tax rate is highly dependent upon the geographic distribution of our earnings or losses and the effects of tax laws and regulations in each tax-paying jurisdiction in which we operate. Significant judgments and estimates are required in determining our consolidated provision for income taxes due to the global nature of our operations. Our provision (benefit) for income taxes and deferred tax assets and liabilities reflects our best assessment of estimated current and

future taxes to be paid, including the recognition and measurement of deferred tax assets and liabilities.

We recognize deferred taxes for future tax effects of temporary differences between financial and income tax reporting. Deferred income tax assets and liabilities for each tax-paying jurisdiction in which we operate are netted and presented as either a noncurrent deferred income tax asset or liability, as applicable. 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.

We periodically review our deferred tax assets ("DTA") to determine if a valuation allowance is required. For example, at December 31, 2024, we have significant German corporate and trade net operating loss (NOL) carryforwards of $447.3 million (DTA of $70.8 million) and $40.1 million (DTA of $4.4 million), respectively; and Belgian corporate NOL carryforwards of $72.0 million (DTA of $18.0 million). Prior to December 31, 2024, and using all available evidence, we had concluded that no deferred income tax asset valuation allowance was required to be recognized with respect to such carryforwards, principally because (i) such carryforwards have lengthy carryforward periods (the German and Belgian carryforwards may be carried forward indefinitely), (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. With respect to our Belgium carryforwards, at December 31, 2024, given our operating results during the fourth quarter of 2024 and our current expectations for 2025, we do not have sufficient positive evidence to overcome the significant negative evidence of having cumulative losses in the most recent twelve consecutive quarters in Belgium (even considering that the carryforward period of our Belgian NOL carryforwards is indefinite, one piece of positive evidence). Accordingly, at December 31, 2024, we concluded that we were required to recognize a non-cash deferred income tax asset valuation allowance of $8.2 million under the more-likely-than-not recognition criteria with respect to our Belgian net deferred tax assets. At December 31, 2024, we continue to conclude no valuation allowance is required to be recognized for our German DTAs although prior to the complete utilization of such carryforwards, if we were to generate additional losses in our German operations for an extended period of time, or if applicable laws were to change such that the carryforward periods were more limited, 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.

The Organization for Economic Cooperation and Development (the "OECD"), the European Union and other countries have committed to enacting the OECD's Pillar Two initiative that would provide a global minimum level of taxation for multinational companies to be applied on a country-by-country basis. Currently, many countries have enacted legislation to implement the Pillar Two rules effective for years beginning on or after December 31, 2023. Based on legislation currently enacted, we do not anticipate any material impact to our Consolidated Financial Statements; however, until all the jurisdictions we operate in enact legislation, the full impact of Pillar Two to us is unknown.

- *Acquisition of Joint Venture* – During the third quarter of 2024, we acquired the 50% joint venture interest in LPC previously held by Venator. Prior to the acquisition we accounted for our interest in LPC under the equity method. The application of the purchase method of accounting for business combinations requires us to use significant estimates and assumptions in the determination of the estimated fair value of assets acquired and liabilities assumed. Our estimates of the fair values of assets acquired and liabilities assumed are based upon assumptions we believe are reasonable, and when appropriate, include assistance from independent third-party valuation advisors. See Note 5 to our Consolidated Financial Statements.

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. In addition to the impact of the operating, investing and financing cash flows discussed below, changes in the amount of cash, cash equivalents and restricted cash we report from year to year can be impacted by changes in currency exchange rates, since a portion of our cash, cash equivalents and restricted cash is held by our non-U.S. subsidiaries. For example, during 2024, relative changes in currency exchange rates resulted in a $.1 million decrease in the reported amount of our cash, cash equivalents and restricted cash compared to a $1.0 million increase in 2023 and a $5.1 million decrease in 2022.

Cash provided by operating activities was $72.5 million in 2024 compared to $5.5 million in 2023. This $67.0 million increase in the amount of cash provided was primarily due to the net effect of the following:

- higher income from operations in 2024 of $178.9 million,
- higher amount of net cash used associated with relative changes in our inventories, receivables, payables and accruals in 2024 of $83.3 million,
- higher cash paid for interest in 2024 of $22.4 million,
- higher cash paid for taxes in 2024 of $17.2 million primarily due to higher earnings,
- cash premium of $6.0 million on the issuance of senior notes, and
- higher net contributions of $5.8 million to our TiO_2 manufacturing joint venture in 2024 prior to the LPC acquisition.

Cash provided by operating activities was $5.5 million in 2023 compared to $81.7 million in 2022. This $76.2 million decrease in the amount of cash provided was primarily due to the net effect of the following:

- lower income from operations in 2023 of $215.6 million,
- lower amount of net cash used associated with relative changes in our inventories, receivables, payables and accruals in 2023 of $109.5 million,
- lower cash paid for income taxes of $20.0 million primarily due to decreased earnings in 2023, and
- lower net contributions to our TiO_2 manufacturing joint venture in 2023 of $13.6 million.

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

- Our average days sales outstanding, or DSO, decreased from December 31, 2023 to December 31, 2024, primarily due to relative changes in the timing of collections, and
- Our average days sales in inventory, or DSI, increased from December 31, 2023 to December 31, 2024, primarily due to production volumes exceeding sales volumes in 2024 compared to 2023 when our sales volumes exceeded our production volumes.

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

	December 31, 2022	December 31, 2023	December 31, 2024
DSO	64 days	66 days	62 days
DSI	103 days	65 days	82 days

Investing activities

We paid $156.8 million, net of cash acquired, for the remaining TiO_2 manufacturing joint venture interest in LPC. See Note 5 to our Consolidated Financial Statements.

Our capital expenditures were $29.5 million in 2024 compared to $47.4 million in 2023 and $63.2 million in 2022. 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 $45.8 million (including $17.0 million in 2024) for our ongoing environmental protection and compliance programs.

During 2023 and 2022, we had no loans or collections under our unsecured revolving demand promissory note with Valhi, which was cancelled in February 2024.

Financing activities

During 2024, we:

- paid dividends of $.48 per share to stockholders aggregating $55.2 million ($.19, $.19, $.05 and $.05 per share in the first, second, third and fourth quarters of 2024, respectively), and
- exchanged €325 million of our Kronos International, Inc. (KII) 3.75% Senior Secured Notes due September 2025 (the "Old Notes") for our newly issued €276.174 million 9.50% Senior Secured Notes due March 2029 (the "New Notes") plus additional cash consideration of $52.6 million to certain eligible holders of the Old Notes and borrowed $53.7 million from Contran. In the third quarter we issued an additional €75 million principal amount of 9.50% Senior Secured Notes due 2029 (the Additional New Notes (as defined below) together with the Old Notes and the New Notes, the "Senior Secured Notes"). See Note 8 to our Consolidated Financial Statements.

During 2023, we:

- paid quarterly dividends of $.19 per share to stockholders aggregating $87.5 million, and
- acquired 313,814 shares of our common stock in market transactions for an aggregate purchase price of $2.8 million.

During 2022, we:

- paid quarterly dividends of $.19 per share to stockholders aggregating $87.8 million, and
- acquired 217,778 shares of our common stock in market transactions for an aggregate purchase price of $2.3 million.

In February 2025, our board of directors declared a first quarter 2025 regular quarterly dividend of $.05 per share, payable March 20, 2025 to stockholders of record as of March 11, 2025.

Outstanding debt obligations and borrowing availability

At December 31, 2024, our consolidated debt comprised:

- €351.174 million aggregate outstanding on our KII 9.5% Senior Secured Notes due 2029 plus €5.1 million of unamortized premium ($365.4 million carrying amount, net of unamortized debt issuance costs),
- €75 million aggregate outstanding on our KII 3.75% Senior Secured Notes due 2025 ($78.3 million carrying amount),
- $53.7 million outstanding on our subordinated, unsecured term loan from Contran due September 2029 (the "Contran Term Loan"), and
- $10.0 million outstanding on our Global Revolver.

Availability under the Global Revolver is subject to a borrowing base calculation, as defined in the agreement. The borrowing base calculated as of December 31, 2024 was approximately $278 million. Effective July 17, 2024, we completed an amendment to our Global Revolver (the "Second Amendment"). Among other things, the Second Amendment increased the maximum borrowing amount from $225 million to $300 million, extended the maturity date to July 2029 and expanded the facility to include LPC and LPC's receivables and certain of its inventories in the borrowing base. The LPC acquisition was financed through borrowings of $132.1 million under our Global Revolver with the remainder paid with cash on hand. On July 30, 2024, our wholly-owned subsidiary, KII, issued an additional €75 million principal amount of 9.50% Senior Secured Notes due 2029 (the "Additional New Notes"). The Additional New Notes were issued at a premium of 107.50% of their principal amount, plus accrued interest from February 12, 2024, resulting in net proceeds of approximately $90 million, after fees and expenses. The Additional New Notes are fungible with the New Notes, are treated as a single series with the New Notes, and have the same terms as the New Notes, other than their date of issuance and issue price. The proceeds from the Additional New Notes were used to pay down borrowings incurred under the Global Revolver. Subsequent to the issuance of the Additional New Notes, the Contran Term Loan was amended in August 2024 to change the interest rate from 11.5% (which had been determined by adding an additional spread of 2% to the final interest rate on the New Notes issued in February 2024) to 9.54% (determined by adding a spread of 2% to the effective interest rate of the Additional New Notes issued in July 2024). In each case, the spread used to determine the rate was based upon comparable debt transactions at the time of the issuance of the applicable notes. See Note 8 to our Consolidated Financial Statements.

The Contran Term Loan is subordinated in right of payment to our Senior Secured Notes and our Global Revolver. Our Senior Secured Notes, the Contran Term Loan and our Global Revolver contain a number of covenants and restrictions which, among other things, restrict our ability to incur or guarantee additional debt, incur liens, pay dividends or make other restricted payments, or merge or consolidate with, or sell or transfer substantially all of our assets to, another entity, and contain other provisions and restrictive covenants customary in lending transactions of these types. 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 typical financial or payment covenants. For example, the 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, the credit agreements could result in the acceleration of all or a portion of the indebtedness following a sale of assets outside the ordinary course of business. The terms of all of our debt instruments are discussed in Note 8 to our Consolidated Financial Statements. We are in compliance with all of our debt covenants at December 31, 2024. We believe we will be able to continue to comply with the financial covenants contained in our credit facility through its maturity; however, if future operating results differ materially from our expectations we may be unable to maintain compliance.

Our assets consist primarily of investments in operating subsidiaries, and our ability to service our obligations, including the Senior Secured Notes and the Contran 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. Our Senior Secured Notes are collateralized by, among other things, a first priority lien on (i) 100% of the common stock or other ownership interests of each existing and future direct domestic subsidiary of KII and the guarantors, and (ii) 65% of the voting common stock or other ownership interests and 100% of the non-voting common stock or other ownership interests of each non-U.S. subsidiary that is directly owned by KII or any guarantor. Our Global Revolver is collateralized by, among other things, a first priority lien on the borrower's trade receivables and inventories.

Future cash requirements

Liquidity

Our primary source of liquidity on an ongoing basis is cash flows from operating activities which is generally used to (i) fund capital expenditures, (ii) repay any short-term indebtedness incurred for working capital purposes, (iii) provide for the payment of dividends and (iv) fund purchases of shares of our common stock under our stock repurchase program. 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 TiO_2 industry is cyclical, and changes in industry economic conditions significantly impact earnings and operating cash flows. Changes in TiO_2 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. We may also from time to time engage in preliminary discussions with existing or potential investors regarding the timing or terms of any such refinancing or other potential transactions. 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 TiO_2 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.

Based upon our expectation for the TiO_2 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, 2025) and our long-term obligations (defined as the five-year period ending December 31, 2029, our time period for long-term budgeting). With respect to the €75 million KII 3.75% Senior Secured Notes due 2025, we intend to satisfy this obligation through cash generated from operations or to the extent that is not sufficient, a combination of cash generated from operations and borrowings on the Global Revolver. If actual developments differ from our expectations, our liquidity could be adversely affected.

Cash, cash equivalents, restricted cash and marketable securities

At December 31, 2024 we had:

	Held by		
	U.S. entities	Non-U.S. entities	Total
		(In millions)	
Cash and cash equivalents	$ 28.9	$ 77.8	$ 106.7
Current restricted cash	1.3	2.0	3.3
Noncurrent restricted cash	-	4.7	4.7
Noncurrent marketable securities	3.4	-	3.4

Following implementation of a territorial tax system under the 2017 Tax Act, repatriation of any cash and cash equivalents held by our non-U.S. subsidiaries would not be expected to result in any material income tax liability as a result of such repatriation.

Stock repurchase program

At December 31, 2024, we have 1,017,518 shares available for repurchase under a stock repurchase program authorized by our board of directors. See Note 13 to our Consolidated Financial Statements.

Capital expenditures

We intend to spend approximately $55 million on capital expenditures during 2025 (including approximately $9 million contractually committed at December 31, 2024), primarily to maintain and improve our existing facilities. We estimate approximately $24 million of our 2025 capital expenditures will be in environmental compliance, protection and improvement programs which are primarily focused on increasing operating efficiency but also result in improved environmental protection, such as lower emissions from our manufacturing plants. Capital spending for 2025 is expected to be funded through cash on hand or borrowing under our existing credit facility. It is possible we will delay planned capital projects based on market conditions.

Commitments and contingencies

See Notes 5, 12 and 15 to our Consolidated Financial Statements for a description of certain income tax contingencies, certain legal proceedings and other commitments.

As described in the Notes to the Consolidated Financial Statements, we are a party to various debt, lease, raw material supply and other agreements which contractually and unconditionally commit us to pay certain amounts in the future. See Notes 7, 8, 14 and 15 to our Consolidated Financial Statements.

Recent accounting pronouncements

See Note 19 to our Consolidated Financial Statements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

General

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

Interest rates

At December 31, 2024, our aggregate indebtedness was comprised primarily of our fixed-rate, euro-denominated KII 9.5% Senior Secured Notes due 2029 and KII 3.75% Senior Secured Notes due 2025. The fixed-rate debt instruments minimize earnings volatility that would result from changes in interest rates. Our Global Revolver is a variable-rate instrument. The following table presents principal amounts and weighted average interest rates for our aggregate outstanding indebtedness at December 31, 2024. Information shown below for our euro-denominated 9.50% and 3.75% Senior Secured Notes due 2029 and 2025, respectively, is presented in its U.S. dollar equivalent at December 31, 2024 (net of unamortized debt issuance costs of $6.3 million, in addition to an unamortized bond premium of $5.3 million) using an exchange rate of U.S. $1.043 per euro. In addition, at December 31, 2024, we have a $53.7 million subordinated, unsecured term loan payable to a related party, Contran, due September 2029. See Notes 8 and 14 to our Consolidated Financial Statements.

	Indebtedness amount		Year-end interest rate	Maturity date
	Carrying amount	Fair value		
	(In millions)			
Fixed-rate indebtedness:				
Kronos International, Inc. 9.50% Senior Secured	$ 365.4	403.4	9.50 %	2029
Kronos International, Inc. 3.75% Senior Secured	78.3	77.9	3.75 %	2025
Total fixed rate indebtedness	$ 443.7	$ 481.3	8.49 %	
Variable rate indebtedness:				
Revolving credit facility	$ 10.0	$ 10.0	6.25 %	2029

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 to a lesser extent the United Kingdom pound sterling and the value of the euro relative to the Norwegian krone.

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 (and consequently our non-U.S. operations will generally hold U.S. dollars from time to time). Certain raw materials used in all our production facilities, primarily titanium-containing feedstocks, are purchased primarily in U.S. dollars, while labor and other production and administrative costs are incurred 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. 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 (i) the difference between the currency exchange rates in effect when non-local currency sales or operating costs (primarily U.S. dollar denominated) are initially accrued and when such amounts are settled with the non-local currency and (ii) changes in currency exchange rates during time periods when our non-U.S. operations are holding non-local currency (primarily 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. However, we may enter into such contracts in the future to manage our currency exchange rate risk. We are not party to any currency forward contracts at December 31, 2024.

Also, we are subject to currency exchange rate risk associated with our Senior Secured Notes due 2025 and 2029, as such indebtedness is denominated in euros. At December 31, 2024, we had the equivalent of $365.4 million outstanding under our euro-denominated KII 9.5% Senior Secured Notes due 2029 (exclusive of unamortized bond premium and debt issuance costs) and $78.3 million outstanding under our euro-dominated KII 3.75% Senior Secured Notes due 2025 (exclusive of unamortized debt issuance costs). The potential increase in the U.S. dollar equivalent of such indebtedness resulting from a hypothetical 10% adverse change in exchange rates at December 31, 2024 would be approximately $45 million.

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. 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 disclosure controls and procedures which, as defined in 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 James M. Buch, our President and Chief Executive Officer and Tim C. Hafer, our Executive Vice President and Chief Financial Officer, have evaluated the design and effectiveness of our disclosure controls and procedures as of December 31, 2024. Based upon their evaluation, these executive officers have concluded that our disclosure controls and procedures are effective as of the date of such evaluation.

Management's report on internal control over financial reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting which, 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 generally accepted accounting principles, 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.

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 in 2013 (commonly referred to as the "2013 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, 2024.

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, 2024, as stated in their report, which is included in this Annual Report on Form 10-K.

Other

As permitted by the SEC, our assessment of internal control over financial reporting excludes (i) internal control over the preparation of any financial statement schedules which would be required by Article 12 of Regulation S-X and (ii) internal control over financial reporting as it relates to our newly-consolidated subsidiary LPC (as discussed in Note 5 to our Consolidated Financial Statements, which represents approximately 19% of our total assets at December 31, 2024).

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, 2024 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

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 2024, our chief executive officer filed such annual certification with the NYSE. The 2024 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, 2024 have been filed as Exhibits 31.1 and 31.2 to this Annual Report on Form 10-K.

ITEM 9B. OTHER INFORMATION

Not applicable

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this Item is incorporated by reference to our 2025 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 2025 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 2025 proxy statement.

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

The information required by this Item is incorporated by reference to our 2025 proxy statement. See also Note 14 to our Consolidated Financial Statements.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this Item is incorporated by reference to our 2025 proxy statement.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) and (c) **Financial Statements**

The Registrant

The Consolidated Financial Statements of the Registrant listed on the accompanying Index of Financial Statements (see page F-1) are filed as part of this Annual Report.

50%-or-less owned persons

We are not required to provide any consolidated financial statements pursuant to Rule 3-09 of Regulation S-X.

(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, 2024 will be furnished to the Commission upon request.

Item No.	Exhibit Index
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 filed on May 12, 2011.
3.2	Amended and Restated Bylaws of Kronos Worldwide, Inc. as of October 25, 2023 – incorporated by reference to Exhibit 3.1 of the Registrant's Current Report on Form 8-K filed with the U.S. Securities and Exchange Commission on October 25, 2023.
4.1	Description of the Registrant's Capital Stock – incorporated by reference to Exhibit 4.1 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2019.
10.1	Tax Agreement between Valhi, Inc. and Kronos Worldwide, Inc. dated as of January 1, 2020 – incorporated by reference to Exhibit 10.1 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2019.
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 10.1 to the Quarterly Report on Form 10-Q of the Registrant 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.
10.4	Lease Contract, dated June 21, 1952, between Farbenfabriken Bayer Aktiengesellschaft and Titangesellschaft mit beschrankter 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. (P)
10.5	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). (P)

Item No.	Exhibit Index
10.6	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). (P)
10.7	Second Amended and Restated Agreement Regarding Shared Insurance among CompX International Inc., Contran Corporation, Kronos Worldwide, Inc., NL Industries, Inc., and Valhi, Inc. dated January 25, 2019 – incorporated by reference to Exhibit 10.16 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2018.
10.8	Restated and Amended Agreement by and between Richards Bay Titanium (Proprietary) Limited (acting through its sales agent Rio Tinto Iron & Titanium Limited) and Kronos (US), Inc. effective January 1, 2016 – incorporated by reference to Exhibit 10.26 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2015.
10.9	Indenture, dated as of September 13, 2017, among Kronos International, Inc., the guarantors named therein, and Deutsche Bank Trust Company Americas, as trustee, collateral agent, paying agent, transfer agent and registrar – incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K dated September 13, 2017 and filed by the Registrant on September 13, 2017.
10.9.1	Supplemental Indenture No. 1, dated as of February 12, 2024, among Kronos International, Inc., the guarantors named therein, and Deutsche Bank Trust Company Americas, as trustee, collateral agent, paying agent, transfer agent and registrar – incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K filed by the Registrant on February 12, 2024.
10.9.2	Supplemental Indenture No. 2, dated as of August 8, 2024, among Louisiana Pigment Company, L.P. and Kronos LPC, LLC (as new guarantors under the Indenture dated as of September 13, 2017, as amended), Kronos International, Inc., and Deutsche Bank Trust Company Americas, as trustee, collateral agent, paying agent, transfer agent and registrar – incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2024.
10.10	Indenture, dated as of February 12, 2024, among Kronos International, Inc., the guarantors named therein, and Deutsche Bank Trust Company Americas, as trustee, collateral agent, paying agent, transfer agent and registrar – incorporated by reference to Exhibit 4.2 to the Current Report on Form 8 K filed by the Registrant on February 12, 2024.
10.10.1	First Supplemental Indenture dated as of July 30, 2024, by and among Kronos International, Inc., the guarantors named therein, and Deutsche Bank Trust Company Americas, as trustee, collateral agent, paying agent, transfer agent and registrar – incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed by the Registrant on July 30, 2024.
10.10.2	Second Supplemental Indenture dated as of August 8, 2024, among Louisiana Pigment Company, L.P. and Kronos LPC, LLC (as new guarantors under the Indenture dated as of February 12, 2024, as amended), Kronos International, Inc., and Deutsche Bank Trust Company Americas, as trustee, collateral agent, paying agent, transfer agent and registrar – incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2024.
10.11	Pledge Agreement, dated as of September 13, 2017, among Kronos International, Inc., the guarantors named therein and Deutsche Bank Trust Company Americas, as collateral agent – incorporated by reference to Exhibit 4.2 to the Current Report on Form 8-K dated September 13, 2017, and filed by the Registrant on September 13, 2017.

Item No.	Exhibit Index
10.11.1	Additional Notes Priority Joinder Agreement dated February 12, 2024, executed by Deutsche Bank Trust Company Americas, as trustee and collateral agent for the holders of Kronos International, Inc.'s 9.50% Senior Secured Notes due 2029 and as existing agent under the Pledge Agreement dated September 13, 2017 entered into in connection with Kronos International Inc.'s 3.75% Senior Secured Notes due 2025 – incorporated by reference to Exhibit 4.4 to the Current Report on Form 8 K filed by the Registrant on February 12, 2024.
10.11.2	Additional Notes Priority Joinder Agreement dated July 30, 2024, executed by Deutsche Bank Trust Company Americas, as trustee and collateral agent – incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K filed by the Registrant on July 30, 2024.
10.11.3	Joinder No. 1 dated as of August 8, 2024, to the Pledge Agreement dated as of September 13, 2017, joining Louisiana Pigment Company, L.P. and Kronos LPC, LLC to the Pledge Agreement – incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2024.
10.11.4	Pledge Amendment dated as of August 8, 2024, to the Pledge Agreement dated as of September 13, 2017, executed by Kronos Louisiana, Inc. and Kronos LPC, LLC regarding additional pledged securities – incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2024.
10.12	Credit Agreement dated as of April 20, 2021, by and among the Company, Kronos Louisiana, Inc., Kronos (US), Inc., Kronos Canada, Inc., Kronos Europe NV, Kronos Titan GmbH and Wells Fargo Bank, National Association as administrative agent and lender – incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2021.
10.12.1	First Amendment to Credit Agreement dated May 8, 2023, among Kronos Worldwide, Inc., Kronos Louisiana, Inc., Kronos (US), Inc., Kronos Canada, Inc., Kronos Europe NV, Kronos Titan GmbH, Wells Fargo Bank, National Association, as administrative agent, and the lenders a party thereto – incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed with the U.S. Securities and Exchange Commission on May 9, 2023.
10.12.2	Second Amendment to Credit Agreement dated July 17, 2024 among Kronos Worldwide, Inc., Kronos Louisiana, Inc., Kronos (US), Inc., Kronos Canada, Inc., Kronos Europe NV, Kronos Titan GmbH, Wells Fargo Bank, National Association as administrative agent and the lenders a party thereto – incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K filed by the Registrant on July 17, 2024.
10.12.3	Third Amendment to Credit Agreement dated December 19, 2024 among Kronos Worldwide, Inc., Kronos Louisiana, Inc., Kronos (US), Inc., Kronos Canada, Inc., Kronos Europe NV, Kronos Titan GmbH, Wells Fargo Bank, National Association, as administrative agent, and the lenders a party thereto – incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed by the Registrant on December 19, 2024.
10.13	Guaranty and Security Agreement dated as of April 20, 2021, by and among the Company, Kronos Louisiana, Inc., Kronos (US), Inc., Kronos Canada, Inc., Kronos International, Inc. and Wells Fargo Bank, National Association as administrative agent and lender – incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2021.
10.13.1	First Amendment to Guaranty and Security Agreement, entered into as of July 17, 2024, by and among Kronos Worldwide, Inc., Kronos Louisiana, Inc., Kronos (US), Inc., Kronos International, Inc. and Wells Fargo Bank, National Association as administrative agent and lender, amending Guaranty and Security Agreement dated as of April 20, 2021 – incorporated by reference to Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2024.

Item No.	Exhibit Index
10.13.2	Joinder No. 1 dated as of August 7, 2024, joining Louisiana Pigment Company, L.P. and Kronos LPC, LLC to the Guaranty and Security Agreement dated as of April 20, 2021, as amended – incorporated by reference to Exhibit 10.6 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2024.
10.14	Unsecured Subordinated Term Promissory Note dated February 12, 2024, in the principal amount of $53,705,000 executed by Kronos Worldwide, Inc. and the guarantors named therein and payable to the order of Contran Corporation – incorporated by reference to Exhibit 4.5 to the Current Report on Form 8 K filed by the Registrant on February 12, 2024.
10.14.1	First Amendment to Unsecured Subordinated Term Promissory Note dated February 12, 2024, executed by Kronos Worldwide, Inc. and Contran Corporation as of August 7, 2024 – incorporated by reference to Exhibit 10.6 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2024.
10.15	Purchase and Sale Agreement dated July 16, 2024 by and between Kronos Louisiana, Inc., Kronos Worldwide, Inc., Venator Investments, Ltd. and Venator Materials PLC – incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed by the Registrant on July 17, 2024.
10.15.1	Amendment to Purchase and Sale Agreement dated August 13, 2024, by and between Kronos Louisiana, Inc., Kronos Worldwide, Inc., Venator Investments, Ltd., Venator Materials PLC and Louisiana Pigment Company, L.P. amending Purchase Agreement dated as of July 16, 2024 – incorporated by reference to Exhibit 10.7 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2024.
19.1**	Kronos Worldwide, Inc. Insider Trading Policy
21.1**	Subsidiaries.
23.1**	Consent of PricewaterhouseCoopers LLP.
31.1**	Certification.
31.2**	Certification.
32.1**	Certification.
97*	Policy of the Recovery of Erroneously Awarded Compensation incorporated by reference to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2023.
101.INS**	Inline XBRL Instance - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH**	Inline XBRL Taxonomy Extension Schema
101.CAL**	Inline XBRL Taxonomy Extension Calculation Linkbase
101.DEF**	Inline XBRL Taxonomy Extension Definition Linkbase
101.LAB**	Inline XBRL Taxonomy Extension Label Linkbase
101.PRE**	Inline XBRL Taxonomy Extension Presentation Linkbase
104	Cover page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

\+ 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

(P) Paper exhibits

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/ James M. Buch
James M. Buch, March 6, 2025
(President 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/ Loretta J. Feehan
Loretta J. Feehan, March 6, 2025
(Chair of the Board (non-executive))

/s/ John E. Harper
John E. Harper, March 6, 2025
(Director)

/s/ Michael S. Simmons
Michael S. Simmons, March 6, 2025
(Vice Chairman of the Board)

/s/ Kevin B. Kramer
Kevin B. Kramer, March 6, 2025
(Director)

/s/ James M. Buch
James M. Buch, March 6, 2025
(President and Chief Executive Officer)

/s/ Meredith W. Mendes
Meredith W. Mendes, March 6, 2025
(Director)

/s/ Tim C. Hafer
Tim C. Hafer, March 6, 2025
(Executive Vice President and Chief Financial Officer, Principal Financial Officer)

/s/ Cecil H. Moore, Jr.
Cecil H. Moore, Jr., March 6, 2025
(Director)

/s/ Bryan S. Bell
Bryan S. Bell, March 6, 2025
(Vice President and Controller, Global Finance)

/s/ R. Gerald Turner
R. Gerald Turner, March 6, 2025
(Director)

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 Board of Directors and Stockholders of Kronos Worldwide, Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Kronos Worldwide, Inc. and its subsidiaries (the "Company") as of December 31, 2024 and 2023, and the related consolidated statements of operations, of comprehensive income (loss), of stockholders' equity and of cash flows for each of the three years in the period ended December 31, 2024, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2024, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2024 and 2023, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2024 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, 2024, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated 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 the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. 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.

As described in Management's report on internal control over financial reporting, management has excluded Louisiana Pigment Company, L.P. ("LPC") from its assessment of internal control over financial reporting as of December 31, 2024, because it was acquired by the Company in a purchase business combination during 2024. We have also excluded LPC from our audit of internal control over financial reporting. LPC is a wholly-owned subsidiary whose total assets and total revenues excluded from management's assessment and our audit of internal control over financial reporting

represent 19% and less than 1%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2024.

Definition and Limitations of Internal Control over Financial Reporting

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.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Income Taxes

As described in Note 12 to the consolidated financial statements, the Company recorded a provision for income taxes of $63.4 million and recorded noncurrent deferred tax asset and deferred tax liability amounts of $55.1 million and $24.5 million, respectively, for the year ended December 31, 2024. As disclosed by management, the Company operates globally and the calculation of the Company's provision for income taxes and its deferred tax assets and liabilities involves the interpretation and application of complex tax laws and regulations in a multitude of jurisdictions across the Company's global operations. The Company's effective tax rate is highly dependent upon the geographic distribution of its earnings or losses and the effects of tax laws and regulations in each tax-paying jurisdiction in which the Company operates. Significant judgments and estimates are required by management in determining the consolidated provision for income taxes due to the global nature of the Company's operations. The Company's provision for income taxes and deferred tax assets and liabilities reflect management's best assessment of estimated current and future taxes to be paid, including the recognition and measurement of deferred tax assets and liabilities.

The principal considerations for our determination that performing procedures relating to income taxes is a critical audit matter are the significant judgment by management when developing the estimate of current and future taxes to be paid, including the recognition and measurement of deferred tax assets and liabilities. This in turn led to a high degree of auditor judgment, subjectivity, and effort in performing procedures and evaluating evidence related to the recognition and measurement of deferred tax assets and liabilities and management's assessment of the estimated current and future taxes to be paid, including evaluating management's interpretation of tax laws and regulations.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls

relating to accounting for income taxes, including controls over the identification, completeness, and recognition of permanent and temporary differences within jurisdictions, the recognition and measurement of deferred tax assets and liabilities, the application of tax laws and regulations in the various jurisdictions in which the Company operates, the rate reconciliation and the provision to tax return reconciliation. These procedures also included, among others, (i) evaluating the provision for income taxes, including the accuracy of the underlying information used in the calculation by jurisdiction, as well as the reasonableness of management's judgments and estimates in the application of tax laws and regulations; (ii) testing the current and deferred income tax provision, including evaluating permanent and temporary differences within certain jurisdictions and management's assessment of the technical merits of the differences; (iii) performing procedures over the Company's rate reconciliation; and (iv) testing the reconciliation of the provision to the tax returns.

/s/ PricewaterhouseCoopers LLP
Dallas, Texas
March 6, 2025

We have served as the Company’s auditor since 1997.

KRONOS WORLDWIDE, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

(In millions, except per share data)

ASSETS	December 31, 2023	December 31, 2024
Current assets:		
Cash and cash equivalents	$ 194.7	**$ 106.7**
Restricted cash	2.2	**3.3**
Accounts and other receivables, net	295.2	**291.0**
Receivables from affiliates	17.3	**.6**
Inventories, net	564.6	**656.7**
Prepaid expenses and other	43.4	**47.0**
Total current assets	1,117.4	**1,105.3**
Other assets:		
Investment in TiO_2 manufacturing joint venture	111.0	**-**
Restricted cash	5.2	**4.7**
Marketable securities	2.2	**3.4**
Operating lease right-of-use assets	22.7	**20.6**
Deferred income taxes	83.3	**55.1**
Goodwill	-	**2.6**
Other	13.3	**27.7**
Total other assets	237.7	**114.1**
Property and equipment:		
Land	44.7	**74.2**
Buildings	236.8	**253.9**
Equipment	1,172.0	**1,306.5**
Mining properties	130.5	**115.8**
Construction in progress	22.9	**41.1**
	1,606.9	**1,791.5**
Less accumulated depreciation and amortization	1,124.0	**1,097.4**
Net property and equipment	482.9	**694.1**
Total assets	$ 1,838.0	**$ 1,913.5**

KRONOS WORLDWIDE, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS (CONTINUED)

(In millions, except per share data)

LIABILITIES AND STOCKHOLDERS' EQUITY	December 31, 2023	December 31, 2024
Current liabilities:		
Current maturities of long-term debt	$ -	**$ 78.3**
Accounts payable and accrued liabilities	324.1	**358.3**
Payables to affiliates	31.3	**18.0**
Income taxes	15.4	**22.0**
Total current liabilities	370.8	**476.6**
Noncurrent liabilities:		
Long-term debt	440.9	**429.1**
Accrued pension costs	150.0	**117.5**
Payable to affiliate - income taxes	18.6	**-**
Operating lease liabilities	18.6	**17.1**
Deferred income taxes	9.0	**24.5**
Other	21.8	**31.7**
Total noncurrent liabilities	658.9	**619.9**
Stockholders' equity:		
Common stock, $.01 par value; 240.0 shares authorized; 115.0 shares issued and outstanding	1.2	**1.2**
Additional paid-in capital	1,390.2	**1,390.3**
Retained deficit	(242.0)	**(211.0)**
Accumulated other comprehensive loss	(341.1)	**(363.5)**
Total stockholders' equity	808.3	**817.0**
Total liabilities and stockholders' equity	$ 1,838.0	**$ 1,913.5**

Commitments and contingencies (Notes 5, 12 and 15)

See accompanying Notes to Consolidated Financial Statements.

KRONOS WORLDWIDE, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS

(In millions, except per share data)

	Years ended December 31,		
	2022	**2023**	**2024**
Net sales	$ 1,930.2	$ 1,666.5	**$ 1,887.1**
Cost of sales	1,539.1	1,501.6	**1,527.8**
Gross margin	391.1	164.9	**359.3**
Selling, general and administrative expense	231.3	211.2	**225.6**
Other operating income (expense):			
Currency transactions, net	11.5	1.4	**1.6**
Other income, net	3.4	3.3	**2.4**
Corporate expense	(15.1)	(14.4)	**(14.8)**
Income (loss) from operations	159.6	(56.0)	**122.9**
Other income (expense):			
Gain on remeasurement of investment in TiO_2 manufacturing joint venture	-	-	**64.5**
Interest and dividend income	5.1	6.9	**5.5**
Marketable equity securities	(1.0)	(1.0)	**1.2**
Other components of net periodic pension and OPEB cost	(12.9)	(5.7)	**(1.6)**
Interest expense	(16.9)	(17.1)	**(42.9)**
Income (loss) before income taxes	133.9	(72.9)	**149.6**
Income tax expense (benefit)	29.4	(23.8)	**63.4**
Net income (loss)	$ 104.5	$ (49.1)	**$ 86.2**
Net income (loss) per basic and diluted share	$ .90	$ (.43)	**$ .75**
Weighted average shares used in the calculation of net income (loss) per share	115.5	115.1	**115.0**

See accompanying Notes to Consolidated Financial Statements.

KRONOS WORLDWIDE, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

(In millions)

	Years ended December 31,		
	2022	**2023**	**2024**
Net income (loss)	$ 104.5	$ (49.1)	**$ 86.2**
Other comprehensive income (loss), net of tax:			
Currency translation	(28.8)	3.7	**(34.5)**
Defined benefit pension plans	100.2	(12.9)	**12.2**
Other postretirement benefit plans	1.2	(.4)	**(.1)**
Total other comprehensive income (loss), net	72.6	(9.6)	**(22.4)**
Comprehensive income (loss)	$ 177.1	$ (58.7)	**$ 63.8**

See accompanying Notes to Consolidated Financial Statements.

KRONOS WORLDWIDE, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

Years ended December 31, 2022, 2023 and 2024

(In millions)

	Common stock	Additional paid-in capital	Retained deficit	Accumulated other comprehensive loss	Treasury stock	Total
Balance at December 31, 2021	$ 1.2	$ 1,395.4	$ (122.1)	$ (404.1)	$ (.2)	$ 870.2
Net income	-	-	104.5	-	-	104.5
Other comprehensive income, net of tax	-	-	-	72.6	-	72.6
Issuance of common stock	-	.2	-	-	-	.2
Dividends paid - $.76 per share	-	-	(87.8)	-	-	(87.8)
Treasury stock acquired	-	-	-	-	(2.5)	(2.5)
Treasury stock retired	-	(1.3)	-	-	1.3	-
Balance at December 31, 2022	1.2	1,394.3	(105.4)	(331.5)	(1.4)	957.2
Net loss	-	-	(49.1)	-	-	(49.1)
Other comprehensive loss, net of tax	-	-	-	(9.6)	-	(9.6)
Issuance of common stock	-	.1	-	-	-	.1
Dividends paid - $.76 per share	-	-	(87.5)	-	-	(87.5)
Treasury stock acquired	-	-	-	-	(2.8)	(2.8)
Treasury stock retired	-	(4.2)	-	-	4.2	-
Balance at December 31, 2023	1.2	1,390.2	(242.0)	(341.1)	-	808.3
Net income	**-**	**-**	**86.2**	**-**	**-**	**86.2**
Other comprehensive loss, net of tax	**-**	**-**	**-**	**(22.4)**	**-**	**(22.4)**
Issuance of common stock	**-**	**.1**	**-**	**-**	**-**	**.1**
Dividends paid - $.48 per share	**-**	**-**	**(55.2)**	**-**	**-**	**(55.2)**
Balance at December 31, 2024	**$ 1.2**	**$ 1,390.3**	**$ (211.0)**	**$ (363.5)**	**$ -**	**$ 817.0**

See accompanying Notes to Consolidated Financial Statements.

KRONOS WORLDWIDE, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

(In millions)

	Years ended December 31,		
	2022	**2023**	**2024**
Cash flows from operating activities:			
Net income (loss)	$ 104.5	$ (49.1)	**$ 86.2**
Depreciation	51.7	48.6	**60.4**
Amortization of operating lease right-of-use assets	4.5	4.5	**4.0**
Gain on remeasurement of investment in TiO_2 manufacturing joint venture	-	-	**(64.5)**
Premium on issuance of senior secured notes	-	-	**6.0**
Deferred income taxes	(1.4)	(39.3)	**31.3**
Benefit plan expense greater (less) than cash funding	8.7	(5.1)	**(8.3)**
Marketable equity securities	1.0	1.0	**(1.2)**
Distributions from (contributions to) TiO_2 manufacturing joint venture, net	(10.5)	3.1	**(2.7)**
Fixed asset impairment	-	3.8	**-**
Other, net	3.5	1.8	**3.6**
Change in assets and liabilities:			
Accounts and other receivables, net	85.7	(43.9)	**(8.4)**
Inventories, net	(198.4)	56.3	**(43.1)**
Prepaid expenses	(12.5)	6.3	**(5.6)**
Accounts payable and accrued liabilities	36.7	33.9	**11.6**
Income taxes	(.1)	8.2	**8.9**
Accounts with affiliates	8.7	(26.0)	**(6.7)**
Other noncurrent assets	.3	.8	**(.2)**
Other noncurrent liabilities	(.7)	.6	**1.2**
Net cash provided by operating activities	81.7	5.5	**72.5**
Cash flows from investing activities:			
Capital expenditures	(63.2)	(47.4)	**(29.5)**
Acquisition of remaining TiO_2 manufacturing joint venture interest, net of cash acquired	-	-	**(156.8)**
Other	.1	-	**-**
Net cash used in investing activities	(63.1)	(47.4)	**(186.3)**
Cash flows from financing activities:			
Revolving credit facility:			
Borrowings	-	-	**158.6**
Payments	-	-	**(148.9)**
Payments on long-term debt	(1.3)	(1.1)	**(52.6)**
Proceeds from issuance of senior secured notes	-	-	**80.2**
Loan from Contran	-	-	**53.7**
Deferred financing fees	(.1)	(.1)	**(9.3)**
Dividends paid	(87.8)	(87.5)	**(55.2)**
Treasury stock acquired	(2.3)	(2.9)	**-**
Net cash provided by (used in) financing activities	(91.5)	(91.6)	**26.5**

KRONOS WORLDWIDE, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

(In millions)

	Years ended December 31,		
	2022	**2023**	**2024**
Cash, cash equivalents and restricted cash - net change from:			
Operating, investing and financing activities	$ (72.9)	$ (133.5)	**$ (87.3)**
Effect of currency exchange rate changes on cash	(5.1)	1.0	**(.1)**
Net change for the year	(78.0)	(132.5)	**(87.4)**
Balance at beginning of year	412.6	334.6	**202.1**
Balance at end of year	$ 334.6	$ 202.1	**$ 114.7**
Supplemental disclosures:			
Cash paid for:			
Interest, net of amount capitalized	$ 15.7	$ 15.8	**$ 38.2**
Income taxes	37.3	17.3	**34.5**
Change in accruals for capital expenditures	6.6	1.1	**6.6**

See accompanying Notes to Consolidated Financial Statements.

Note 1 – Summary of significant accounting policies:

Organization and basis of presentation – At December 31, 2024, Valhi, Inc. (NYSE: VHI) held approximately 50% of our outstanding common stock and a wholly-owned subsidiary of NL Industries, Inc. (NYSE: NL) held approximately 31% of our common stock. Valhi owned approximately 83% of NL's outstanding common stock and a wholly-owned subsidiary of Contran Corporation held approximately 91% of Valhi's outstanding common stock. A majority of Contran's outstanding voting stock is held directly by Lisa K. Simmons and by family stockholders (Thomas C. Connelly (the husband of Ms. Simmons' late sister), a family-owned entity and various family trusts established for the benefit of Ms. Simmons, Mr. Connelly and their children) who are required to vote their shares of Contran voting stock in the same manner as Ms. Simmons. Such voting rights are personal to Ms. Simmons and last through April 22, 2030. The remainder of Contran's outstanding voting stock is held by another trust (the "Family Trust"), which was established for the benefit of Ms. Simmons and her late sister and their children and for which a third-party financial institution serves as trustee. Consequently, at December 31, 2024, Ms. Simmons and the Family Trust may be deemed to control Contran, and therefore may be deemed to indirectly control the wholly-owned subsidiary of Contran, Valhi, NL and us.

Unless otherwise indicated, references in this report to "we," "us" or "our" refer 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 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 (loss) or other comprehensive income (loss), depending on the intended use of the derivative.

Cash and cash equivalents – We classify bank time deposits and highly-liquid investments, including government and commercial notes and bills, with original maturities of three months or less as cash equivalents.

Restricted cash – We classify cash that has been segregated or is otherwise limited in use as restricted. Such restrictions or limitations relate primarily to financial assurance for landfill closure obligations at our Belgium facility, certain Norwegian payroll tax and employee benefit obligations and certain employee benefit obligations at our U.S. operating facility. 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. Restricted cash classified as a current asset and restricted cash classified as a noncurrent asset are presented separately on our Consolidated Balance Sheets.

Marketable securities and securities transactions – We carry marketable securities at fair value. Accounting Standards 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. Unrealized gains or losses on the marketable equity securities are recognized in other income (expense) - marketable equity securities on our Consolidated Statements of Operations. We accumulate unrealized gains and losses on marketable debt securities as part of accumulated other comprehensive income (loss), net of related deferred income taxes. We base realized gains and losses upon the specific identification of the securities sold. See Notes 6 and 10.

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. See Note 3.

Inventories and cost of sales – We state inventories at the lower of cost or net realizable value, 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 overhead costs 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. See Note 4.

Investment in TiO_2 manufacturing joint venture – We accounted for our investment in Louisiana Pigment Company, L.P. ("LPC"), a 50%-owned manufacturing joint venture, by the equity method before our acquisition of the remaining 50% joint venture interest in July 2024. Distributions received from LPC are classified for statement of cash flow purposes using the "nature of distribution" approach under ASC Topic 320. See Note 5.

Leases – We enter into various arrangements (or leases) that convey the rights to use and control identified underlying assets for a period of time in exchange for consideration. We lease various manufacturing facilities, land and equipment. From time to time, we may also enter into an arrangement in which the right to use and control an identified underlying asset is embedded in another type of contract.

We determine if an arrangement is a lease (including leases embedded in another type of contract) at inception. All of our leases are classified as operating leases. Operating leases are included in operating lease right-of-use assets, current operating lease liabilities and noncurrent operating lease liabilities on our Consolidated Balance Sheets. See Note 9. As permitted by ASC Topic 842, *Leases*, we elected the practical expedients related to nonlease components (in which

nonlease components associated with a lease and paid by us to the lessor, such as property taxes, insurance and maintenance, are treated as a lease component and considered part of minimum lease rental payments), and short-term leases (in which leases with an original maturity of 12 months or less are excluded from the recognition requirements of ASC 842).

Right-of-use assets represent our right to use an underlying asset for the lease term and operating lease liabilities represent our obligation to make lease payments arising from the lease. The right-of-use operating lease assets and liabilities are recognized based on the estimated present value of lease payments over the lease term as of the respective lease commencement dates.

We use an estimated incremental borrowing rate to determine the present value of lease payments (unless we can determine the rate implicit in the lease, which is generally not the case). Our incremental borrowing rate for each of our leases is derived from available information, including our current debt and credit facility and U.S. and European yield curves as well as publicly available data for instruments with similar characteristics, adjusted for factors such as collateralization and term.

Our leases generally do not include termination or purchase options. Certain of our leases include an option to renew the lease after expiration of the initial lease term, but we have not included such renewal periods in our lease term because it is not reasonably certain that we would exercise the renewal option. Our leases generally have fixed lease payments, with no contingent or incentive payments. Certain of our leases include variable lease payments that depend on a specified index or rate. Our lease agreements do not contain any residual value guarantees.

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 $1.2 million in 2022, $1.5 million in 2023 and $.6 in 2024. 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:

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

We use the Alternative Depreciation System ("ADS") method for income tax purposes. 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 mine in Norway. Mining properties consist of buildings and equipment used in our Norwegian ilmenite mining operations. 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 is required. During the fourth quarter of 2023, we recorded a fixed asset impairment of $3.8 million related to the write-off of certain costs resulting from a capital project termination. Excluding this project, we did not evaluate any long-lived assets for impairment during 2023 or 2024 because no such impairment indicators were present.

Long-term debt – We state long-term debt net of any unamortized original issue premium, discount or deferred financing costs (other than deferred financing costs associated with revolving credit facilities, which are recognized as an asset). We classify amortization of all 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. See Note 8.

Employee benefit plans – Accounting and funding policies for our defined benefit pension and defined contribution retirement plans are described in Note 10. We also provide certain postretirement benefits other than pensions ("OPEB"), consisting of health care and life insurance benefits, to certain U.S. and Canadian retired employees, which are not material. See 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 14. 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 $15.9 million, $11.8 million and $17.8 million in 2022, 2023 and 2024, respectively.

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. At December 31, 2024, we continue to assert indefinite reinvestment as it relates to our outside basis difference attributable to our investments in our non-U.S. subsidiaries, other than post-1986 undistributed earnings of our European subsidiaries and all undistributed earnings of our Canadian subsidiary, which are not subject to permanent reinvestment plans. It is not practical for us to determine the amount of the unrecognized deferred income tax liability related to our investments in our non-U.S. subsidiaries which are permanently reinvested due to the complexities associated with our organizational structure, changes in the Tax Cuts and Jobs Act ("2017 Tax Act"), and the U.S. taxation of such investments in the states in which we operate. Deferred income tax assets and liabilities for each tax-paying jurisdiction in which we operate are netted and presented as either a noncurrent deferred income tax asset or liability, as applicable. 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.

The 2017 Tax Act imposed a tax on global intangible low-taxed income ("GILTI"). We record GILTI tax as a current-period expense when incurred under the period cost method. While our future global operations depend on a number of different factors, we do expect to have future U.S. inclusions in taxable income related to GILTI.

We account for the tax effects of a change in tax law as a component of the income tax provision related to continuing operations in the period of enactment, including the tax effects of any deferred income taxes originally established through a financial statement component other than continuing operations (i.e., other comprehensive income (loss)). Changes in applicable income tax rates over time as a result of changes in tax law, or times in which a deferred income tax asset valuation allowance is initially recognized in one year and subsequently reversed in a later year, can give rise to "stranded" tax effects in accumulated other comprehensive income in which the net accumulated income tax expense (benefit) remaining in accumulated other comprehensive income does not correspond to the then-applicable income tax rate applied to the pre-tax amount which resides in accumulated other comprehensive income (loss). As permitted by GAAP, our accounting policy is to remove any such stranded tax effect remaining in accumulated other comprehensive income by recognizing an offset to our provision for income taxes related to continuing operations, only at the time when there is no remaining pre-tax amount in accumulated other comprehensive income. For accumulated other comprehensive income related to currency translation, this would occur only upon the sale or complete liquidation of one

of our non-U.S. subsidiaries. For defined pension benefit plans and OPEB plans, this would occur whenever one of our subsidiaries which previously sponsored a defined benefit pension or OPEB plan had terminated such a plan and had no future obligation or plan asset associated with such a plan.

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 12.

Net sales – Our sales involve single performance obligations to ship our products pursuant to customer purchase orders. In some cases, the purchase order is supported by an underlying master sales agreement, but our purchase order acceptance generally evidences the contract with our customer by specifying the key terms of product and quantity ordered, price and delivery and payment terms. In accordance with *Revenues from Contracts with Customers, (ASC 606)*, we record revenue when we satisfy our performance obligation to our customers by transferring control of our products to them, which generally occurs at point of shipment or upon delivery. Such transfer of control is also evidenced by transfer of legal title and other risks and rewards of ownership (giving the customer the ability to direct the use of, and obtain substantially all of the benefits of, the product), and our customers becoming obligated to pay us and it is probable we will receive payment. In certain arrangements we provide shipping and handling activities after the transfer of control to our customer (e.g., when control transfers prior to delivery) that are considered fulfillment activities, and accordingly, such costs are accrued when the related revenue is recognized. Sales arrangements with consignment customers occur when our product is shipped to a consignment customer location but we maintain control until the product is used in the customer's manufacturing process. In these instances, we recognize sales when the consignment customer uses our product, as control of our product has not passed to the customer until that time and all other revenue recognition criteria have been satisfied.

Revenue is recorded in an amount that reflects the net consideration we expect to receive in exchange for our products. Prices for our products are based on terms specified in published list prices and purchase orders, which generally do not include financing components, noncash consideration or consideration paid to our customers. As our standard payment terms are less than one year, we have elected the practical expedient under ASC 606 and have not assessed whether a contract has a significant financing component. We state sales net of price, early payment and distributor discounts and volume rebates (collectively, variable consideration). Variable consideration, to the extent present, is recognized as the amount to which we are most-likely to be entitled, using all information (historical, current and forecasted) that is reasonably available to us, and only to the extent that a significant reversal in the amount of the cumulative revenue recognized is not probable of occurring in a future period. Differences, if any, between estimates of the amount of variable consideration to which we will be entitled and the actual amount of such variable consideration have not been material in the past. Amounts received or receivable from our customers with respect to variable consideration we expect to refund to our customers is recognized as a current liability and classified as accrued sales discounts and rebates. See Note 9. 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).

Frequently, we receive orders for products to be delivered over dates that may extend across reporting periods. We invoice for each delivery upon shipment and recognize revenue for each distinct shipment when all sales recognition criteria for that shipment have been satisfied. As scheduled delivery dates for these orders are within a one-year period, under the optional exemption provided by ASC 606, we do not disclose sales allocated to future shipments of partially completed contracts.

ASC 606 requires a disaggregation of our sales into categories that depict how the nature, amount, timing and uncertainty of revenue and cash flows are affected by economic factors. We have determined such disaggregation of our sales is the same as the disclosure of our sales by place of manufacture (point of origin) and to the location of the customer (point of destination). See Note 2.

Selling, general and administrative expense; distribution 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 distribution costs (shipping and handling) in selling, general and administrative expense and these costs were $122 million in 2022, $101 million in 2023 and $115 million in 2024. We expense research and development costs as incurred, and these costs were $15 million in 2022, $18 million in 2023 and $14 million in 2024. We expense advertising costs as incurred and these costs were not material in any year presented.

Note 2 – TiO_2 segment and geographic information:

We have one operating segment – the manufacture and sale of titanium dioxide pigments ("TiO_2") and related by-products. We are a leading global producer and marketer of TiO_2 in North America and Europe and the leading seller of TiO_2 in several countries, including Germany. TiO_2 is a white inorganic pigment used in a wide range of products for its exceptional durability and its ability to impart whiteness, brightness and opacity. TiO_2 is a critical component of everyday applications, such as coatings, plastics and paper, as well as many specialty products such as inks, cosmetics and pharmaceuticals. We are managed on a global basis by our Vice Chairman of the Board, who we have determined is our chief operating decision maker ("CODM") and makes the key operating decisions, allocates resources and assesses our performance. Our CODM evaluates the segment's operating performance based on net income and segment profit (a non-GAAP measure), which we define as net income before income tax expense and certain general corporate items. These general corporate items include corporate expense and the components of other income (expense) except for trade interest income. The CODM considers current-period net income and segment profit (loss) compared to plan and prior-period on a monthly and/or quarterly basis for evaluating performance of the TiO_2 segment and making decisions about allocating capital and other resources.

TiO_2 segment accounting policies are the same as those described in Note 1. Differences between segment profit (loss) and the amounts included in consolidated net income (loss) are highlighted within the table below. Asset information, including investments in equity method investees and expenditures for additions of long-lived assets, is not regularly provided to the CODM and therefore is not considered to be used by the CODM in making key operating decisions, allocating resources or assessing TiO_2 segment performance. Trade interest income included in the calculation of segment profit (loss) is $1.2 million, $1.8 million, and $3.3 million in 2022, 2023 and 2024, respectively. Depreciation and amortization amounts included in the calculation of segment profit are $51.7 million, $48.6 million and $60.4 million for the periods ended December 31, 2022, 2023 and 2024, respectively.

	Years ended December 31,		
	2022	**2023**	**2024**
		(In millions)	
Net sales	$ 1,930.2	$ 1,666.5	**$ 1,887.1**
Segment profit (loss)	$ 175.9	$ (39.8)	**$ 141.0**
Gain on remeasurement of investment in TiO_2 manufacturing joint venture	-	-	**64.5**
Corporate expense	(15.1)	(14.4)	**(14.8)**
Interest and dividend income - corporate	3.9	5.1	**2.2**
Marketable equity securities gain (loss)	(1.0)	(1.0)	**1.2**
Other components of net periodic pension and OPEB cost	(12.9)	(5.7)	**(1.6)**
Interest expense	(16.9)	(17.1)	**(42.9)**
Income tax (expense) benefit	(29.4)	23.8	**(63.4)**
Net income (loss)	$ 104.5	$ (49.1)	**$ 86.2**

See the Consolidated Financial Statements for other financial information regarding the Company's operating segment.

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,		
	2022	2023	2024
		(In millions)	
Net sales - point of origin:			
United States	$ 1,226.6	$ 1,029.2	**$ 1,178.4**
Germany	895.4	726.4	**826.6**
Canada	389.4	351.0	**351.5**
Norway	273.5	252.1	**278.6**
Belgium	306.5	217.1	**237.8**
Eliminations	(1,161.2)	(909.3)	**(985.8)**
Total	$ 1,930.2	$ 1,666.5	**$ 1,887.1**
Net sales - point of destination:			
Europe	$ 878.3	$ 737.8	**$ 841.5**
North America	695.7	618.1	**698.3**
Other	356.2	310.6	**347.3**
Total	$ 1,930.2	$ 1,666.5	**$ 1,887.1**

	December 31,	
	2023	2024
	(In millions)	
Identifiable assets - net property and equipment:		
United States	$ 5.7	**$ 270.2**
Germany	207.7	**187.4**
Belgium	97.9	**88.2**
Norway	82.7	**73.2**
Canada	81.9	**68.3**
Other	7.0	**6.8**
Total	$ 482.9	**$ 694.1**

At December 31, 2024, the United States net property and equipment includes the acquired assets of LPC.

At December 31, 2023 and 2024, the net assets of non-U.S. subsidiaries included in consolidated net assets approximated $443 million and $286 million, respectively.

Note 3 – Accounts and other receivables, net:

	December 31,	
	2023	2024
	(In millions)	
Trade receivables	$ 273.6	**$ 269.2**
Recoverable VAT and other receivables	23.8	**24.3**
Refundable income taxes	1.9	**1.3**
Allowance for doubtful accounts	(4.1)	**(3.8)**
Total	$ 295.2	**$ 291.0**

Note 4 – Inventories, net:

	December 31,	
	2023	2024
	(In millions)	
Raw materials	$ 188.3	**$ 176.9**
Work in process	30.8	**52.5**
Finished products	249.6	**307.5**
Supplies	95.9	**119.8**
Total	$ 564.6	**$ 656.7**

Note 5 – Acquisition of joint venture interest in LPC:

Effective July 16, 2024 ("Acquisition Date"), we acquired the 50% joint venture interest in LPC previously held by Venator Investments, Ltd. ("Venator"). Prior to the acquisition, we held a 50% joint venture interest in LPC and LPC was operated as a manufacturing joint venture between us and Venator. We acquired the 50% joint venture interest in LPC for consideration of $185 million less a working capital adjustment. An additional earn-out payment of up to $15 million may be required if our aggregate consolidated net income before interest expense, income taxes and depreciation and amortization expense, or EBITDA, during a two-year period comprising calendar years 2025 and 2026 exceed certain thresholds as described below. We accounted for the acquisition of the interest in LPC as a business combination and, as a result of obtaining full control, LPC became a wholly-owned subsidiary of ours. Obtaining control of LPC and its estimated additional 78,000 metric tons annually of TiO_2 production volume allows us to better serve the North American TiO_2 marketplace. The acquisition was financed through a borrowing of $132.1 million under our Global Revolver and the remainder paid with cash on hand.

For financial reporting purposes, the assets acquired and liabilities assumed of LPC have been included in our Consolidated Balance Sheet as of December 31, 2024, and the results of operations and cash flows of LPC have been included in our Consolidated Statement of Operations and Cash flows beginning as of the Acquisition Date. We incurred $2.2 million of transaction costs in connection with the acquisition. These costs were primarily associated with legal and professional services and were expensed in accordance with ASC 805 and are included in selling, general and administrative expense in our Consolidated Statement of Operations.

The potential earn-out payment of up to $15 million is based on our aggregate consolidated EBITDA tiers for 2025 and 2026 of $650 million and $730 million, with $5 million of the earn-out payable if we achieve $650 million in aggregate consolidated EBITDA, and a maximum of $15 million payable if aggregate EBITDA is $730 million or greater for the period. If we achieve aggregated consolidated EBITDA between $650 million and $730 million, the payment of the additional $10 million is prorated between the two targets. The earn-out is payable at the earliest in April 2027. The estimated fair value of the earn-out at the Acquisition Date was $4.2 million and was determined using a weighted probability of potential outcomes based on estimated future EBITDA and volatility factors, among other variables and estimates. The earn-out liability is included in other noncurrent liabilities on the Consolidated Balance Sheet and is part of the line item captioned "Earn-out liability" in Note 11. The fair value measurement is based on significant inputs not observable in the market and therefore represents a Level 3 measurement as defined in ASC 820. The earn-out liability will be re-measured at fair value on a recurring basis and the change to the liability, if any, would be recorded in other income (expense) in our Consolidated Statements of Operations. See Note 16.

We remeasured our existing ownership interest in LPC to its estimated fair value at the Acquisition Date in accordance with ASC 805-10-25, for a business combination achieved in stages (because we previously had an ownership interest in LPC). As a result of such remeasurement, we recognized a pre-tax gain of approximately $64.5 million in the third quarter of 2024, representing the difference between the $178.2 million estimated fair value of our existing ownership interest in LPC at the Acquisition Date and its aggregate $113.7 million carrying value at the Acquisition Date. Such pre-tax gain is disclosed as gain on remeasurement of investment in TiO_2 manufacturing joint venture and is included in other income (expense) in our Consolidated Statement of Operations.

The following table summarizes the aggregate fair value of the consideration transferred to gain control of LPC, the current estimate for the fair value of our existing ownership interest in LPC, and the amounts assigned to the identifiable assets acquired and liabilities assumed at the Acquisition Date. The estimated purchase price allocation is based upon management's estimate of the fair value of the acquired assets and assumed liabilities using independent third-party appraiser valuation techniques including income, cost and market approaches. The total consideration was allocated to the assets acquired and liabilities assumed, with the excess of the consideration over the estimated fair value of the net assets acquired recorded as goodwill. Subject to final determination, which is expected to occur within 12 months of the Acquisition Date, the provisional fair values of the assets acquired and liabilities assumed in the acquisition are as follows:

	Amount (In millions)
Consideration:	
Cash consideration	$ 185.0
Working capital adjustment	(11.0)
Earn-out liability	4.2
Total fair value of consideration	178.2
Fair value of investment in TiO_2 manufacturing joint venture	178.2
Total	$ 356.4
Allocation of purchase price to identifiable assets acquired and liabilities assumed:	
Cash and cash equivalents	$ 21.3
Restricted cash	1.3
Accounts and other receivables, net	.2
Inventories, net	82.0
Prepaid expenses and other	.6
Other assets	10.7
Property and equipment	268.5
Accounts payable and accrued liabilities	(21.7)
Other noncurrent liabilities	(6.4)
Deferred tax liability	(2.7)
Total net identifiable assets acquired	353.8
Goodwill	2.6
Total	$ 356.4

Property and equipment will be depreciated over useful lives of 5 years to 20 years. Goodwill is related to the benefits expected as a result of the acquisition, and of the $2.6 million recorded as goodwill, $.1 million is expected to be deductible for tax purposes.

Prior to the Acquisition Date, we and Venator were both required to purchase one-half of the TiO_2 produced by LPC, unless we and Venator agreed otherwise. Because we operated LPC on a break-even basis, we reported no equity in earnings of LPC. Each owner's acquisition transfer price for its share of the TiO_2 produced was equal to its share of the joint venture's production costs and interest expense, if any. Our share of net cost was reported as cost of sales as the related TiO_2 acquired from LPC was sold. We reported distributions we received from LPC, which generally related to excess cash generated by LPC from its non-cash production costs, and contributions we made to LPC, which generally related to cash required by LPC when it built working capital, as part of our cash flows from operating activities in our Consolidated Statements of Cash Flows. The components of our net cash distributions from (contributions to) LPC are shown in the table below.

	Years ended December 31,		
	2022	2023	2024(1)
		(In millions)	
Distributions from LPC	$ 58.3	$ 52.8	**$ 31.2**
Contributions to LPC	(68.8)	(49.7)	**(33.9)**
Net distributions (contributions)	$ (10.5)	$ 3.1	**$ (2.7)**

(1) Reflects distributions and contributions from/to LPC prior to the Acquisition Date.

The summary balance sheet for LPC for the annual period prior to the Acquisition Date is shown below:

	December 31, 2023
	(In millions)
ASSETS	
Current assets	$ 118.5
Property and equipment, net	148.4
Total assets	$ 266.9
LIABILITIES AND PARTNERS' EQUITY	
Other liabilities, primarily current	$ 42.1
Partners' equity	224.8
Total liabilities and partners' equity	$ 266.9

Summary income statements for LPC for the annual periods prior to the Acquisition Date are shown below:

	Years ended December 31,	
	2022	2023
	(In millions)	
Revenues and other income:		
Kronos	$ 225.6	$ 231.7
Venator	225.9	231.7
Total revenues and other income	451.5	463.4
Cost and expenses:		
Cost of sales	451.1	463.0
General and administrative	.4	.4
Total costs and expenses	451.5	463.4
Net income	$ -	$ -

Prior to the acquisition, we had certain related party transactions with LPC, as more fully described in Note 14.

The pro forma impact of combining LPC's results of operations assuming the LPC transaction had occurred as of January 1, 2023 would result in no net increase to earnings. The additional interest expense and depreciation expense that would have occurred during the comparable period is not material. The pro forma impact is not necessarily indicative of either future results of operations or results of operations that might have been achieved had the acquisition occurred as of January 1, 2023. The incremental finished goods offtake produced resulting from our additional 50% interest acquired in LPC has not materially impacted our revenue and earnings from Acquisition Date through the end of the year.

Note 6 – Marketable securities:

Our marketable securities consist of an investment in the publicly-traded shares of Valhi, a related party. 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. Unrealized gains or losses on equity securities are recognized in other income (expense) - marketable equity securities on our Consolidated Statements of Operations.

Marketable security	Fair value measurement level	Market value	Cost basis	Unrealized gain (loss)
			(In millions)	
December 31, 2023:				
Valhi common stock	1	$ 2.2	$ 3.2	$ (1.0)
December 31, 2024:				
Valhi common stock	1	**$ 3.4**	**$ 3.2**	**$ .2**

At December 31, 2023 and 2024, we held approximately 144,000 shares of Valhi's common stock. The per share quoted market price of Valhi's common stock was $15.19 and $23.39 at December 31, 2023 and 2024, respectively.

The Valhi common stock we own is 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 General Corporation Law, but we do receive dividends from Valhi on these shares, when declared and paid.

Note 7 – Leases:

We enter into various operating leases for manufacturing facilities, land and equipment. Our operating leases are included in operating lease right-of-use assets, current operating lease liabilities and noncurrent operating lease liabilities on our Consolidated Balance Sheets. See Note 9. Our principal German operating subsidiary leases the land under its Leverkusen TiO_2 production facility pursuant to a lease that expires in 2050. The Leverkusen facility itself, which we own and which represents approximately 29% of our current TiO_2 production capacity, is located within an extensive manufacturing complex.

During 2022, 2023 and 2024, our operating lease expense approximated $5.5 million, $5.6 million and $5.2 million, respectively (which approximates the amount of cash paid during each year for our operating leases included in the determination of our cash flows from operating activities). During 2022, 2023 and 2024, variable lease expense and short-term lease expense were not material. During 2022, 2023 and 2024, we entered into new operating leases which resulted in the recognition of $6.6 million, $4.6 million and $2.8 million, respectively, in right-of-use operating lease assets and corresponding liabilities on our Consolidated Balance Sheets. At December 31, 2023 and 2024, the weighted average remaining lease term of our operating leases was approximately 14 years and the weighted average discount rate associated with such leases was approximately 5.0% in 2023 and approximately 6.0% in 2024. Such average remaining lease term is weighted based on each arrangement's lease obligation, and such average discount rate is weighted based on each arrangement's total remaining lease payments.

At December 31, 2024, maturities of our operating lease liabilities were as follows:

Years ending December 31,	Amount
	(In millions)
2025	$ 4.4
2026	4.0
2027	2.8
2028	2.3
2029	2.0
2030 and thereafter	14.6
Total remaining lease payments	30.1
Less imputed interest	9.5
Total lease obligations	20.6
Less current obligations	3.5
Long term lease obligations	$ 17.1

With respect to our land lease associated with our Leverkusen facility, we periodically establish the amount of rent for such land lease 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 of such land lease; rather, any change in the rent is subject solely to periodic negotiation. As such, we will account for any change in the rent associated with such lease as a lease modification. Of the $20.6 million total lease obligations at December 31, 2024, $6.8 million relates to our Leverkusen facility land lease.

At December 31, 2024, we have no significant lease commitments that have not yet commenced.

Note 8 – Long-term debt:

	December 31,	
	2023	2024
	(In millions)	
Kronos International, Inc. 9.50% Senior Secured Notes due 2029	$ -	**$ 365.4**
Kronos International, Inc. 3.75% Senior Secured Notes due 2025	440.9	**78.3**
Subordinated, Unsecured Term Loan from Contran	-	**53.7**
Revolving credit facility	-	**10.0**
Total debt	440.9	**507.4**
Less current maturities	-	**78.3**
Total long-term debt	$ 440.9	**$ 429.1**

9.50% Senior Secured Notes due 2029 – On February 12, 2024, for certain eligible holders of existing 3.75% Senior Secured Notes due September 2025 (the "Old Notes"), Kronos International, Inc. ("KII") executed an exchange of €325 million principal amount of the outstanding Old Notes for newly issued €276.174 million aggregate outstanding KII 9.50% Senior Secured Notes due March 2029 (the "New Notes" and together with the Old Notes and the Additional New Notes (as defined below), the "Senior Secured Notes") plus additional cash consideration of €48.75 million ($52.6 million). Holders of the Old Notes received for each €1,000 principal amount of Old Notes exchanged, €850 in principal amount of New Notes, plus a cash payment in an amount equal to €150. Following the exchange, Old Notes totaling €75 million principal amount that were not exchanged continue to remain outstanding. In connection with the exchange, the indenture governing the Old Notes was amended to conform to the restrictive covenants in the indenture governing the New Notes and to make other conforming changes. KII did not receive any cash proceeds from the issuance and delivery of the New Notes in connection with the exchange. We also entered into a $53.7 million unsecured term loan from Contran Corporation (described below) in connection with the exchange.

On July 30, 2024, KII issued an additional €75 million principal amount of 9.50% Senior Secured Notes due 2029 (the "Additional New Notes" and together with the New Notes the "9.50% Senior Secured Notes due 2029"). The

Additional New Notes are additional notes to the existing €276.174 million aggregate principal amount of New Notes issued on February 12, 2024. The Additional New Notes were issued at a premium of 107.50% of their principal amount, plus accrued interest from February 12, 2024, resulting in net proceeds of approximately $90 million after fees and estimated expenses. The Additional New Notes are fungible with the New Notes, are treated as a single series with the New Notes and have the same terms as the New Notes, other than their date of issuance and issue price. The proceeds from the Additional New Notes were used to pay down borrowings under the $300 million global revolving credit facility (the "Global Revolver").

The 9.50% Senior Secured Notes due 2029:

- bear interest at 9.50% per annum, payable semi-annually on March 15 and September 15 of each year, payments began on September 15, 2024;
- have a maturity date of March 15, 2029. Prior to March 15, 2026, we may redeem some or all of the 9.50% Senior Secured Notes due 2029 at a price equal to 100% of the principal amount thereof, plus an applicable premium as of the date of the redemption as described in the indenture governing our 9.50% Senior Secured Notes due 2029 plus accrued and unpaid interest. On or after March 15, 2026, we may redeem the 9.50% Senior Secured Notes due 2029 at redemption prices ranging from 104.75% of the principal amount, declining to 100% on or after March 15, 2028, plus accrued and unpaid interest. In addition, on or before March 15, 2026, we may redeem up to 40% of the 9.50% Senior Secured Notes due 2029 with the net proceeds of certain public or private equity offerings at 109.50% of the principal amount, plus accrued and unpaid interest, provided that following the redemption at least 50% of the 9.50% Senior Secured Notes due 2029 remain outstanding. If we or our subsidiaries experience certain change of control events, as outlined in the indenture governing our 9.50% Senior Secured Notes due 2029, we would be required to make an offer to purchase the 9.50% Senior Secured Notes due 2029 at 101% of the principal amount thereof, plus accrued and unpaid interest. We would also be required to make an offer to purchase a specified portion of the 9.50% Senior Secured Notes due 2029 at par value, plus accrued and unpaid interest, in the event that we and our subsidiaries generate a certain amount of net proceeds from the sale of assets outside the ordinary course of business, and such net proceeds are not otherwise used for specified purposes within a specified time period as described in the indenture governing our 9.50% Senior Secured Notes due 2029;
- are fully and unconditionally guaranteed, jointly and severally, on a senior secured basis by Kronos Worldwide, Inc. and each of our direct and indirect domestic, wholly-owned subsidiaries;
- are collateralized by a first priority lien on (i) 100% of the common stock or other ownership interests of each existing and future direct domestic subsidiary of KII and the guarantors, and (ii) 65% of the voting common stock or other ownership interests and 100% of the non-voting common stock or other ownership interests of each non-U.S. subsidiary that is directly owned by KII or any guarantor;
- contain a number of covenants and restrictions which, among other things, restrict our ability to incur or guarantee additional debt, incur liens, pay dividends or make other restricted payments, or merge or consolidate with, or sell or transfer substantially all of our assets to, another entity, and contain other provisions and restrictive covenants customary in lending transactions of this type (however, there are no ongoing financial maintenance covenants); and
- contain customary default provisions, including a default under any of our other indebtedness in excess of $50.0 million.

At December 31, 2024, the carrying value of the 9.50% Senior Secured Notes due 2029 (€351.174 million aggregate principal amount outstanding plus €5.1 million of unamortized premium) is stated net of unamortized debt issuance costs of $6.3 million. As a result of the note exchange, in the first quarter of 2024 we recognized a non-cash pre-tax interest charge of $1.5 million included in interest expense related to the write-off of the deferred financing costs associated with the Old Notes. As of December 31, 2024, we have capitalized $7.4 million in debt issuance costs associated with the 9.50% Senior Secured Notes due 2029.

3.75% Senior Secured Notes due 2025 – At December 31, 2024, the carrying value of our remaining Old Notes (€75 million aggregate principal amount outstanding) is $78.3 million. In connection with the issuance of the New Notes in February 2024, the indenture governing the Old Notes was amended to conform to the restrictive covenants in the indenture governing the New Notes and to make other conforming changes.

Subordinated, Unsecured Term Loan from Contran – As part of the refinancing of a majority of our Old Notes discussed above, we borrowed $53.7 million (€50.0 million) from Contran through the issuance of an unsecured, subordinated term promissory note dated February 12, 2024 (the "Contran Term Loan"). The Contran Term Loan is guaranteed by certain of our domestic wholly-owned subsidiaries. Our obligations under the Contran Term Loan, and the obligations of the guarantors under the related guaranties, are unsecured and subordinated in right of payment to our Senior Secured Notes and our Global Revolver. Interest on the Contran Term Loan is payable in cash. Subsequent to the issuance of the Additional New Notes the Contran Term Loan was amended in August 2024 to change the interest rate from 11.5% (which had been determined by adding an additional spread of 2% to the final interest rate on the New Notes issued in February 2024) to 9.54% (determined by adding a spread of 2% to the effective interest rate of the Additional New Notes issued in July 2024). In each case, the spread used to determine the rate was based upon comparable debt transactions at the time of the issuance of the applicable notes. The Contran Term Loan matures on demand (but no earlier than September 2029), is not subject to any amortization payments and is prepayable at par beginning in March 2026. The restrictive covenants in the Contran Term Loan are substantially similar to those contained in the indenture governing our 9.50% Senior Secured Notes due 2029. In accordance with our related party transaction policy, the audit committee of our board of directors, comprised of the independent directors, approved the terms and conditions of the original Contran Term Loan and its amendment in August 2024.

Revolving credit facility – Effective July 17, 2024, we completed an amendment to our Global Revolver (the "Second Amendment"). Among other things, the Second Amendment increased the maximum borrowing amount from $225 million to $300 million, extended the maturity date to July 2029 and expanded the agreement to include LPC and LPC's receivables and certain of its inventories in the borrowing base. See Note 5. Available borrowings are based on formula-determined amounts of eligible trade receivables and inventories, as defined in the agreement, less any borrowings outstanding and outstanding letters of credit issued under the Global Revolver. Borrowings by our Canadian, Belgian and German subsidiaries are limited to U.S. $35 million, €30 million and €60 million, respectively. Any amounts outstanding under the Global Revolver bear interest, at our option, at the applicable non-base rate (SOFR, adjusted CORRA or EURIBOR, depending on the currency of the borrowing) 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 2.0%. U.S. Dollar or Canadian Dollar non-base rate loans, as well as euro non-base rate and euro base rate loans are subject to a 0.25% floor, plus the applicable margin. The Global Revolver 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 customary in lending transactions of this type which, among other things, restrict the borrowers' ability to incur additional debt, incur liens, pay additional dividends or merge or consolidate with, or sell or transfer all or substantially all of their assets to another entity and, under certain conditions, requires the maintenance of a fixed charge coverage ratio, as defined in the agreement, of at least 1.0 to 1.0. During 2024, we borrowed $157.8 million and repaid $147.8 million under our Global Revolver. The average interest rate on outstanding borrowings for 2024 was 7.21%, and at December 31, 2024, the interest rate on the outstanding borrowings was 6.25%. The borrowing base calculated as of December 31, 2024 was approximately $278 million.

During 2023, we had no borrowings or repayments under our Global Revolver.

Aggregate maturities and other – Aggregate maturities of debt at December 31, 2024 are presented in the table below.

Years ending December 31,	Amount
	(In millions)
2025	$ 78.3
2026	-
2027	-
2028	-
2029	430.1
2030 and thereafter	-
Gross maturities	508.4
Less net amounts representing original issue premium and debt issuance costs	1.0
Total	$ 507.4

We are in compliance with all of our debt covenants at December 31, 2024.

Note 9 – Accounts payable and accrued liabilities:

	December 31,	
	2023	2024
	(In millions)	
Accounts payable	$ 218.7	**$ 232.4**
Accrued sales discounts and rebates	22.5	**27.6**
Employee benefits	24.7	**27.6**
Operating lease liabilities	3.9	**3.5**
Other	54.3	**67.2**
Total	$ 324.1	**$ 358.3**

Note 10 – Defined contribution and defined benefit retirement 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 $3.9 million in 2022, $4.1 million in 2023 and $4.0 million in 2024.

Defined benefit pension plans – We participate in or maintain various defined benefit pension plans. Certain non-U.S. employees are covered by plans in their respective countries. Our U.S. plan, which has been maintained and administered by NL since prior to our spinoff from NL in 2003, was closed to new participants in 1996, and existing participants no longer accrue any additional benefits after that date. The benefits under all of our defined benefit pension 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 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, to the extent they are reflected in periodic benefit cost, or through other comprehensive income (loss).

As a result of the LPC acquisition in July 2024 (see Note 5), we acquired the LPC defined benefit pension plan, which had a net pension asset of $10.6 million on the Acquisition Date. Prior to the LPC acquisition, LPC's defined benefit pension plan had been frozen for all employees with benefits based on years of service and employee compensation. Effective December 31, 2024, the LPC defined benefit pension plan was merged into our U.S. defined benefit pension plan. See Note 14.

We expect to contribute the equivalent of approximately $16 million to all of our defined benefit pension plans during 2025. Benefit payments to plan participants out of plan assets are expected to be the equivalent of:

Years ending December 31,	Amount
	(In millions)
2025	$ 27.0
2026	27.6
2027	29.7
2028	34.5
2029	33.1
Next 5 years	162.4

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

	December 31,	
	2023	2024
	(In millions)	
Change in projected benefit obligations ("PBO"):		
Benefit obligations at beginning of the year	$ 502.8	$ 563.7
Service cost	6.3	6.6
Interest cost	19.7	18.9
Participant contributions	1.8	1.8
Actuarial (gains) losses	44.7	(16.2)
Settlements	(3.1)	(1.9)
Change in currency exchange rates	14.0	(36.8)
Benefits paid	(22.5)	(22.8)
Benefit obligations at end of the year	563.7	513.3
Change in plan assets:		
Fair value of plan assets at beginning of the year	383.6	422.6
Actual return on plan assets	37.9	20.0
Employer contributions	15.6	14.9
Participant contributions	1.8	1.8
Settlements	(3.1)	(1.9)
Change in currency exchange rates	9.3	(29.7)
Benefits paid	(22.5)	(22.8)
Fair value of plan assets at end of year	422.6	404.9
Funded status	$ (141.1)	$ (108.4)
Amounts recognized in the balance sheet:		
Noncurrent pension asset	$ 8.1	$ 9.1
Noncurrent accrued pension costs	(149.2)	(117.5)
Total	$ (141.1)	$ (108.4)
Amounts recognized in accumulated other comprehensive loss:		
Actuarial losses	$ 106.8	$ 88.8
Prior service cost	.3	.3
Total	$ 107.1	$ 89.1
Accumulated benefit obligations ("ABO")	$ 549.8	$ 499.7

The total net underfunded status of our non-U.S. defined benefit pension plans decreased from $141.1 million at December 31, 2023 to $108.4 million at December 31, 2024 due to the change in our PBO during 2024 exceeding the

change in plan assets during 2024. The decrease in our PBO in 2024 was primarily attributable to higher actuarial gains due primarily to the increase in discount rates in Germany from the end of 2023 and favorable currency fluctuations, primarily from the strengthening of the U.S. dollar relative to the euro. The decrease in our plan assets in 2024 was primarily attributable to unfavorable currency fluctuations (primarily from the strengthening of the U.S. dollar relative to the euro) offsetting positive plan asset returns and employer contributions in 2024.

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. The amounts shown below for the amortization of prior service cost and recognized actuarial losses for 2022, 2023 and 2024 were recognized as components of our accumulated other comprehensive loss at December 31, 2021, 2022 and 2023, respectively, net of deferred income taxes.

	Years ended December 31,		
	2022	2023	2024
		(In millions)	
Net periodic pension cost (income):			
Service cost	$ 11.3	$ 6.3	**$ 6.6**
Interest cost	10.5	19.7	**18.9**
Expected return on plan assets	(11.0)	(18.2)	**(19.9)**
Amortization of prior service cost	.1	.1	**.1**
Recognized actuarial losses	12.5	1.8	**1.9**
Settlements	.3	1.6	**.4**
Total	$ 23.7	$ 11.3	**$ 8.0**

Information concerning certain of our non-U.S. defined benefit pension plans (for which the ABO exceeds the fair value of plan assets as of the indicated date) is presented in the table below.

	December 31,	
	2023	2024
	(In millions)	
Plans for which the ABO exceeds plan assets:		
PBO	$ 463.1	**$ 397.1**
ABO	452.9	**387.1**
Fair value of plan assets	313.8	**279.5**

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, 2023 and 2024 are presented in the table below.

	December 31,	
Rate	2023	2024
Discount rate	3.4%	**3.6%**
Increase in future compensation levels	2.7%	**2.8%**

The weighted-average rate assumptions used in determining the net periodic pension cost for our non-U.S. defined benefit pension plans for 2022, 2023 and 2024 are presented in the table below.

	Years ended December 31,		
Rate	2022	2023	2024
Discount rate	1.5%	3.9%	**3.4%**
Increase in future compensation levels	2.6%	2.7%	**2.7%**
Long-term return on plan assets	2.5%	4.6%	**4.9%**

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, including the acquired LPC plan, is presented in the table below.

	December 31,	
	2023	2024
	(In millions)	
Change in PBO:		
Benefit obligations at beginning of the year	$ 13.2	**$ 13.3**
Interest cost	.7	**1.3**
Actuarial (gains) losses	.5	**(1.8)**
Benefits paid	(1.1)	**(1.7)**
Acquisition	-	**27.5**
Benefit obligations at end of the year	13.3	**38.6**
Change in plan assets:		
Fair value of plan assets at beginning of the year	12.0	**12.5**
Actual return on plan assets	1.1	**(.5)**
Employer contributions	.5	**.5**
Benefits paid	(1.1)	**(1.7)**
Acquisition	-	**38.1**
Fair value of plan assets at end of year	12.5	**48.9**
Funded status	$ (.8)	**$ 10.3**
Amounts recognized in the balance sheet:		
Noncurrent pension asset	$ -	**$ 10.3**
Noncurrent accrued pension costs	(.8)	**-**
Total	$ (.8)	**$ 10.3**
Amounts recognized in accumulated other comprehensive loss - actuarial losses	$ 8.5	**$ 8.6**
ABO	$ 13.3	**$ 38.6**

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 2022, 2023 and 2024 were recognized as components of our accumulated other comprehensive loss at December 31, 2021, 2022 and 2023 respectively, net of deferred income taxes.

	Years ended December 31,		
	2022	2023	2024
		(In millions)	
Net periodic pension cost (income):			
Interest cost	$ .4	$ .7	**$ 1.3**
Expected return on plan assets	(.6)	(.6)	**(1.8)**
Recognized actuarial losses	.6	.6	**.5**
Total	$ .4	$ .7	**$ -**

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, 2023 and 2024 were 5.0% and 5.5%, 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 2022, 2023 and 2024 are presented in the table below. The impact of assumed increases in future

compensation levels also does not have an effect on the periodic pension cost as the plan is frozen with regards to compensation.

Rate	Years ended December 31, 2022	2023	2024
Discount rate	2.6%	5.3%	**5.0%**
Long-term return on plan assets	4.0%	5.0%	**5.0%**

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 tables above for actuarial (gains) losses at December 31, 2023 and 2024 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 loss at December 31, 2023 and 2024.

The table below details the changes in our consolidated other comprehensive income (loss) during 2022, 2023 and 2024.

	Years ended December 31, 2022	2023 (In millions)	2024
Changes in plan assets and benefit obligations recognized in other comprehensive income (loss):			
Current year:			
Net actuarial (losses) gains	$ 135.1	$ (25.0)	**$ 14.9**
Amortization of unrecognized:			
Net actuarial losses	13.0	2.4	**2.4**
Prior service cost	.1	.1	**.1**
Settlement loss	.3	1.6	**.4**
Total	$ 148.5	$ (20.9)	**$ 17.8**

In determining the expected long-term rate of return on our U.S. and 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 plans 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 in the fair value hierarchy because there is not an active market that approximates the value of our investment in the Bayer investment fund. We estimate the fair value of the Bayer plan assets based on periodic reports we receive from the managers of the Bayer fund and using a model we developed with assistance from our third-party actuary that uses estimated asset allocations and correlates such allocation to similar asset mixes in fund indexes quoted on an active market. We periodically evaluate the results of our valuation model against actual returns in the Bayer fund and adjust the model as needed. The Bayer fund periodic reports are subject to audit by the German pension regulator.
- In Canada, we currently have a plan asset target allocation of up to 10% to equity securities and 90 - 100% to fixed income securities. We expect the long-term rate of return for such investments to approximate the applicable average equity or fixed income index. The Canadian assets are Level 1 inputs because they are traded in active markets.

- In Norway, we currently have a plan asset target allocation of 18% to equity securities, 63% to fixed income securities, 14% 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 7%, 5%, 7% and 8%, respectively. The majority of Norwegian plan assets are Level 1 inputs because they are traded in active markets; however, approximately 15% of our Norwegian plan assets are invested in real estate and other investments not actively traded and are therefore a Level 3 input.
- In the U.S. we currently have a plan asset target allocation of 17% to equity securities, 80% to fixed income securities and the remainder is allocated to other strategies. The expected long-term rate of return for our equity securities and fixed income securities is approximately 7% and 5%, respectively (before plan administrative expenses). Approximately 25% of our U.S. plan assets are invested in funds that are valued at net asset value ("NAV") and, in accordance with ASC 820-10, not subject to classification in the fair value hierarchy. As noted above, our LPC defined benefit pension plan was merged into our U.S. plan effective December 31, 2024. See Note 14. In preparation for merging the U.S. pension plans, pension assets held by the LPC defined benefit pension plan were converted to cash, resulting in an overall higher allocation to cash for our U.S. plan at December 31, 2024. In January 2025, our plan assets were rebalanced to align with the asset target allocation noted above.
- We also have plan assets in Belgium. The Belgium 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.

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 pension plan assets by asset category and fair value level at December 31, 2023 and 2024 is shown in the tables below.

	Fair Value Measurements at December 31, 2023				
	Total	Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Assets measured at NAV
			(In millions)		
Germany	$ 269.4	$ -	$ -	$ 269.4	$ -
Canada:					
Non local currency equities	2.7	2.7	-	-	-
Local currency fixed income	86.2	86.2	-	-	-
Cash and other	1.1	1.1	-	-	-
Norway:					
Local currency equities	2.4	2.4	-	-	-
Non local currency equities	7.2	7.2	-	-	-
Local currency fixed income	23.9	4.4	19.5	-	-
Non local currency fixed income	4.2	4.2	-	-	-
Real estate	6.6	-	-	6.6	-
Cash and other	3.0	2.8	-	.2	-
U.S.:					
Equities	3.5	-	-	-	3.5
Fixed income	8.4	-	-	-	8.4
Cash and other	.6	.2	-	-	.4
Other	15.9	-	-	15.9	-
Total	$ 435.1	$ 111.2	$ 19.5	$ 292.1	$ 12.3

	Fair Value Measurements at December 31, 2024				
	Total	Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Assets measured at NAV
			(In millions)		
Germany	$ 264.6	$ -	$ -	$ 264.6	$ -
Canada:					
Local currency equities	2.8	2.8	-	-	-
Local currency fixed income	78.1	78.1	-	-	-
Cash and other	.5	.5	-	-	-
Norway:					
Local currency equities	2.0	2.0	-	-	-
Non local currency equities	6.9	6.9	-	-	-
Local currency fixed income	21.1	3.7	17.4	-	-
Non local currency fixed income	4.2	4.2	-	-	-
Real estate	6.2	-	-	6.2	-
Cash and other	3.6	3.4	-	.2	-
U.S.:					
Equities	2.1	-	-	-	2.1
Fixed income	9.7	-	-	-	9.7
Cash and other	37.1	36.7	-	-	.4
Other	14.9	-	-	14.9	-
Total	$ 453.8	$ 138.3	$ 17.4	$ 285.9	$ 12.2

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

	December 31,	
	2023	2024
	(In millions)	
Fair value at beginning of year	$ 259.0	$ 292.1
Gain on assets held at end of year	11.1	12.7
Gain (loss) on assets sold during the year	14.4	(.7)
Assets purchased	1.7	1.5
Assets sold	(3.5)	(2.3)
Currency exchange rate fluctuations	9.4	(17.4)
Fair value at end of year	$ 292.1	$ 285.9

Note 11 – Other noncurrent liabilities:

	December 31,	
	2023	2024
	(In millions)	
Asset retirement obligation	$ 7.2	$ 14.3
Accrued postretirement benefits	6.4	5.9
Employee benefits	4.9	4.5
Earn-out liability	-	4.3
Other	3.3	2.7
Total	$ 21.8	$ 31.7

See Note 16 to our Consolidated Financial Statements for additional details related to the LPC acquisition earn-out liability.

Note 12 – Income taxes:

	Years ended December 31,		
	2022	2023	2024
		(In millions)	
Pre-tax income (loss):			
U.S.	$ 44.1	$ (1.5)	**$ 72.6**
Non-U.S.	89.8	(71.4)	**77.0**
Total	$ 133.9	$ (72.9)	**$ 149.6**
Expected tax expense (benefit), at U.S. federal statutory income tax rate of 21%	$ 28.1	$ (15.3)	**$ 31.4**
Non-U.S. tax rates	2.1	(6.3)	**.2**
Incremental net tax expense (benefit) on earnings and losses of U.S. and non-U.S. companies	(.5)	(4.7)	**9.3**
Valuation allowance, net	(3.6)	2.6	**13.8**
Global intangible low-tax income, net	2.1	(.3)	**3.2**
Nondeductible expenses	.9	1.0	**3.1**
U.S. state income taxes, net	1.2	.2	**1.8**
Other	(.9)	(1.0)	**.6**
Income tax expense (benefit)	$ 29.4	$ (23.8)	**$ 63.4**
Components of income tax expense (benefit):			
Current payable:			
U.S. federal and state	$ 10.7	$ 2.0	**$ 7.0**
Non-U.S.	20.1	13.5	**25.2**
	30.8	15.5	**32.2**
Deferred income taxes (benefit):			
U.S. federal and state	(3.0)	(3.7)	**28.4**
Non-U.S.	1.6	(35.6)	**2.8**
	(1.4)	(39.3)	**31.2**
Income tax expense (benefit)	$ 29.4	$ (23.8)	**$ 63.4**
Comprehensive provision for income taxes (benefit) allocable to:			
Net income (loss)	$ 29.4	$ (23.8)	**$ 63.4**
Other comprehensive income (loss):			
Pension plans	49.3	(6.7)	**5.6**
OPEB plans	.4	(.2)	**-**
Total	$ 79.1	$ (30.7)	**$ 69.0**

The amount shown in the preceding table of our income tax rate reconciliation for non-U.S. tax rates represents the result determined by multiplying the pre-tax earnings or losses of each of our non-U.S. subsidiaries by the difference between the applicable statutory income tax rate for each non-U.S. jurisdiction and the U.S. federal statutory tax rate. The amount shown on such table for incremental net tax benefit on earnings and losses of U.S. and non-U.S. companies includes, as applicable, (i) deferred income taxes (or deferred income tax benefits) associated with the current-year earnings of all of our non-U.S. subsidiaries and (ii) current U.S. income taxes (or current income tax benefit), including U.S. personal holding company tax, as applicable, attributable to current-year income (losses) of one of our non-U.S. subsidiaries, which subsidiary is treated as a dual resident for U.S. income tax purposes, to the extent the current-year

income (losses) of such subsidiary is subject to U.S. income tax under the U.S. dual-resident provisions of the Internal Revenue Code.

The components of our net deferred income taxes at December 31, 2023 and 2024 are summarized in the following table.

	December 31,			
	2023		2024	
	Assets	Liabilities	Assets	Liabilities
	(In millions)			
Tax effect of temporary differences related to:				
Inventories	$ 1.1	$ -	$ -	$ (.3)
Property and equipment	-	(59.3)	-	(66.8)
Lease assets (liabilities)	5.7	(5.7)	5.2	(5.3)
Accrued OPEB costs	1.8	-	1.7	-
Accrued pension costs	26.8	-	14.7	-
Capitalized research and development costs	4.8	-	6.3	-
Other accrued liabilities and deductible differences	12.1	-	13.7	-
Other taxable differences	-	(3.5)	-	(8.9)
Unrecognized currency gain	-	-	-	(16.8)
Tax on unremitted earnings of non-U.S. subsidiaries	-	(10.8)	-	(8.8)
Tax loss and tax credit carryforwards	107.7	-	116.0	-
Valuation allowance	(6.4)	-	(20.1)	-
Adjusted gross deferred tax assets (liabilities)	153.6	(79.3)	137.5	(106.9)
Netting by tax jurisdiction	(70.3)	70.3	(82.4)	82.4
Net noncurrent deferred tax asset (liability)	$ 83.3	$ (9.0)	$ 55.1	$ (24.5)

We periodically review our deferred tax assets ("DTA") to determine if a valuation allowance is required. At December 31, 2024, we have German corporate and trade net operating loss ("NOL") carryforwards of $447.3 million (DTA of $70.8 million) and $40.1 million (DTA of $4.4 million), respectively; Belgian corporate NOL carryforwards of $72.0 million (DTA of $18.0 million) and Canadian corporate and provincial NOL carryforwards of $28.9 million (DTA of $4.3 million) and $31.1 million (DTA of $3.6 million), respectively. Prior to December 31, 2024, and using all available evidence, we had concluded that no deferred income tax asset valuation allowance was required to be recognized with respect to such carryforwards, principally because (i) such carryforwards have lengthy carryforward periods (the German and Belgian carryforwards may be carried forward indefinitely and the Canadian carryforwards may be carried forward 20 years), (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. With regards to our Belgian DTA, given our Belgium unit's operating results during the fourth quarter of 2024 and our current expectations for 2025 in that jurisdiction, we do not have sufficient positive evidence to overcome the significant negative evidence of having twelve quarters of cumulative losses. Accordingly, at December 31, 2024, we concluded that we were required to recognize a non-cash deferred income tax asset valuation allowance of $8.2 million under the more-likely-than-not recognition criteria with respect to our Belgian DTA. At December 31, 2024, we continue to conclude no valuation allowance is required to be recognized for our German and Canadian DTAs although prior to the complete utilization of such carryforwards, if we were to generate additional losses in our German or Canadian operations for an extended period of time, or if applicable laws were to change such that the carryforward periods were more limited, 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.

The 2017 Tax Act limited our business interest expense to the sum of our business interest income and 30% of our adjusted taxable income as defined in the Tax Act. Any business interest expense disallowed as a deduction as a result of the limitation may be carried forward indefinitely. At December 31, 2023 and December 31, 2024, we have recorded deferred tax assets of $3.5 million and $13.3 million, respectively, for the carryforwards associated with the nondeductible

portion of our interest expense and have concluded we are required to recognize a valuation allowance for such deferred tax asset under the more-likely-than-not recognition criteria. During 2024 we recognized a non-cash deferred income tax expense of $5.7 million with respect to the valuation allowance recorded on a portion of our additional interest expense carryforwards not benefitted by future reversals of existing deferred tax liabilities.

Prior to the enactment of the 2017 Tax Act, the undistributed earnings of our European subsidiaries were deemed to be permanently reinvested (we had not made a similar determination with respect to the undistributed earnings of our Canadian subsidiary). Pursuant to the one-time repatriation tax (Transition Tax) provisions of the 2017 Tax Act which imposed a one-time repatriation tax on post-1986 undistributed earnings, we recognized current income tax expense of $74.5 million and elected to pay such tax in annual installments over an eight-year period beginning in 2018. At December 31, 2024, the balance of our unpaid Transition Tax is $18.6 million, with the remaining payment due in 2025. The payment is recorded as a current payable to affiliate (income taxes payable to Valhi) on our Consolidated Balance Sheet at December 31, 2024.

On December 10, 2024, the Department of the Treasury and the Internal Revenue Service released final currency regulations under §987 and related rules (the "2024 Final Regulations"). The 2024 Final Regulations generally apply to tax years beginning after December 31, 2024, and include transition rules that require us to compute a pretransition gain or loss for currency translation related to the operations, assets and liabilities of our non-U.S. qualified business units. Pursuant to the 2024 Final Regulations, we have calculated a pretransition gain of $77.1 million and, accordingly, our income tax expense in 2024 includes a non-cash deferred income tax expense of $16.5 million recognized in the fourth quarter.

Tax authorities are examining certain of our U.S. and non-U.S. tax returns and 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, if any, will be resolved in our favor, and therefore our potential exposure, if any, is also uncertain. 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 2022, 2023 and 2024 was not material.

The following table shows the changes in the amount of our uncertain tax positions (exclusive of the effect of interest and penalties discussed above) during 2022, 2023 and 2024:

	Years ended December 31,		
	2022	2023	2024
		(In millions)	
Changes in unrecognized tax benefits:			
Unrecognized tax benefits at beginning of year	$ 3.8	$ 3.2	**$ 2.8**
Tax positions taken in current period	.7	.5	**.5**
Lapse due to applicable statute of limitations	(1.1)	(1.0)	**-**
Change in currency exchange rates	(.2)	.1	**(.1)**
Unrecognized tax benefits at end of year	$ 3.2	$ 2.8	**$ 3.2**

At December 31, 2024, all of our uncertain tax benefits are classified as a component of our noncurrent deferred tax asset. If our uncertain tax position at December 31, 2024 was recognized, a benefit of $3.2 million would affect our effective income tax rate. Excluding any potential adjustments resulting from on-going examinations by tax authorities, we currently estimate that our unrecognized tax benefits will not change materially during the next twelve months.

We and Contran file income tax returns in U.S. federal and various 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 2021 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 2020 for Germany, 2021 for Belgium, and 2019 for Canada and Norway although certain periods may be extended if currently under examination or for the review of cross-border transactions.

Note 13 – Stockholders' equity:

Long-term incentive compensation plan – Prior to 2020, our board of directors adopted a plan that provides for the award of stock to our board of directors, up to a maximum of 200,000 shares. We awarded 8,400 shares in 2022, 14,700 shares in 2023 and 9,300 shares in 2024 under this plan. At December 31, 2024, 87,800 shares are available for awards.

Stock repurchase program – Our board of directors has previously 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 use cash on hand or other sources of liquidity to acquire the shares. Repurchased shares are added to our treasury and subsequently cancelled upon approval of the board of directors. In 2022, we acquired 217,778 shares of our common stock in market transactions for an aggregate purchase price of $2.5 million and subsequently cancelled all such shares. In 2023, we acquired 313,814 shares of our common stock in market transactions for an aggregate purchase price of $2.8 million and subsequently cancelled all such shares. We made no treasury purchases in 2024. At December 31, 2024, 1,017,518 shares are available for repurchase under this stock repurchase program.

Accumulated other comprehensive loss – Changes in accumulated other comprehensive loss for 2022, 2023 and 2024 are presented in the table below.

	Years ended December 31,		
	2022	2023	2024
		(In millions)	
Accumulated other comprehensive loss, net of tax:			
Currency translation:			
Balance at beginning of period	$ (240.4)	$ (269.2)	**$ (265.5)**
Other comprehensive income (loss)	(28.8)	3.7	**(34.5)**
Balance at end of period	$ (269.2)	$ (265.5)	**$ (300.0)**
Defined benefit pension plans:			
Balance at beginning of period	$ (163.3)	$ (63.1)	**$ (76.0)**
Other comprehensive income:			
Amortization of prior service cost and net losses included in net periodic pension cost	9.9	2.0	**1.9**
Net actuarial gain (loss) arising during year	90.3	(16.0)	**10.0**
Plan settlement	-	1.1	**.3**
Balance at end of period	$ (63.1)	$ (76.0)	**$ (63.8)**
OPEB plans:			
Balance at beginning of period	$ (.4)	$ .8	**$ .4**
Other comprehensive loss - amortization of prior service credit and net losses included in net periodic OPEB cost	(.3)	(.2)	**(.1)**
Net actuarial gain (loss) arising during year	1.5	(.2)	**-**
Balance at end of period	$ .8	$ .4	**$ .3**
Total accumulated other comprehensive loss:			
Balance at beginning of period	$ (404.1)	$ (331.5)	**$ (341.1)**
Other comprehensive income (loss)	72.6	(9.6)	**(22.4)**
Balance at end of period	$ (331.5)	$ (341.1)	**$ (363.5)**

See Note 6 for further discussion on our marketable securities, Note 10 for amounts related to our defined benefit pension plans and Note 11 for our OPEB plans.

Note 14 – Related party transactions:

We may be deemed to be controlled by Ms. Simmons and the Family Trust. See Note 1. Corporations that may be deemed to be controlled by or affiliated with such individuals 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.

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

	December 31,	
	2023	2024
	(In millions)	
Current receivables from affiliates:		
LPC	$ 16.9	$ -
Other	.4	.6
	$ 17.3	$ .6
Current payables to affiliates:		
LPC	$ 19.9	$ -
Income taxes payable to Valhi (See Note 12)	10.8	17.9
Other	.6	.1
	$ 31.3	$ 18.0
Noncurrent payable to affiliate -		
Income taxes payable to Valhi (See Note 12)	$ 18.6	$ -

Amounts payable to LPC were generally for the purchase of TiO_2, while amounts receivable from LPC were generally from the sale of TiO_2 feedstock. Purchases of TiO_2 from LPC totaled $225.6 million in 2022 and $231.7 million in 2023. Sales of feedstock to LPC totaled $106.9 million in 2022 and $135.1 million in 2023. See Note 5 for the details on the LPC acquisition.

From time to time, we may 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:

- prior to 2022 we entered into an unsecured revolving demand promissory note with Valhi under which as amended, we agreed to loan Valhi up to $25 million. Our loan to Valhi bore interest at prime plus 1.00%, payable quarterly, with all principal due on demand, but in any event no earlier than December 31, 2024. Loans made to Valhi at any time were at our discretion. At December 31, 2023, we had no outstanding loans to Valhi under this promissory note. In February 2024, this note was cancelled by mutual agreement between us and Valhi.
- In February 2024, we received a $53.7 million subordinated, unsecured term loan from Contran. See Note 8.

Interest income (including unused commitment fees) on our loan to Valhi was $.2 million in 2022, $.1 million in 2023 and nominal in 2024. Interest expense on our loan from Contran was $5.1 million in 2024.

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 fees are based upon the compensation of individual Contran employees providing services for us and/or estimates of the time devoted to our affairs by such persons. Because of the 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. We negotiate fees

annually and agreements renew quarterly. The net ISA fee charged to us by Contran is included in selling, general and administrative expense and corporate expense on our Consolidated Statements of Operations and was $24.5 million in 2022, $22.6 million in 2023 and $23.7 million in 2024.

Contran and certain of its subsidiaries and affiliates, including us, purchase certain of their insurance policies and risk management services as a group, with the costs of the jointly-owned policies and services being apportioned among the participating companies. Tall Pines Insurance Company (Tall Pines), a subsidiary of Valhi, underwrites certain insurance policies for Contran and certain of its subsidiaries and affiliates, including us. Tall Pines purchases reinsurance from highly rated (as determined by A. M. Best or another internationally recognized ratings agency) third-party insurance carriers for substantially all of the risks it underwrites. Consistent with insurance industry practices, Tall Pines receives commissions from the reinsurance underwriters and/or assesses fees for certain of the policies that it underwrites. During 2022, 2023 and 2024 we and LPC paid $20.8 million, $24.8 million and $25.6 million, respectively, under the group insurance program, which amounts principally represent insurance premiums, including $17.3 million, $19.6 million and $20.3 million, respectively, for policies written by Tall Pines. Amounts paid under the group insurance program also include payments to insurers or reinsurers for the reimbursement of claims within our applicable deductible or retention ranges that such insurers and reinsurers paid to third parties on our behalf, as well as amounts for claims and risk management services and various other third-party fees and expenses incurred by the program. We expect these relationships will continue in 2025.

With respect to certain of such jointly-owned 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, and in the event that the available coverage under a particular policy would become exhausted by one or more claims, Contran and certain of its subsidiaries and affiliates, including us, have entered into a loss sharing agreement under which any uninsured loss arising because the available coverage had been exhausted by one or more claims will be shared ratably by those entities that had 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.

Contran and certain of its subsidiaries, including us, participate in a combined information technology data services program that Contran provides for primary data processing and failover. The program apportions its costs among the participating companies. The aggregate amount we paid Contran for such services was $.3 million in 2022, and $.4 million in each of 2023 and 2024. Under the terms of a sublease agreement between Contran and us, we lease certain office space from Contran. We paid Contran $.5 million in 2022, $.6 million in 2023 and $.7 million in 2024 for such rent and related ancillary services. We expect these relationships with Contran will continue in 2025.

We are a party to a tax sharing agreement with Contran and Valhi 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 sharing agreement.

As noted above, effective December 31, 2024, our LPC defined benefit pension plan was merged into our U.S. defined benefit pension plan, which is maintained and administered by NL. Under the terms of the merger, each of us and NL are contractually obligated to bear our respective share of the merged plan costs, including any funding obligations, and we and NL each continue to account for our respective portions of the merged plan as if it were a separate employee benefit plan. If the merged plan were to be terminated in the future, we would be entitled to all funding surplus attributable to our participants in the plan. In February 2025, the NL board of directors approved the termination of the merged plan, with an effective date of June 30, 2025. We anticipate that the completion of the merged plan termination will occur in the second half of 2026, following the receipt of all necessary regulatory approvals. Termination of the merged plan would permanently remove all plan assets, liabilities and accumulated other comprehensive income (loss) from our financial statements.

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 and overall sustainability. Periodically we produce our Kronos Environmental Social Governance Report, which highlights our focus on sustainability of our manufacturing operations, as well as our environmental, social and governance strategy. From time to time, we may be subject to environmental regulatory enforcement under U.S. and non-U.S. statutes, the resolution of which typically involves the establishment or enhancement 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 our manufacturing facilities 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. At least quarterly our management discusses and evaluates the status of any pending litigation to which we are a party. The factors considered in such evaluation include, among other things, the nature of such pending cases, the status of such pending cases, the advice of legal counsel and our experience in similar cases (if any). Based on such evaluation, we make a determination as to whether we believe (i) it is probable a loss has been incurred, and if so if the amount of such loss (or a range of loss) is reasonably estimable, or (ii) it is reasonably possible but not probable a loss has been incurred, and if so if the amount of such loss (or a range of loss) is reasonably estimable, or (iii) the probability a loss has been incurred is remote. We have not accrued any amounts for litigation matters because it is not reasonably possible we have incurred a loss that would be material to our Consolidated Financial Statements, results of operations or liquidity.

Concentrations of credit risk – Sales of TiO_2 accounted for 92% of our net sales in 2022 and 90% in both 2023 and 2024. The remaining sales result from the 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 TiO_2 production processes). TiO_2 is generally sold to the paint, plastics and paper industries. Such markets are generally considered "quality-of-life" markets whose demand for TiO_2 is influenced by the relative economic well-being of the various geographic regions. We sell TiO_2 to approximately 3,000 customers, with the top ten customers approximating 33% in 2022, 35% in 2023 and 39% in 2024 of net sales. One customer accounted for approximately 10% of our net sales in 2022, 12% of our net sales in 2023 and 10% in 2024.

The table below shows the approximate percentage of our TiO_2 sales by volume for our significant markets, Europe and North America, for the last three years.

	2022	2023	2024
Europe	45%	44%	**44%**
North America	39%	41%	**40%**

Long-term contracts – We have long-term supply contracts that provide for certain of our TiO_2 feedstock requirements through 2026. The agreements require us to purchase certain minimum quantities of feedstock with minimum purchase commitments aggregating approximately $542 million over the life of the contracts in years subsequent to December 31, 2024 (including approximately $484 million committed to be purchased in 2025). 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 $67 million at December 31, 2024 (including approximately $40 million committed to be purchased in 2025).

Note 16 – Financial instruments:

See Note 6 for information on how we determine fair value of our marketable securities.

See Note 5 for information on how we determine fair value of our acquisition earn-out liability. The fair value measurement is based on significant inputs not observable in the market and therefore represents a Level 3 measurement as defined in ASC 820. Accretion of the earn-out liability was not material in 2024. There has been no other activity subsequent to Acquisition Date impacting the fair value of the acquisition earn-out liability. The fair value of the acquisition earn-out liability is included in other noncurrent liabilities on the Consolidated Balance Sheet.

The following table presents the financial instruments that are not carried at fair value but which require fair value disclosure as of December 31, 2023 and 2024.

	December 31, 2023		December 31, 2024	
	Carrying amount	Fair value	Carrying amount	Fair value
	(In millions)			
Cash, cash equivalents and restricted cash	$ 202.1	$ 202.1	**$ 114.7**	**$ 114.7**
Long-term debt:				
Fixed rate 9.50% Senior Secured Notes due 2029	-	-	**365.4**	**403.4**
Fixed rate 3.75% Senior Secured Notes due 2025	440.9	424.5	**78.3**	**77.9**
Revolving credit facility	-	-	**10.0**	**10.0**

At December 31, 2024, the estimated market price of our 3.75% Senior Secured Notes due 2025 was €996 per €1,000 principal amount and the estimated market price for our 9.50% Senior Secured Notes due 2029 was €1101 per €1,000 principal amount. The fair value of our 3.75% Senior Secured Notes due 2025 and 9.50% Senior Secured Notes due 2029 were based on quoted market prices; however, these quoted market prices represented Level 2 inputs because the markets in which the 3.75% Senior Secured Notes due 2025 and 9.50% Senior Secured Notes due 2029 trade were not active. Due to the variable interest rate, the carrying amount of our revolving credit facility is deemed to approximate fair value. Due to their near-term maturities, the carrying amounts of accounts receivable and accounts payable are considered equivalent to fair value. In addition, at December 31, 2024, we have a $53.7 million subordinated, unsecured term loan payable to a related party, Contran, due September 2029. See Notes 3, 9 and 14.

Note 17 – Other operating income (expense), net:

On August 24, 2020, LPC temporarily halted production due to Hurricane Laura. Although storm damage to core processing facilities was not extensive, a variety of factors, including loss of utilities and limited access and availability of employees and raw materials, prevented the resumption of operations until September 25, 2020. The majority of our losses from property damage and our share of LPC's lost production and other costs resulting from the disruption of operations, were covered by insurance. We recognized aggregate gains of $2.7 million and $2.5 million in 2022 and 2023, respectively, related to our business interruption claim, which are included in other operating income (expense) – other income, net on our Consolidated Statements of Operations.

Note 18 – Restructuring costs:

In response to the extended period of reduced demand in 2023, we took measures to reduce our operating costs and improve our long-term cost structure such as the implementation of certain voluntary and involuntary workforce reductions during the third quarter of 2023 that primarily impacted our European operations. A substantial portion of our workforce reductions were accomplished through voluntary programs, for which eligible workforce reduction costs are recognized at the time both the employee and employer are irrevocably committed to the terms of the separation. These workforce reductions impacted approximately 100 employees. We recognized a total of approximately $6 million in charges primarily in the fourth quarter of 2023 related to workforce reductions we implemented during the second half of 2023.

In the third quarter of 2024, we closed our sulfate process line at our facility in Varennes, Canada. As a result of the sulfate process line closure, we recognized charges to cost of sales in 2024 of approximately $2 million related to workforce reductions for employees impacted and approximately $14 million in non-cash charges primarily related to accelerated depreciation.

A summary of the activity in our accrued restructuring costs for 2023 and 2024 is shown in the table below:

	Years ended December 31,	
	2023	2024
	(in millions)	
Changes in accrued workforce reduction costs:		
Balances at beginning of the year	$ -	$ **5.0**
Workforce reduction costs accrued	5.8	**2.0**
Workforce reduction costs paid	(.9)	**(6.0)**
Currency translation adjustments, net	.1	**(.1)**
Balance at the end of the year	$ 5.0	$ **.9**
Amounts recognized in the balance sheet:		
Current liability	$ 5.0	$ **.9**
Noncurrent liability	-	**-**
	$ 5.0	$ **.9**

Note 19 – Recent accounting pronouncements:

Adopted

In November 2023, the Financial Accounting Standards Board (FASB) issued ASU 2023-07, Segment Reporting (Topic 280): *Improvements to Reportable Segment Disclosures*. The ASU requires public companies to disclose significant segment expenses and other segment items on an annual and interim basis. The ASU also mandates public companies to provide all annual segment disclosures currently required annually in interim periods. Public entities with a single reportable segment are required to provide the new disclosures and all disclosures required under ASC 280. Public companies are required to disclose the title and position of the CODM and explain how the CODM uses the reported measure of segment profit or loss in assessing segment performance and allocation resources. See Note 2.

Pending Adoption

In December 2023, the FASB issued ASU 2023-09, Income Taxes (Topic 740): *Improvements to Income Tax Disclosures*. The ASU requires additional annual disclosure and disaggregation for the rate reconciliation, income taxes paid and income tax expense by federal, state and non-U.S. tax jurisdictions. In addition, the standard increases the disclosure requirements for items included in the rate reconciliation that meet a quantitative threshold. The ASU is effective for us beginning with our 2025 Annual Report. The ASU may be applied prospectively; however, entities have the option to apply it retrospectively. We are in the process of evaluating the additional disclosure requirements.

In November 2024, the FASB issued ASU No. 2024-03, *Reporting Comprehensive Income - Expense Disaggregation Disclosures*. The ASU requires additional information about specific expense categories in the notes to financial statements for both interim and annual reporting periods. The ASU is effective for us beginning with our 2027 Annual Report, and for interim reporting, in the first quarter of 2028, with early adoption permitted. We are in the process of evaluating the additional disclosure requirements.