

**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, 2022

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 1-5467

VALHI, INC.

(Exact name of Registrant as specified in its charter)

Delaware
(State or other jurisdiction of
Incorporation or organization)

87-0110150
(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:

<u>Title of each class</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered</u>
Common stock	VHI	NYSE

No Securities 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 (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

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 Act.

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input checked="" type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

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 2.4 million shares of voting common stock held by nonaffiliates of Valhi, Inc. as of June 30, 2022 (the last business day of the Registrant's most recently-completed second fiscal quarter) approximated \$109.6 million.

Number of shares of the registrant's common stock, \$.01 par value per share, outstanding on March 3, 2023: 28,279,493.

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.

PART I

ITEM 1. BUSINESS

Valhi, Inc. (NYSE: VHI) is primarily a holding company. We operate through our wholly-owned and majority-owned subsidiaries, including NL Industries, Inc., Kronos Worldwide, Inc., CompX International Inc., Basic Management, Inc. and The LandWell Company. Kronos (NYSE: KRO), NL (NYSE: NL) and CompX (NYSE American: CIX) each file periodic reports with the U.S. Securities and Exchange Commission (“SEC”).

Our principal executive offices are located at Three Lincoln Center 5430 LBJ Freeway, Suite 1700, Dallas, Texas 75240-2620. Our telephone number is (972) 233-1700. We maintain a website at www.valhi.net.

Brief History

LLC Corporation, our legal predecessor, was incorporated in Delaware in 1932. We are the successor company of the 1987 merger of LLC Corporation and another entity controlled by Contran Corporation. One of Contran’s wholly-owned subsidiaries held approximately 92% of Valhi’s outstanding common stock at December 31, 2022. 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 us.

Key events in our history include:

- 1979 – Contran acquires control of LLC;
- 1981 – Contran acquires control of our other predecessor company;
- 1982 – Contran acquires control of Keystone Consolidated Industries, Inc., a predecessor to CompX;
- 1984 – Keystone spins-off an entity that includes what is to become CompX; this entity subsequently merges with LLC;
- 1986 – Contran acquires control of NL, which at the time owns 100% of Kronos;
- 1987 – LLC and another Contran controlled company merge to form Valhi, our current corporate structure;
- 1995 – WCS begins start-up operations;
- 2003 – NL completes the spin-off of Kronos through the pro-rata distribution of Kronos shares to its shareholders including us;
- 2004 through 2005 – NL distributes Kronos shares to its shareholders, including us, through quarterly dividends;
- 2008 – WCS receives a license for the disposal of byproduct material and begins construction of the byproduct facility infrastructure;
- 2009 – WCS receives a license for the disposal of Class A, B and C low-level radioactive waste (“LLRW”) and completes construction of the byproduct facility;
- 2010 – Kronos completes a secondary offering of its common stock lowering our ownership of Kronos to 80%;
- 2011 – WCS begins construction on its Compact and Federal LLRW and mixed LLRW disposal facilities;
- 2012 – WCS completes construction of its Compact and Federal LLRW disposal facilities and commences operations at the Compact facility;
- 2012 – In December CompX completes the sale of its furniture components business;
- 2013 – WCS commences operations at the Federal LLRW facility;

- 2013 – In December we purchased an additional ownership interest in and became the majority owner of Basic Management, Inc. and The LandWell Company; both companies are now included in our Consolidated Financial Statements effective December 31, 2013;
- 2015 – The first homes in our Cadence planned community were completed by third-party builders and sold to the public;
- 2018 – In January we completed the sale of WCS;
- 2020 – In December LandWell completed the first bulk sale of land within the Cadence planned community; and
- 2022 – In July 2022 Basic Water Company ceased water delivery due to a decline in water levels at Lake Mead in Nevada.

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

Forward-Looking Statements

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

- Future supply and demand for our products;
- The extent of the dependence of certain of our businesses on certain market sectors;
- The cyclical nature of certain of our businesses (such as Kronos’ TiO₂ operations);
- Customer and producer inventory levels;
- Unexpected or earlier-than-expected industry capacity expansion (such as the TiO₂ industry);
- Changes in raw material and other operating costs (such as ore, zinc, brass, aluminum, steel and energy 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, reduce demand or perceived demand for TiO₂ component products and land held for development or impair our ability to operate our facilities (including changes in the level of gross domestic product in various regions of the world, natural disasters, terrorist acts, global conflicts and public health crises such as COVID-19);
- Operating interruptions (including, but not limited to, labor disputes, leaks, natural disasters, fires, explosions, unscheduled or unplanned downtime such as disruptions in energy supplies, transportation interruptions, cyber-attacks and public health crises such as COVID-19);
- Competitive products and substitute products;
- Customer and competitor strategies;

- Potential difficulties in integrating future acquisitions;
- Potential difficulties in upgrading or implementing accounting and manufacturing software systems;
- Potential consolidation of our competitors;
- Potential consolidation of our customers;
- The impact of pricing and production decisions;
- Competitive technology positions;
- Our ability to protect or defend intellectual property rights;
- The introduction of trade barriers or trade disputes;
- The ability of our subsidiaries to pay us dividends;
- Uncertainties associated with new product development and the development of new product features;
- 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;
- Decisions to sell operating assets other than in the ordinary course of business;
- The timing and amounts of insurance recoveries;
- Our ability to renew, amend, refinance or establish credit facilities;
- Increases in interest rates;
- 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, or new developments regarding environmental remediation or decommissioning obligations at sites related to our former operations);
- Government laws and regulations and possible changes therein (such as changes in government regulations which might impose various obligations on former manufacturers of lead pigment and lead-based paint, including NL, with respect to asserted health concerns associated with the use of such products) including new environmental health and safety or other regulations such as those seeking to limit or classify TiO₂ or its use;
- The ultimate resolution of pending litigation (such as NL's lead pigment and environmental matters);
- Our ability to comply with covenants contained in our revolving bank credit facilities;
- Our ability to complete and comply with the conditions of our licenses and permits;
- Changes in real estate values and construction costs in Henderson, Nevada; and
- Possible future litigation.

Should one or more of these risks materialize (or the consequences of such development worsen), or should the underlying assumptions prove incorrect, actual results could differ materially from those currently forecasted or expected.

We disclaim any intention or obligation to update or revise any forward-looking statement whether as a result of changes in information, future events or otherwise.

Segments

We currently have three consolidated reportable operating segments at December 31, 2022:

Chemicals

Kronos Worldwide, Inc.

Our Chemicals Segment is operated through our majority control of Kronos. Kronos is a leading global producer and marketer of value-added titanium dioxide pigments (“TiO₂”). TiO₂ is used to impart whiteness, brightness, opacity and durability to a wide variety of products, including paints, plastics, paper, fibers and ceramics. Additionally, TiO₂ is a critical component of everyday applications, such as coatings, plastics and paper, as well as many specialty products such as inks, cosmetics and pharmaceuticals.

Component Products

CompX International Inc.

We operate in the component products industry through our majority control of CompX. CompX is a leading manufacturer of security products used in the postal, recreational transportation, office and institutional furniture, cabinetry, tool storage, healthcare and a variety of other industries. CompX is also a leading manufacturer of wake enhancement systems, stainless steel exhaust systems, gauges, throttle controls, trim tabs and related hardware and accessories for the recreational marine industry.

Real Estate Management and Development

Basic Management, Inc. and The LandWell Company

We operate in real estate management and development through our majority control of BMI and LandWell. BMI owns real property in Henderson, Nevada and through its wholly-owned subsidiaries provides utility services to certain industrial and municipal customers. LandWell is engaged in efforts to develop certain land holdings for commercial, industrial and residential purposes in Henderson, Nevada.

For additional information about our segments and equity investments see “Part II – Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” and Notes 2, 7 and 12 to our Consolidated Financial Statements.

CHEMICALS SEGMENT – KRONOS WORLDWIDE, INC.

Business Overview

Our majority-controlled subsidiary, Kronos, is a leading global producer and marketer of value-added titanium dioxide pigments, or TiO₂, a base industrial product used in a wide range of applications. Kronos, along with its distributors and agents, sells and provides technical services for its products to approximately 4,000 customers in 100 countries with the majority of sales in Europe, North America and the Asia Pacific region. We believe Kronos has developed considerable expertise and efficiency in the manufacture, sale, shipment and service of its products in domestic and international markets.

TiO₂ 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. TiO₂ 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. TiO₂ is widely considered to

be superior to alternative white pigments in large part due to its hiding power (or opacity), which is the ability to cover or mask other materials effectively and efficiently. TiO₂ is designed, marketed and sold based on specific end-use applications.

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

TiO₂ is considered a “quality-of-life” product. Demand for TiO₂ has generally been driven by worldwide gross domestic product and has generally increased with rising standards of living in various regions of the world. According to industry estimates, TiO₂ consumption has grown at a compound annual growth rate of approximately 2% since 2000. Per capita consumption of TiO₂ 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 TiO₂ on a per capita basis for the foreseeable future. We believe Western Europe and North America currently each account for approximately 16% of global TiO₂ consumption. Markets for TiO₂ 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 TiO₂, experience greater demand.

Products and end-use markets

Including its predecessors, Kronos has produced and marketed TiO₂ in North America and Europe, its primary markets, for over 100 years. We believe Kronos is the largest TiO₂ producer in Europe with 45% of its 2022 sales volumes attributable to markets in Europe. The table below shows Kronos’ estimated market share for its significant markets, Europe and North America, for the last three years.

	2020	2021	2022
Europe	17%	15%	14%
North America	18%	17%	17%

We believe Kronos is the leading seller of TiO₂ in several countries, including Germany. Overall, Kronos is one of the top five producers of TiO₂ in the world, with an estimated 7% share of worldwide TiO₂ sales volume in 2022.

Kronos offers its customers a broad portfolio of products that include over 40 different TiO₂ pigment grades under the KRONOS® trademark, which provide a variety of performance properties to meet customers’ specific requirements. Kronos’ major customers include domestic and international paint, plastics, decorative laminate and paper manufacturers. Kronos ships TiO₂ to its customers in either a dry or slurry form via rail, truck and/or ocean carrier. Sales of Kronos’ core TiO₂ pigments represented approximately 92% of our Chemicals Segment’s net sales in 2022. Kronos and its agents and distributors primarily sell its products in three major end-use markets: coatings, plastics and paper.

The following tables show Kronos’ approximate TiO₂ sales volume by geographic region and end-use for the year ended December 31, 2022:

Sales volume percentages by geographic region		Sales volume percentages by end-use	
Europe	45%	Coatings	50%
North America	39%	Plastics	29%
Asia Pacific	9%	Paper	8%
Rest of World	7%	Other	13%

Some of the principal applications for Kronos' products include the following:

TiO₂ for coatings – Kronos' TiO₂ 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 TiO₂ used in coatings varies widely depending on the opacity, color and quality desired. In general, the higher the opacity requirement of the coating, the greater the TiO₂ content.

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

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

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

Kronos produces high purity sulfate process anatase TiO₂ used to provide opacity, whiteness and brightness in a variety of cosmetic and personal care products, such as skin cream, lipstick, eye shadow and toothpaste. In pharmaceuticals, Kronos' TiO₂ 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 and BP (United States Pharmacopoeia and British Pharmacopoeia) and the FDA (United States Food and Drug Administration).

Kronos' TiO₂ business is enhanced by the following three complementary businesses, which comprised approximately 8% of our Chemicals Segment's net sales in 2022:

- Kronos owns and operates 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 TiO₂ plants. Kronos supplies ilmenite to its sulfate plants in Europe. Kronos also sells ilmenite ore to third parties, some of whom are its competitors. Kronos also sells an ilmenite-based specialty product to the oil and gas industry. The mine has estimated ilmenite reserves that are expected to last at least 50 years.
- Kronos manufactures and sells iron-based chemicals, which are co-products and processed co-products of sulfate and chloride process TiO₂ pigment production. These co-product chemicals are marketed through its 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.

- Kronos manufactures and sells other specialty chemicals, which are side-stream products from the production of TiO₂. 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

Kronos produces TiO₂ in two crystalline forms: rutile and anatase. Rutile TiO₂ is manufactured using both a chloride production process and a sulfate production process, whereas anatase TiO₂ is only produced using a sulfate production process. Manufacturers of many end-use applications can use either form, especially during periods of tight supply for TiO₂. The chloride process is the preferred form for use in coatings and plastics, the two largest end-use markets. Due to environmental factors and customer considerations, the proportion of TiO₂ industry sales represented by chloride process pigments has remained stable relative to sulfate process pigments, and in 2022, chloride process production facilities represented approximately 45% 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 TiO₂ pigment has been produced by either the chloride or sulfate process, it is “finished” into products with specific performance characteristics for particular end-use applications through proprietary processes involving various chemical surface treatments and intensive micronizing (milling).

- *Chloride process* – The chloride process is a continuous process in which chlorine is used to extract rutile TiO₂. 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.
- *Sulfate process* – The sulfate process is a batch process in which sulfuric acid is used to extract the TiO₂ from ilmenite or titanium slag. After separation from the impurities in the ore (mainly iron), the TiO₂ is precipitated and calcined to form an intermediate base pigment ready for sale or can be upgraded through finishing treatments.

Kronos produced 517,000, 545,000 and 492,000 metric tons of TiO₂ in 2020, 2021 and 2022, respectively. Kronos’ production volumes include its share of the output produced by its TiO₂ manufacturing joint venture discussed below. Kronos’ average production capacity utilization rates were approximately 92% in 2020, full practical capacity in 2021 and 89% in 2022. Kronos’ production rates in 2020 were impacted by the COVID-19 pandemic (primarily in the third quarter). In the fourth quarter of 2022 Kronos adjusted production levels to correspond with reduced customer demand in its European and export markets resulting from challenging economic conditions and geopolitical uncertainties.

Kronos operates facilities throughout North America and Europe, including the only sulfate process plant in North America and four TiO₂ plants in Europe (one in each of Leverkusen, Germany; Nordenham, Germany; Langerbrugge, Belgium; and Fredrikstad, Norway). In North America, Kronos has a TiO₂ plant in Varennes, Quebec, Canada and, through the manufacturing joint venture described below, a 50% interest in a TiO₂ plant near Lake Charles, Louisiana.

As part of Kronos’ long-term strategy to increase chloride process production, Kronos phased-out sulfate production at its Leverkusen facility during 2020. Kronos’ 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. Kronos operated its facilities at reduced capacities in the fourth quarter of 2022 and into 2023. Based on current assumptions about market performance and demand, Kronos expects to operate its TiO₂ plants at 80% to 90% capacity in the first half of 2023 and near full practical capacity levels by the second half of 2023.

The following table presents the division of Kronos' expected 2023 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	32 %	– %
Nordenham, Germany	TiO ₂ production, sulfate process, co-products	–	11
Langerbrugge, Belgium	TiO ₂ production, chloride process, co-products, titanium chemicals products	15	–
Fredrikstad, Norway (2)	TiO ₂ production, sulfate process, co-products	–	7
Varenes, Canada	TiO ₂ production, chloride and sulfate process, slurry facility, titanium chemicals products	17	3
Lake Charles, LA, US (3)	TiO ₂ production, chloride process	15	–
Total		79 %	21 %

- (1) The Leverkusen facility is located within an extensive manufacturing complex owned by Bayer AG. Kronos owns the Leverkusen facility, which represents about one-third of its current TiO₂ production capacity, but Kronos leases the land under the facility from Bayer under a long-term agreement which expires in 2050. Lease payments are periodically negotiated with Bayer for periods of at least two years at a time. A majority-owned subsidiary of Bayer provides some raw materials including chlorine, auxiliary and operating materials, utilities and services necessary to operate the Leverkusen facility under separate supplies and services agreements.
- (2) The Fredrikstad facility is located on public land and is leased until 2063.
- (3) Kronos operates the facility near Lake Charles through a joint venture with Venator Investments LLC (Venator Investments), a wholly-owned subsidiary of Venator Group, of which Venator Materials PLC (Venator) owns 100% and the amount indicated in the table above represents the share of TiO₂ produced by the joint venture to which Kronos is entitled. See Note 7 to our Consolidated Financial Statements and "TiO₂ manufacturing joint venture." The joint venture owns the land and facility.

Kronos owns the land underlying all of its principal production facilities unless otherwise indicated in the table above.

Kronos also operates an ilmenite mine in Norway pursuant to a governmental concession with an unlimited term. In addition, Kronos operates a rutile slurry manufacturing plant near Lake Charles, Louisiana, which converts dry pigment primarily manufactured for it at the Lake Charles TiO₂ facility into a slurry form that is then shipped to customers.

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

TiO₂ manufacturing joint venture

Kronos Louisiana, Inc., one of Kronos' subsidiaries, and Venator Investments each own a 50% interest in a manufacturing joint venture, Louisiana Pigment Company, L.P. (LPC). LPC owns and operates a chloride-process TiO₂ plant located near Lake Charles, Louisiana. Kronos and Venator share production from the plant equally pursuant to separate offtake agreements, unless Kronos and Venator otherwise agree.

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

We do not consolidate LPC because we do not control it. We account for Kronos' interest in the joint venture by the equity method. The joint venture operates on a break-even basis and therefore we do not have any equity in earnings of the joint venture. Kronos is required to purchase one half of the TiO₂ produced by the joint venture. All costs and capital expenditures are shared equally with Venator with the exception of feedstock (purchased natural rutile ore or chlorine slag) and packaging costs for the pigment grades produced. Kronos' share of net costs is reported as cost of sales as the TiO₂ is sold. See Notes 7 and 17 to our Consolidated Financial Statements.

Raw materials

The primary raw materials used in chloride process TiO₂ 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. Kronos purchases feedstock for its chloride process TiO₂ 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
Eramet SA	Chloride process grade slag	Renewal terms upon negotiation
Sierra Rutile Limited	Rutile ore	Renewal terms upon negotiation
Iluka Resources Limited	Rutile ore	Renewal terms upon negotiation
Saraf Agencies Private Limited	Chloride process grade slag	Renewal terms upon negotiation

In the past Kronos has been, and it expects that it will continue to be, successful in obtaining short-term and long-term extensions to these and other existing supply contracts prior to their expiration. Kronos expects the raw materials purchased under these contracts, and contracts that it may enter into, will meet its chloride process feedstock requirements over the next several years. Contracts may be terminated with a 12-month written notice (generally for multi-year agreement terms) 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 TiO₂ are titanium-containing feedstock, primarily ilmenite or purchased sulfate grade slag and sulfuric acid. Sulfuric acid is available from a number of suppliers. Titanium-containing feedstock suitable for use in the sulfate process is available from a limited number of suppliers principally in Norway, Canada, Australia, India and South Africa. As one of the few vertically-integrated producers of sulfate process TiO₂, Kronos operates a rock ilmenite mine in Norway, which provided all of the feedstock for its European sulfate process TiO₂ plants in 2022. Kronos expects ilmenite production from its mine to meet its European sulfate process feedstock requirements for the foreseeable future. For its Canadian sulfate process plant, Kronos purchases sulfate grade slag primarily from Rio Tinto Fer et Titane Inc. under a supply contract that renews annually, subject to termination upon twelve months written notice. Kronos expects the raw materials purchased under this contract, and contracts that it may enter into, to meet its sulfate process feedstock requirements over the next several years.

Many of Kronos' raw material contracts contain fixed quantities it is required to purchase, or specify a range of quantities within which it is required to purchase. The pricing under these agreements is generally negotiated quarterly or semi-annually.

The following table summarizes Kronos' raw materials purchased or mined in 2022.

<u>Production process/raw material</u>	<u>Raw materials procured or mined (In thousands of metric tons)</u>
Chloride process plants -	
Purchased slag or rutile ore	488
Sulfate process plants:	
Ilmenite ore mined and used internally	220
Purchased slag	20

Sales and marketing

Kronos' marketing strategy is aimed at developing and maintaining strong relationships with new and existing customers. Because TiO₂ represents a significant input cost for its customers, the purchasing decisions are often made by Kronos' customers' senior management. Kronos works to maintain close relationships with the key decision makers through in-depth and frequent contact. Kronos endeavors to extend these commercial and technical relationships to multiple levels within its customers' organizations using its direct sales force and technical service group to accomplish this objective. Kronos believes this helps build customer loyalty and strengthens its competitive position. Close cooperation and strong customer relationships enable Kronos to stay closely attuned to trends in its customers' businesses. Where appropriate, Kronos works in conjunction with its customers to solve formulation or application problems by modifying specific product properties or developing new pigment grades. Kronos also focuses its sales and marketing efforts on those geographic and end-use market segments where it believes it can realize higher selling prices. This focus includes continuously reviewing and optimizing its customer and product portfolios.

Kronos also works directly with its customers to monitor the success of its products in their end-use applications, evaluates the need for improvements in its product and process technology and identifies opportunities to develop new product solutions for its customers. Kronos' marketing staff closely coordinates with its sales force and technical specialists to ensure the needs of its customers are met, and to help develop and commercialize new grades where appropriate.

Kronos sells a majority of its products through its direct sales force operating in Europe and North America. Kronos also utilizes sales agents and distributors who are authorized to sell its products in specific geographic areas. In Europe, Kronos' sales efforts are conducted primarily through its direct sales force and its sales agents. Kronos' agents do not sell any TiO₂ products other than KRONOS[®] branded products. In North America, its sales are made primarily through its direct sales force and supported by a network of distributors. Kronos has increased its marketing efforts over the last several years in export markets and its sales are now made through its direct sales force, sales agents and distributors. In addition to its direct sales force and sales agents, many of Kronos' sales agents also act as distributors to service its customers in all regions. Kronos offers customer and technical service to customers who purchase its products through distributors as well as to its larger customers serviced by its direct sales force.

Kronos sells to a diverse customer base with only one customer representing 10% or more of our Chemicals Segment's net sales in 2022 (Behr Process Corporation – 10%). Kronos' largest ten customers accounted for approximately 33% of our Chemicals Segment's net sales in 2022.

Neither our Chemicals Segment's business as a whole nor any of its principal product groups is seasonal to any significant extent. However, TiO₂ sales are generally higher in the second and third quarters of the year, due in part to the increase in coatings production in the spring to meet demand during the spring and summer painting seasons. With certain exceptions, such as during the third quarter of 2020 as a result of the COVID-19 pandemic, and during the fourth quarter of 2022 as a result of reduced customer demand and unprecedentedly high energy costs, Kronos has historically operated its production facilities at near full capacity rates throughout the entire year, which among other things helps to minimize its per-unit production costs. As a result, Kronos normally builds inventories during the first and fourth quarters of each year in order to maximize its product availability during the higher demand periods normally experienced in the second and third quarters.

Competition

The TiO₂ industry is highly competitive. Kronos competes primarily on the basis of price, product quality, technical service and the availability of high performance pigment grades. Since TiO₂ 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 Kronos' product grades. Increasingly, Kronos is focused on providing pigments that are differentiated to meet specific customer requests and specialty grades that are differentiated from its competitors' products. During 2022, Kronos had an estimated 7% share of worldwide TiO₂ sales volume, and based on sales volume, we believe Kronos is the leading seller of TiO₂ in several countries, including Germany.

Kronos' principal competitors are The Chemours Company, Tronox Incorporated, LB Group Co. Ltd. and Venator Materials PLC. The top five TiO₂ producers (i.e. Kronos and its four principal competitors) account for approximately 52% of the world's production capacity.

The following chart shows our estimate of worldwide production capacity in 2022:

Chemours	15 %
Tronox	12 %
LB Group Co. Ltd.	11 %
Venator	7 %
Kronos	7 %
Other	48 %

Chemours has approximately one-half of total North American TiO₂ production capacity and is Kronos' principal North American competitor. LB Group Co. Ltd. previously announced it plans to add an additional 200,000 tons of chloride capacity which we expect will be added incrementally over the next several years.

The TiO₂ 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, Kronos and its competitors increased industry capacity through debottlenecking projects, although this increase only partly compensated for the shut-down of various TiO₂ plants throughout the world. Although overall industry demand is expected to increase in 2023, other than through debottlenecking projects and the LB Group Co. Ltd. expansion mentioned above, Kronos does not expect any significant efforts will be undertaken by it or its principal competitors to further increase capacity and Kronos believes it is unlikely any new TiO₂ plants will be constructed in Europe or North America for the foreseeable future. If actual developments differ from Kronos' expectations, the TiO₂ industry's and Kronos' performance could be unfavorably affected.

Research and development

Kronos employs 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 Kronos' chloride and sulfate production processes, improving product quality and strengthening its competitive position by developing new products and applications. Kronos' expenditures for these activities were approximately \$16 million in 2020, \$17 million in 2021 and \$15 million in 2022. Kronos expects to spend approximately \$17 million on research and development in 2023.

Kronos continually seeks to improve the quality of its grades and has been successful at developing new grades for existing and new applications to meet the needs of its customers and increase product life cycles. Since the beginning of 2017, Kronos has added nine new grades for pigments and other applications.

Patents, trademarks, trade secrets and other intellectual property rights

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

Patents – Kronos has obtained patents and has numerous patent applications pending that cover its products and the technology used in the manufacture of its products. Kronos' patent strategy is important to it and its continuing business activities. In addition to maintaining its patent portfolio, Kronos seeks patent protection for its technical developments, principally in the United States, Canada and Europe. U.S. patents are generally in effect for 20 years from the date of filing. Kronos' U.S. patent portfolio includes patents having remaining terms ranging from one year to 20 years.

Trademarks and trade secrets – Kronos' trademarks, including KRONOS[®], are covered by issued and/or pending registrations, including in Canada and the United States. Kronos protects the trademarks it uses in connection with the products it manufactures and sells and has developed goodwill in connection with its long-term use of its trademarks. Kronos conducts research activities in secret and it protects the confidentiality of its trade secrets through reasonable measures, including confidentiality agreements and security procedures, including data security. Kronos relies upon unpatented proprietary knowledge and continuing technological innovation and other trade secrets to develop and maintain its competitive position. Kronos' proprietary chloride production process is an important part of its technology and its business could be harmed if it fails to maintain confidentiality of its trade secrets used in this technology.

Regulatory and environmental matters

Kronos' 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 Kronos' employees. Certain of Kronos' 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 Kronos' past and current operations and products have the potential to cause environmental or other damage. Kronos has implemented and continues to implement various policies and programs in an effort to minimize these risks. Kronos' policy is to comply with applicable environmental laws and regulations at all its facilities and to strive to improve its environmental performance and overall sustainability. It is possible that future developments, such as stricter requirements in environmental laws and enforcement policies, could adversely affect Kronos' operations, including production, handling, use, storage, transportation, sale or disposal of hazardous or toxic substances or require Kronos to make capital and other expenditures to comply, and could adversely affect our consolidated financial position and results of operations or liquidity. During 2021, Kronos was notified by government authorities in Norway that the classification of a dam at its mine facilities was changed to the highest level of Norwegian classification of dam structures. As a result, Kronos' mine operations are subject to a higher degree of oversight and regulation than existed prior to this change in classification, and Kronos has increased its capital expenditures to adapt to the higher classification standards.

Kronos has a history of identifying new ways to reduce consumption and waste by converting byproducts to co-products through its KRONOS ecochem[®] products. Annually Kronos updates and publishes its Safety, Environment, Energy and Quality Policy which is translated into local languages and distributed to all its employees and shared publicly via its website. Kronos has implemented rigorous procedures for incident reporting and investigation, including root cause analysis of environmental and safety incidents and near misses. Because TiO₂ production requires significant energy input, Kronos is focused on energy efficiency at all production locations. Three of its five 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, Kronos looks for opportunities to partner with local government authorities through grant opportunities to reduce energy consumption and associated GHG

emissions. Kronos also actively manages potential water-related risks, including flooding and water shortages. Kronos' manufacturing facilities are strategically located adjacent to sources of water, which it uses 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.

Kronos' 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 Kronos has not incurred and does not currently anticipate any material liabilities in connection with such environmental laws, Kronos 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, Kronos' facilities may be subject to environmental regulatory enforcement under U.S. and non-U.S. statutes. Typically, Kronos establishes compliance programs to resolve these matters. Occasionally, Kronos 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. Kronos believes all of its facilities are in substantial compliance with applicable environmental laws.

From time to time, new environmental, health and safety regulations are passed or proposed in the countries in which Kronos operates or sells its products, seeking to regulate its operations or to restrict, limit or classify TiO₂. Kronos believes it is in substantial compliance with laws applicable to the regulation of TiO₂. However, increased regulatory scrutiny could affect consumer perception of TiO₂ or limit the marketability and demand for TiO₂ or products containing TiO₂ and increase Kronos' regulatory and compliance costs.

On October 1, 2021, EU Regulation No. 1272/2008 classifying dry TiO₂ and mixtures containing dry TiO₂ as a suspected carcinogen via inhalation went into force. Kronos' dry TiO₂ 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 TiO₂ as a suspected carcinogen in its entirety.

Kronos' 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 its manufacturing facilities, were \$17.6 million in 2022 and are currently expected to be approximately \$20 million in 2023.

COMPONENT PRODUCTS SEGMENT – COMPX INTERNATIONAL INC.

Business overview

Through our majority-controlled subsidiary, CompX, we are a leading manufacturer of security products including mechanical and electrical cabinet locks and other locking mechanisms used in postal, recreational transportation, office and institutional furniture, cabinetry, tool storage and healthcare applications. CompX also manufactures wake enhancement systems, stainless steel exhaust systems, gauges, throttle controls, trim tabs and related hardware and accessories for the recreational marine and other industries. CompX continuously seeks to diversify into new markets and

identify new applications and features for its products, which it believes provides a greater potential for higher rates of earnings growth as well as diversification of risk.

Manufacturing, operations and products

Security Products. CompX's security products reporting unit manufactures mechanical and electrical cabinet locks and other locking mechanisms used in a variety of applications including mailboxes, ignition systems, file cabinets, desk drawers, tool storage cabinets, high security medical cabinetry, integrated inventory and access control secured narcotics boxes, electronic circuit panels, storage compartments, gas station security, vending and cash containment machines. CompX's security products reporting unit has one manufacturing facility in Mauldin, South Carolina and one in Grayslake, Illinois which is shared with its marine components reporting unit. CompX believes it is a North American market leader in the manufacture and sale of cabinet locks and other locking mechanisms. These products include:

- disc tumbler locks which provide moderate security and generally represent the lowest cost lock CompX produces;
- pin tumbler locking mechanisms which are more costly to produce and are used in applications requiring higher levels of security, including *KeSet*[®] and *System 64*[®] (which each allow the user to change the keying on a single lock 64 times without removing the lock from its enclosure), *TuBar*[®] and *Turbine*[™]; and
- CompX's innovative *CompX eLock*[®] and *StealthLock*[®] electronic locks which provide stand-alone or networked security and audit trail capability for drug storage and other valuables through the use of a proximity card, magnetic stripe, radio frequency or other keypad credential.

A substantial portion of Security Products' sales consist of products with specialized adaptations to an individual customer's specifications, some of which are listed above. CompX also has a standardized product line suitable for many customers, which is offered through a North American distribution network to locksmith and smaller original equipment manufacturer distributors via its *STOCK LOCKS*[®] distribution program.

Marine Components. CompX's marine components reporting unit manufactures and distributes wake enhancement systems, stainless steel exhaust components, gauges, throttle controls, trim tabs and related hardware and accessories primarily for ski/wakeboard boats (tow boats) and performance boats. CompX's marine components reporting unit has a facility in Neenah, Wisconsin and a facility in Grayslake, Illinois which is shared with its security products reporting unit. CompX's specialty marine component products are high precision components designed to operate within tight tolerances in the highly demanding marine environment. These products include:

- wake enhancement devices, trim tabs, steering wheels, and billet aluminum accessories;
- original equipment and aftermarket stainless steel exhaust headers, exhaust pipes, mufflers and other exhaust components;
- high performance gauges such as GPS speedometers and tachometers;
- mechanical and electronic controls and throttles;
- dash panels, LED indicators, and wire harnesses; and
- grab handles, pin cleats and other accessories.

CompX operated three principal operating facilities at December 31, 2022 as shown below.

Facility Name	Reporting Unit	Location	Size (square feet)
Owned Facilities:			
National ⁽¹⁾	SP	Mauldin, SC	198,000
Grayslake ⁽¹⁾	SP/MC	Grayslake, IL	133,000
Custom ⁽¹⁾	MC	Neenah, WI	95,000

⁽¹⁾ ISO-9001 registered facilities
 SP- Security Products
 MC- Marine Components

Raw materials

CompX's primary raw materials are:

- Security Products - zinc and brass (for the manufacture of locking mechanisms).
- Marine Components - stainless steel (for the manufacture of exhaust headers and pipes and wake enhancement systems), aluminum (for the manufacture of throttles and trim tabs) and other components.

These raw materials are purchased from several suppliers, are readily available from numerous sources and accounted for approximately 17% of our Component Products Segment's total cost of sales for 2022. Total material costs, including purchased components, represented approximately 47% of our Component Products Segment's cost of sales in 2022.

CompX occasionally enters into short-term commodity-related raw material supply arrangements to mitigate the impact of future price increases in commodity-related raw materials, including zinc, brass and stainless steel. These arrangements generally provide for stated unit prices based upon specified purchase volumes, which help CompX to stabilize its commodity-related raw material costs to a certain extent. At other times CompX may make spot market buys of larger quantities of raw materials to take advantage of favorable pricing or volume-based discounts. Prices for the primary commodity-related raw materials used in the manufacture of locking mechanisms, primarily zinc and brass, generally increased throughout 2021 and the first half of 2022. Prices began to stabilize in the latter half of 2022, although at elevated levels. The prices for stainless steel, the primary raw material used for the manufacture of marine exhaust headers and pipes and wake enhancement systems, experienced significant volatility during 2021 and 2022. Based on current economic conditions, CompX expects the prices for zinc, brass, stainless steel and other manufacturing materials in 2023 to be relatively stable, although at the elevated levels it experienced in the second half of 2022. When purchased on the spot market, each of these raw materials may be subject to sudden and unanticipated price increases. When possible, CompX seeks to mitigate the impact of fluctuations in these raw material costs on its margins through improvements in production efficiencies or other operating cost reductions. In the event CompX is unable to offset raw material cost increases with other cost reductions, it may be difficult to recover those cost increases through increased product selling prices or raw material surcharges due to the competitive nature of the markets in which it competes. Consequently, overall operating margins can be affected by commodity-related raw material cost pressures. Commodity market prices are cyclical, reflecting overall economic trends, specific developments in consuming industries and speculative investor activities.

Patents and trademarks

CompX holds a number of patents relating to its component products, certain of which it believes to be important to it and its continuing business activity. Patents generally have a term of 20 years, and CompX's patents have remaining

terms ranging from 1 year to 18 years at December 31, 2022. CompX's major trademarks and brand names in addition to CompX® include:

Security Products	Security Products	Marine Components
<i>CompX® Security Products™</i>	<i>Lockview®</i>	<i>CompX Marine®</i>
<i>National Cabinet Lock®</i>	<i>System 64®</i>	<i>Custom Marine®</i>
<i>Fort Lock®</i>	<i>SlamCAM®</i>	<i>Livorsi® Marine</i>
<i>Timberline® Lock</i>	<i>RegulatoR®</i>	<i>Livorsi II® Marine</i>
<i>Chicago Lock®</i>	<i>CompXpress®</i>	<i>CMI Industrial®</i>
<i>STOCK LOCKS®</i>	<i>GEM®</i>	<i>Custom Marine® Stainless Exhaust</i>
<i>KeSet®</i>	<i>Turbine™</i>	<i>The #1 Choice in Performance</i>
<i>TuBar®</i>	<i>NARC iD®</i>	<i>Boating®</i>
<i>StealthLock®</i>	<i>NARC®</i>	<i>Mega Rim®</i>
<i>ACE®</i>	<i>ecoForce®</i>	<i>Race Rim®</i>
<i>ACE® II</i>	<i>Pearl®</i>	<i>Vantage View®</i>
<i>CompX eLock®</i>		<i>GEN-X®</i>

Sales, marketing and distribution

A majority of our Component Products Segment's sales are direct to large OEM customers through its factory-based sales and marketing professionals supported by engineers working in concert with field salespeople and independent manufacturer's representatives. CompX selects manufacturer's representatives based on special skills in certain markets or relationships with current or potential customers.

In addition to sales to large OEM customers, a substantial portion of CompX's security products sales are made through distributors. CompX has a significant North American market share of cabinet lock security product sales as a result of the locksmith distribution channel. CompX supports its locksmith distributor sales with a line of standardized products used by the largest segments of the marketplace. These products are packaged and merchandised for easy availability and handling by distributors and end users.

Our Component Products Segment sells to a diverse customer base with only two customers representing 10% or more of our Component Products Segment's sales in 2022 (United States Postal Service – 14% and Malibu Boats, LLC – 12%). Our Component Products Segment's largest ten customers accounted for approximately 52% of its sales in 2022.

Competition

The markets in which CompX participates are highly competitive. CompX competes primarily on the basis of product design, including space utilization and aesthetic factors, product quality and durability, price, on-time delivery, service and technical support. CompX focuses its efforts on the middle and high-end segments of the market, where product design, quality, durability and service are valued by the customer. CompX's security products reporting unit competes against a number of domestic and foreign manufacturers. CompX's marine components reporting unit competes with small domestic manufacturers and is minimally affected by foreign competitors.

Regulatory and environmental matters

CompX has a history of incorporating environmental management and compliance in its operations and decision making. CompX operates three low-emission manufacturing facilities and CompX's production processes requiring wastewater discharge are consolidated at its Mauldin, South Carolina facility. This facility has received a ReWa Gold Award from Renewable Water Resources, an organization which sets regulatory and water policies for the Mauldin facility's geographic region, for multiple years for its exemplary performance. In addition, CompX operates extensive scrap metal recycling programs to reduce landfill waste.

CompX's operations are subject to federal, state and local laws and regulations relating to the use, storage, handling, generation, transportation, treatment, emission, discharge, disposal, remediation of and exposure to hazardous

and non-hazardous substances, materials and wastes. CompX's operations are also subject to federal, state, and local laws and regulations relating to worker health and safety. CompX believes it is in substantial compliance with all such laws and regulations. To date, the costs of maintaining compliance with such laws and regulations have not significantly impacted CompX's results. CompX currently does not anticipate any significant costs or expenses relating to such matters; however, it is possible future laws and regulations may require it to incur significant additional expenditures.

REAL ESTATE MANAGEMENT AND DEVELOPMENT SEGMENT – BASIC MANAGEMENT, INC. AND THE LANDWELL COMPANY

Business overview

Our Real Estate Management and Development Segment consists of our majority owned subsidiaries, BMI and LandWell. BMI provides certain utility services, among other things, to an industrial park located in Henderson, Nevada and prior to the bankruptcy filing on September 10, 2022 of Basic Water Company ("BWC"), a wholly-owned subsidiary of BMI, was responsible for the delivery of water to the City of Henderson and various other users through a water distribution system owned and operated by BWC. See Note 2 to our Consolidated Financial Statements and also Item 7 – "Management's Discussion and Analysis of Financial Condition and Results of Operations – Real Estate Management and Development". LandWell is actively engaged in efforts to develop certain real estate in Henderson, Nevada including approximately 2,100 acres zoned for residential/planned community purposes and approximately 400 acres zoned for commercial and light industrial use.

Operations and services

Over the years, LandWell and BMI have focused on developing and selling the land transferred to LandWell as part of its formation in the early 1950's as well as additional land holdings acquired by LandWell in the surrounding area subsequent to LandWell's formation (although BMI and LandWell have not had significant real property acquisitions since 2004). Since LandWell's formation, LandWell and BMI have a history of successfully developing and selling retail, light industrial, commercial and residential projects in the Henderson, Nevada area. LandWell is focused primarily on the development of a large tract of land in Henderson zoned for residential/planned community purposes (approximately 2,100 acres). Planning and zoning work on the project began in 2007, but intensive development efforts of the residential/planned community did not begin until 2013 (with LandWell acting as the master developer for all such development efforts). LandWell markets and sells its residential/planned community to established home builders in tracts of land that are pre-zoned for a maximum number of home lots. LandWell supports the builders' efforts to market and sell specific residential homes within its residential/planned community through joint marketing campaign and community wide education efforts.

In addition, BMI provides certain utility services to an industrial park located in Henderson, Nevada and prior to BWC's bankruptcy filing on September 10, 2022 also delivered water to the City of Henderson and various other users through a water delivery system owned and operated by BWC.

Sales

LandWell began marketing land for sale in the residential/planned community in December 2013 and at December 31, 2022 approximately 90 saleable acres remain. LandWell has been actively marketing and selling the land zoned for commercial and light industrial use and at December 31, 2022 approximately 20 saleable acres remain. Contracts for land sales are negotiated on an individual basis and sales terms and prices will vary based on such factors as location (including location within a planned community), expected development work and individual buyer needs. Although land may be under contract, we do not recognize revenue until we have satisfied the criteria for revenue recognition. In some instances, LandWell will receive cash proceeds at the time the contract closes and record deferred revenue for some or all of the cash amount received, with deferred revenue being recognized in subsequent periods. Substantially all of the land in the residential/planned community has been sold; however, we expect the development work to take three to five years to complete.

Our Real Estate Management and Development Segment's sales consist principally of land sales and to a lesser extent water (for the first half of 2022) and electric delivery fees. During 2022 we had sales to two customers that exceeded

10% of our Real Estate Management and Development Segment's net sales (CCR 270 – 30% and Richmond American Homes – 19%) related to land sales.

Competition

There are multiple new construction residential communities in the greater Las Vegas, Nevada area. LandWell competes with these communities on the basis of location; planned community amenities and features; proximity to major retail and recreational activities; and the perception of quality of life within the new community. We believe LandWell's residential/planned community is unique within the greater Las Vegas area due to its location and planned amenities which include 490 acres of community and neighborhood parks and open space interconnected with major regional trails and parks. LandWell markets its residential/planned community to builders who target first-time to middle market home buyers to maximize sales.

Regulatory and environmental matters

LandWell and the subcontractors it uses must comply with many federal, state, and local laws and regulations, including zoning, density and development requirements, building, environmental, advertising, labor and real estate sales rules and regulations. These regulations and requirements affect substantially all aspects of its land development. Our Real Estate Management and Development Segment's operations are subject to federal, state and local laws and regulations relating to the use, storage, handling, generation, transportation, treatment, emission, discharge, disposal, remediation of and exposure to hazardous and non-hazardous substances, materials and wastes. We believe our Real Estate Management and Development Segment is in substantial compliance with all such laws and regulations. To date, the costs of maintaining compliance with such laws and regulations have not significantly impacted our results. We currently do not anticipate our Real Estate Management and Development Segment will incur significant costs or expenses relating to such matters; however, it is possible future laws and regulations may require it to incur significant additional expenditures.

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.

At a corporate level, we engage in periodic reviews of our cybersecurity programs, including cybersecurity risk and threats. Our cybersecurity programs are built on operations and compliance foundations. Operations focus on continuous detection, prevention, measurement, analysis, and response to cybersecurity alerts and incidents and on emerging threats. Compliance 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. We periodically update our board of directors on our cyber-related risks and cybersecurity programs.

In an effort to align our non-employee directors' financial interests with those of our stockholders, our Board established share ownership guidelines for our non-management directors.

Kronos has taken steps to integrate ESG considerations into operating decisions with other critical business factors. Kronos biennially publishes an ESG Report, which is available on its public website. The primary purpose of its ESG Report is to describe Kronos' policies and programs in the area of ESG, including certain internal metrics and benchmarks related to various aspects of ESG. Kronos voluntarily developed these internal metrics and benchmarks, which Kronos uses 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 company 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. Each of our businesses has a well-trained labor force with a substantial number of long-tenured employees. Our businesses 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 segment and 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.

As of December 31, 2022, our Chemicals Segment employed the following number of people:

Europe	1,841
Canada	369
United States (1)	56
Total	<u>2,266</u>

(1) Excludes employees of our LPC joint venture.

Certain employees at each of Kronos' production facilities are organized by labor unions. Kronos strives to maintain good relationships with all its employees, including the unions and workers' councils representing those employees. In Europe, Kronos' union employees are covered by master collective bargaining agreements for the chemical industry that are generally renewed annually. At December 31, 2022, approximately 88% of Kronos' worldwide workforce is organized under collective bargaining agreements. Kronos did not experience any work stoppages during 2022, although it is possible that there could be future work stoppages or other labor disruptions that could materially and adversely affect Kronos' business, results of operations, financial position, or liquidity.

As of December 31, 2022, our Component Products Segment and our Real Estate Management and Development Segment employed 609 people and 24 people, respectively, all in the United States. We believe CompX's and BMI's labor relations are good.

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 Kronos operating location 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, Kronos collects the location specific information and applies a U.S.-based injury rate calculation to arrive at a global total frequency rate, which is expressed as the number of incidents at its 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. Kronos' global total frequency rate aggregating information about employees and contractors was 1.61 in 2020 (1.54 of the aggregate represents employees only), 1.08 in 2021 (0.90 of the aggregate represents employees only) and 1.01 in 2022 (0.86 of the aggregate represents employees only).

CompX uses lost time incidents as a key measure of worker safety. CompX defines lost time incidents as work-related accidents where a worker sustains an injury that results in time away from work. CompX had lost time incidents of nil in 2020, one in 2021 and three in 2022.

Diversity and inclusion

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.

OTHER

NL Industries, Inc. – At December 31, 2022, NL owned approximately 87% of CompX and approximately 31% of Kronos. NL also holds certain marketable securities and other investments.

Tremont LLC – Tremont is primarily a holding company through which we hold our 63% ownership interest in BMI and our 77% ownership interest in LandWell. Our 77% ownership interest in LandWell includes 27% we hold through our ownership of Tremont and 50% held by a subsidiary of BMI. Tremont also owns 100% of Tall Pines Insurance Company, an insurance company that also holds certain marketable securities and other investments. Tremont also owns certain real property in Henderson, Nevada. See Note 17 to our Consolidated Financial Statements.

In addition, we also own real property related to certain of our former business units.

Discontinued Operations – On January 26, 2018, we completed the sale of our former Waste Management Segment to JFL-WCS Partners, LLC (“JFL Partners”), an entity sponsored by certain investment affiliates of J.F. Lehman & Company, for consideration consisting of the assumption of all of the Waste Management Segment's third-party indebtedness and other liabilities. We recognized a pre-tax gain of approximately \$4.9 million in the fourth quarter of 2020 related to proceeds received from JFL Partners in final settlement of an earn-out provision in the sale agreement. Amounts associated with the sale of our former Waste Management Segment are classified as part of discontinued operations. See Note 3 to our Consolidated Financial Statements.

Business Strategy – We routinely compare our liquidity requirements and alternative uses of capital against the estimated future cash flows to be received from our subsidiaries and unconsolidated affiliates, and the estimated sales value of those businesses. As a result, we have in the past, and may in the future, seek to raise additional capital, refinance or restructure indebtedness, repurchase indebtedness in the market or otherwise, modify our dividend policy, consider the sale of an interest in our subsidiaries, business units, marketable securities or other assets, or take a combination of these or other steps, to increase liquidity, reduce indebtedness and fund future activities, which have in the past and may in the future involve related companies. From time to time, we and our related entities consider restructuring ownership interests among our subsidiaries and related companies. We expect to continue this activity in the future.

We and other entities that may be deemed to be controlled by or affiliated with Ms. Simmons and the Family Trust routinely evaluate acquisitions of interests in, or combinations with, companies, including related companies, that provide strategic opportunities and synergies or that we perceive to be undervalued in the marketplace. These companies may or may not be engaged in businesses related to our current businesses. In some instances we actively manage the

businesses we acquire with a focus on maximizing return-on-investment through cost reductions, capital expenditures, improved operating efficiencies, selective marketing to address market niches, disposition of marginal operations, use of leverage and redeployment of capital to more productive assets. In other instances, we have disposed of our interest in a company prior to gaining control. We intend to consider such activities in the future and may, in connection with such activities, consider issuing additional equity securities and increasing our indebtedness.

Website and Available Information – Our fiscal year ends December 31. We furnish our stockholders with annual reports containing audited financial statements. In addition, we file annual, quarterly and current reports, proxy and information statements and other information with the SEC. Certain of our consolidated subsidiaries (Kronos, NL and CompX) also file annual, quarterly and current reports, proxy and information statements and other information with the SEC. We also make our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments thereto, available free of charge through our website at www.valhi.net as soon as reasonably practical after they have been filed with the SEC. We also provide to anyone, without charge, copies of such documents upon written request. Requests should be directed to the attention of the Corporate Secretary at our address on the cover page of this Form 10-K.

Additional information, including our Audit Committee Charter, our Code of Business Conduct and Ethics and our Corporate Governance Guidelines, can also be found on our website. Information contained on our website is not part of this Annual Report.

The SEC maintains an Internet website at www.sec.gov that contains reports, proxy and information statements and other information regarding issuers, such as us, that file electronically with the SEC.

ITEM 1A. RISK FACTORS

Listed below are certain risk factors associated with us and our businesses. 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 increased 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 Chemicals Segment’s products are influenced by changing market conditions for its products, which may result in reduced earnings or operating losses.

Our Chemicals Segment’s sales and profitability are largely dependent on the TiO₂ industry. In 2022, 92% of our Chemicals Segment’s sales were attributable to sales of TiO₂. TiO₂ 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 TiO₂ industry over the long term is cyclical and changes in economic conditions worldwide can significantly impact our Chemicals Segment’s earnings and operating cash flows. Historically, the markets for many of our Chemicals Segment’s products have experienced alternating periods of increasing and decreasing demand. Relative changes in the selling prices for our Chemicals Segment’s products are one of the main factors that affect the level of our Chemicals Segment’s profitability. In periods of increasing demand, our Chemicals Segment’s selling prices and profit margins generally will tend to increase, while in periods of decreasing demand selling prices and profit margins generally tend to decrease. In addition, pricing may affect customer inventory levels as customers may from time to time accelerate purchases of TiO₂ in advance of anticipated price increases or defer purchases of TiO₂ in advance of anticipated price decreases. Our Chemicals Segment’s ability to further increase capacity without additional investment in greenfield

or brownfield capacity may be limited and as a result, our Chemicals Segment's profitability may become even more dependent upon the selling prices of its products.

The TiO₂ industry is concentrated and highly competitive and our Chemical Segment faces price pressures in the markets in which it operates, which may result in reduced earnings or operating losses.

The global market in which our Chemicals Segment operates is concentrated, with the top five TiO₂ producers accounting for approximately 52% of the world's production capacity and is highly competitive. Competition is based on a number of factors, such as price, product quality, and service. Some of our Chemicals Segment's competitors may be able to drive down prices for its products if their costs are lower than our Chemicals Segment's costs. In addition, some of our Chemicals Segment's competitors' financial, technological, and other resources may be greater than its resources and such competitors may be better able to withstand changes in market conditions. Our Chemicals Segment's competitors may be able to respond more quickly than it can to new or emerging technologies and changes in customer requirements. Further, consolidation of our Chemicals Segment's competitors or customers may result in reduced demand for its products or make it more difficult for it to compete with its competitors. The occurrence of any of these events could result in reduced earnings or operating losses.

Many of the markets in which our Component Products Segment operates are mature and highly competitive resulting in pricing pressure and the need to continuously reduce costs.

Many of the markets our Component Products Segment serves are highly competitive, with a number of competitors offering similar products. Our Component Products Segment focuses its efforts on the middle and high-end segment of the market where it feels that it can compete due to the importance of product design, quality, and durability to the customer. However, our Component Products Segment's ability to effectively compete is impacted by a number of factors. The occurrence of any of these factors could result in reduced earnings or operating losses.

- Competitors may be able to drive down prices for our Component Products Segment's products beyond its ability to adjust costs because their costs are lower than our Component Products Segment's, especially products sourced from Asia.
- Competitors' financial, technological, and other resources may be greater than our Component Products Segment's resources, which may enable them to more effectively withstand changes in market conditions.
- Competitors may be able to respond more quickly than our Component Products Segment can to new or emerging technologies and changes in customer requirements.
- A reduction of our Component Products Segment's market share with one or more of its key customers, or a reduction in one or more of its key customers' market share for their end-use products, may reduce demand for its products.
- New competitors could emerge by modifying their existing production facilities to manufacture products that compete with our Component Products Segment's products.
- Our Component Products Segment may not be able to sustain a cost structure that enables us to be competitive.
- Customers may no longer value our Component Products Segment's product design, quality, or durability over the lower cost products of its competitors.

Our development of innovative features for current products is critical to sustaining and growing our Component Product Segment's sales.

Historically, our Component Products Segment's ability to provide value-added custom engineered products that address requirements of technology and space utilization has been a key element of its success. Our Component Products Segment spends a significant amount of time and effort to refine, improve and adapt its existing products for new customers and applications. Since expenditures for these types of activities are not considered research and development expense under accounting principles generally accepted in the United States of America ("GAAP"), the amount of our Component

Products Segment's research and development expenditures, which is not significant, is not indicative of the overall effort involved in the development of new product features. The introduction of new product features requires the coordination of the design, manufacturing, and marketing of the new product features with current and potential customers. The ability to coordinate these activities with current and potential customers may be affected by factors beyond our Component Products Segment's control. While our Component Products Segment will continue to emphasize the introduction of innovative new product features that target customer-specific opportunities, we do not know if any new product features our Component Products Segment introduces will achieve the same degree of success that it has achieved with its existing products. Introduction of new product features typically requires increases in production volume on a timely basis while maintaining product quality. Manufacturers often encounter difficulties in increasing production volumes, including delays, quality control problems and shortages of qualified personnel or raw materials. As our Component Products Segment attempts to introduce new product features in the future, we do not know if it will be able to increase production volumes without encountering these or other problems, which might negatively impact our financial condition or results of operations.

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.

For our Chemicals Segment, 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 Chemicals Segment's TiO₂ facilities are available from a limited number of suppliers around the world. Political and economic instability or increased regulations in the countries from which our Chemicals Segment purchases or mines its raw material supplies could adversely affect raw material availability. If our Chemicals Segment or its worldwide vendors are unable to meet their planned or contractual obligations and our Chemicals Segment is unable to obtain necessary raw materials, it could incur higher costs for raw materials or may be required to reduce production levels. Our Chemicals Segment experienced increases in feedstock costs in 2021 and 2022, and we expect feedstock costs to continue to increase in 2023. Our Chemicals Segment may also experience higher operating costs such as energy costs, which could affect its profitability. Our Chemicals Segment may not always be able to increase its selling prices to offset the impact of any higher costs or reduced production levels, which could reduce earnings and decrease liquidity.

Our Chemicals Segment has supply contracts that provide for its TiO₂ feedstock requirements that currently expire in 2023, and one contract that extends through 2026. While our Chemicals Segment believes it will be able to renew these contracts, we do not know if our Chemicals Segment will be successful in renewing them or in obtaining long-term extensions to them prior to expiration. Our Chemicals Segment's current agreements (including those entered into through February 2023) require it to purchase certain minimum quantities of feedstock with minimum purchase commitments aggregating approximately \$1.0 billion beginning in 2023 and extending through 2026. In addition, our Chemicals Segment has other long-term supply and service contracts that provide for various raw materials and services. These agreements require it to purchase certain minimum quantities or services with minimum purchase commitments aggregating approximately \$84 million at December 31, 2022. Our Chemicals Segment's commitments under these contracts could adversely affect our financial results if it significantly reduces its production and is unable to modify the contractual commitments.

Certain raw materials used in our Component Products Segment's products are commodities that are subject to significant fluctuations in price in response to world-wide supply and demand as well as speculative investor activity. Zinc and brass are the principal raw materials used in the manufacture of security products. Stainless steel and aluminum are the major raw materials used in the manufacture of marine components. These raw materials are purchased from several suppliers and are generally readily available from numerous sources. Our Component Products Segment occasionally enters into short-term raw material supply arrangements to mitigate the impact of future increases in commodity-related raw material costs and ensure supply. Materials purchased outside of these arrangements are sometimes subject to unanticipated and sudden price increases.

Certain components used in our Component Products Segment's products are manufactured by foreign suppliers located in China and elsewhere. Global economic and political conditions, including natural disasters, terrorist acts, global conflict, and public health crises such as COVID-19, could prevent our Component Products Segment's vendors from being able to supply these components. Should our Component Products Segment's vendors not be able to meet their

supply obligations or should it be otherwise unable to obtain necessary raw materials or components, it may incur higher supply costs or may be required to reduce production levels, either of which may decrease our liquidity or negatively impact our financial condition or results of operations as our Component Products Segment may be unable to offset the higher costs with increases in its selling prices or reductions in other operating costs.

Our Real Estate Management and Development Segment has significant development obligations related to a residential/planned community in Henderson, Nevada. Increases in labor or construction costs related to the completion of such development obligations may reduce our earnings and decrease our liquidity.

A substantial portion of the revenues and assets associated with our Real Estate Management and Development Segment relates to certain land under development in Henderson, Nevada, including approximately 2,100 acres zoned for residential/planned community purposes. A substantial majority of the land in the residential/planned community was sold prior to 2023. We generally recognize revenue from these land sales over time using cost-based inputs because we receive substantially all cash payment at the time of sale but significant development obligations still exist. We currently estimate development obligations are \$140 million and will take approximately three to five years to complete. Our estimates of our development obligations include certain assumptions about future labor and construction costs. If actual costs were significantly above our estimates, revenue, profits and liquidity in our Real Estate Management and Development Segment may be significantly and negatively affected.

Financial Risk Factors

Our assets consist primarily of investments in our operating subsidiaries, and we are dependent upon distributions from our subsidiaries to service our liabilities.

The majority of our operating cash flows are generated by our operating subsidiaries, and our ability to service liabilities and pay dividends on our common stock depends to a large extent upon the cash dividends or other distributions we receive from our subsidiaries. Our subsidiaries are separate and distinct legal entities and they have no obligation, contingent or otherwise, to pay cash dividends or other distributions to us. In addition, the payment of dividends or other distributions from our subsidiaries could be subject to restrictions under applicable law, monetary transfer restrictions, currency exchange regulations in jurisdictions in which our subsidiaries operate or any other restrictions imposed by current or future agreements to which our subsidiaries may be a party, including debt instruments. Events beyond our control, including changes in general business and economic conditions, could adversely impact the ability of our subsidiaries to pay dividends or make other distributions to us. If our subsidiaries were to become unable to make sufficient cash dividends or other distributions to us, our ability to service our liabilities and to pay dividends on our common stock could be adversely affected.

In addition, a significant portion of our assets consist of ownership interests in our subsidiaries. If we were required to liquidate our subsidiaries' securities in order to generate funds to satisfy our liabilities, we may be required to sell such securities at a time or times for less than what we believe to be the long-term value of such assets.

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 Kronos' Senior Notes, our loan from Contran Corporation, and the LandWell bank note. As of December 31, 2022, our total consolidated debt was approximately \$560 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 businesses and the industries in which we operate; and
- placing us at a competitive disadvantage relative to other less leveraged competitors.

Indebtedness outstanding under our loan from Contran and Kronos' global revolving credit facility accrues interest at variable rates. To the extent market interest rates rise, the cost of our debt could increase, adversely affecting 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 \$790 million in 2023. 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 certain of our revolving credit facilities in the future, in some instances, will depend in part on these subsidiaries' ability to maintain specified financial ratios and satisfy certain financial covenants contained in the applicable credit agreement.

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

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 2022, 45% of our Chemicals Segment's sales volumes were sold into European markets. The majority (but not all) of our sales from our Chemicals Segment's 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 could incur significant costs related to legal and environmental remediation matters.

NL formerly manufactured lead pigments for use in paint. NL and others have been named as defendants in various legal proceedings seeking damages for personal injury, property damage and governmental expenditures allegedly caused by the use of lead-based paints. These lawsuits seek recovery under a variety of theories, including public and private nuisance, negligent product design, negligent failure to warn, strict liability, breach of warranty, conspiracy/concert of action, aiding and abetting, enterprise liability, market share or risk contribution liability, intentional tort, fraud and misrepresentation, violations of state consumer protection statutes, supplier negligence and similar claims. The plaintiffs in these actions generally seek to impose on the defendants responsibility for lead paint abatement and health concerns associated with the use of lead-based paints, including damages for personal injury, contribution and/or indemnification for medical expenses, medical monitoring expenses and costs for educational programs. NL entered into a legal settlement in one public-nuisance lead pigment case and has recognized a material liability related to the settlement. Any additional liability NL might incur in the future for these matters could be material. See also Item 3 - "Legal Proceedings - Lead pigment litigation - NL."

Certain properties and facilities used in NL's former operations are the subject of litigation, administrative proceedings or investigations arising under various environmental laws. These proceedings seek cleanup costs, personal injury or property damages and/or damages for injury to natural resources. Some of these proceedings involve claims for substantial amounts. Environmental obligations are difficult to assess and estimate for numerous reasons, and we may incur costs for environmental remediation in the future in excess of amounts currently estimated. Any liability we might incur in the future could be material. See also Item 3 - "Legal Proceedings - Environmental matters and litigation."

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 Chemicals Segment's 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 TiO₂, or its use. Increased regulatory scrutiny could affect consumer perception of TiO₂ or limit the marketability and demand for TiO₂ or products containing TiO₂ and increase our manufacturing and regulatory compliance obligations and costs. Increased compliance obligations and costs or restrictions on operations, raw materials and certain TiO₂ 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 our intellectual property were to be declared invalid, or copied by or 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, trade secrets, confidential information, trademarks and tradenames, is important to our businesses and our competitive positions. We endeavor to protect our intellectual property rights in key jurisdictions in which our products are produced 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 rely on judicial enforcement of our patents and other proprietary rights. Our patents and other intellectual property rights may be challenged, invalidated, circumvented and 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.

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

Our Component Products Segment relies on patent, trademark and trade secret laws in the United States and similar laws in other countries to establish and maintain our intellectual property rights in our technology and designs. Despite these measures, any of our intellectual property rights could be challenged, invalidated, circumvented, or misappropriated. Others may independently discover our trade secrets and proprietary information, and in such cases our Component Products Segment could not assert any trade secret rights against such parties. Further, we do not know if any of our Component Products Segment's pending trademark or patent applications will be approved. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our intellectual property rights. In addition, the laws of certain countries do not protect intellectual property rights to the same extent as the laws of the United States. Therefore, in certain jurisdictions, we may be unable to protect our technology and designs adequately against unauthorized third-party use, which could adversely affect our competitive position.

Third parties may claim that we or our customers are infringing upon their intellectual property rights. Even if we believe that such claims are without merit, they can be time-consuming and costly to defend and distract our management's and technical staff's attention and resources. Claims of intellectual property infringement also might require us to redesign affected technology, enter into costly settlement or license agreements or pay costly damage awards, or face a temporary or permanent injunction prohibiting us from marketing or selling certain of our technology. If we cannot or do not license the infringed technology on reasonable pricing terms or at all, or substitute similar technology from another source, our business could be adversely impacted.

If we must take legal action to protect, defend or enforce our intellectual property rights, any suits or proceedings could result in significant costs and diversion of resources and management's attention, and we may not prevail in any such suits or proceedings. A failure to protect, defend or enforce our intellectual property rights could have an adverse effect on our financial condition and results of operations.

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 introduced 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 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 trade barriers, tariffs, economic sanctions, exchange controls, global and regional economic downturns, natural disasters, terrorism, armed conflict (such as the current conflict between Russia and Ukraine), health crises (such as COVID-19) and political conditions. We may encounter difficulties enforcing agreements or other legal rights and the effective tax rate may fluctuate based on the variability of geographic earnings and statutory tax rates. TiO₂ 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.

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

Our businesses 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 plants, 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 2. PROPERTIES

We along with our subsidiaries, Kronos, CompX and NL lease office space through Contran for our principal executive offices in Dallas, Texas. Our BMI and LandWell subsidiaries' principal offices are in an owned building in Henderson, Nevada. A list of principal operating facilities for each of our subsidiaries is described in the applicable business sections of Item 1 – “Business.” We believe our facilities are generally adequate and suitable for their respective uses.

ITEM 3. LEGAL PROCEEDINGS

We are involved in various legal proceedings. In addition to information included below, certain information called for by this Item is included in Note 18 to our Consolidated Financial Statements, which is incorporated herein by reference.

Lead Pigment Litigation – NL

NL's former operations included the manufacture of lead pigments for use in paint and lead-based paint. NL, other former manufacturers of lead pigments for use in paint and lead-based paint (together, the “former pigment manufacturers”), and the Lead Industries Association (LIA), which discontinued business operations in 2002, have been named as defendants in various legal proceedings seeking damages for personal injury, property damage and governmental expenditures allegedly caused by the use of lead-based paints. Certain of these actions have been filed by or on behalf of states, counties, cities or their public housing authorities and school districts, and certain others have been asserted as class actions. These lawsuits seek recovery under a variety of theories, including public and private nuisance, negligent product design, negligent failure to warn, strict liability, breach of warranty, conspiracy/concert of action, aiding and abetting, enterprise liability, market share or risk contribution liability, intentional tort, fraud and misrepresentation, violations of state consumer protection statutes, supplier negligence and similar claims.

The plaintiffs in these actions generally seek to impose on the defendants responsibility for lead paint abatement and health concerns associated with the use of lead-based paints, including damages for personal injury, contribution and/or indemnification for medical expenses, medical monitoring expenses and costs for educational programs. To the extent the plaintiffs seek compensatory or punitive damages in these actions, such damages are generally unspecified. In some cases, the damages are unspecified pursuant to the requirements of applicable state law. A number of cases are inactive or have been dismissed or withdrawn. Most of the remaining cases are in various pre-trial stages. Some are on appeal following dismissal or summary judgment rulings or a trial verdict in favor of either the defendants or the plaintiffs.

NL believes these actions are without merit, and intends to continue to deny all allegations of wrongdoing and liability and to defend against all actions vigorously. We do not believe it is probable we have incurred any liability with respect to pending lead pigment litigation cases to which NL is a party, and with respect to all such lead pigment litigation cases to which NL is a party, we believe liability to NL that may result, if any, in this regard cannot be reasonably estimated, because:

- NL has never settled any of the market share, intentional tort, fraud, nuisance, supplier negligence, breach of warranty, conspiracy, misrepresentation, aiding and abetting, enterprise liability, or statutory cases (other than the Santa Clara case discussed below),
- no final, non-appealable adverse judgments have ever been entered against NL, and
- NL has never ultimately been found liable with respect to any such litigation matters, including over 100 cases over a thirty-year period for which NL was previously a party and for which NL has been dismissed without any finding of liability.

Accordingly, we have not accrued any amounts for any of the pending lead pigment and lead-based paint litigation cases filed by or on behalf of states, counties, cities or their public housing authorities and school districts, or those asserted as class actions. In addition, we have determined that liability to NL which may result, if any, cannot be reasonably estimated at this time because there is no prior history of a loss of this nature on which an estimate could be made and there is no substantive information available upon which an estimate could be based.

In the matter titled *County of Santa Clara v. Atlantic Richfield Company, et al.* (Superior Court of the State of California, County of Santa Clara, Case No. 1-00-CV-788657) on July 24, 2019, an order approving a global settlement agreement entered into among all of the plaintiffs and the three defendants remaining in the case (the Sherwin Williams Company, ConAgra Grocery Products and NL) was entered by the court and the case was dismissed with prejudice. The global settlement agreement provides that an aggregate \$305 million will be paid collectively by the three co-defendants in full satisfaction of all claims resulting in a dismissal of the case with prejudice and the resolution of (i) all pending and future claims by the plaintiffs in the case, and (ii) all potential claims for contribution or indemnity between NL and its co-defendants in respect to the case. In the agreement, NL expressly denies any and all liability and the dismissal of the case with prejudice was entered by the court without a final judgment of liability entered against NL. The settlement agreement fully concludes this matter.

Under the terms of the global settlement agreement, each defendant must pay an aggregate \$101.7 million to the plaintiffs as follows: \$25.0 million within sixty days of the court's approval of the settlement and dismissal of the case, and the remaining \$76.7 million in six annual installments beginning on the first anniversary of the initial payment (\$12.0 million for the first five installments and \$16.7 million for the sixth installment). NL's sixth installment will be made with funds already on deposit at the court, which is included in noncurrent restricted cash on our Consolidated Balance Sheets, that are committed to the settlement, including all accrued interest at the date of payment, with any remaining balance to be paid by NL (and any amounts on deposit in excess of the final payment would be returned to NL). Pursuant to the settlement agreement, NL placed an additional \$9.0 million into an escrow account which is included in noncurrent restricted cash on our Consolidated Balance Sheets.

For financial reporting purposes, using a discount rate of 1.9% per annum, we discounted the aggregate \$101.7 million settlement to the estimated net present value of \$96.3 million. NL made the initial \$25.0 million payment in September 2019 and the first, second and third annual installment payments of \$12.0 million each in September 2020,

2021 and 2022. We recognized an aggregate accretion expense of \$1.3 million, \$1.1 million and \$.9 million in 2020, 2021 and 2022, respectively.

In November 2018, NL was served with two complaints filed by county governments in Pennsylvania. Each county alleges that NL and several other defendants created a public nuisance by selling and promoting lead-containing paints and pigments in the counties. The plaintiffs seek abatement and declaratory relief. NL believes these lawsuits are inconsistent with Pennsylvania law and without merit, and NL intends to defend itself vigorously. In February 2022, the Pennsylvania Commonwealth Court entered orders staying all proceedings in the trial courts, and granting defendants' request for an interlocutory appeal of earlier trial court rulings allowing the cases to proceed. The stay will remain in place until defendants' appeals are resolved.

New cases may continue to be filed against NL. We do not know if NL will incur liability in the future in respect of any of the pending or possible litigation in view of the inherent uncertainties involved in court and jury rulings. In the future, if new information regarding such matters becomes available to us (such as a final, non-appealable adverse verdict against NL or otherwise ultimately being found liable with respect to such matters), at that time we would consider such information in evaluating any remaining cases then-pending against NL as to whether it might then have become probable NL has incurred liability with respect to these matters, and whether such liability, if any, could have become reasonably estimable. The resolution of any of these cases could result in the recognition of a loss contingency accrual that could have a material adverse impact on our net income for the interim or annual period during which such liability is recognized and a material adverse impact on our consolidated financial condition and liquidity.

Environmental Matters and Litigation

Certain properties and facilities used in our former operations (primarily NL's former operations), including divested primary and secondary lead smelters and former mining locations, are the subject of civil litigation, administrative proceedings or investigations arising under federal and state environmental laws and common law. Additionally, in connection with past operating practices, we are currently involved as a defendant, potentially responsible party (PRP) or both, pursuant to the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act (CERCLA), and similar state laws in various governmental and private actions associated with waste disposal sites, mining locations, and facilities that we or our predecessors and NL or its predecessors, subsidiaries or their predecessors currently or previously owned, operated or used, certain of which are on the United States Environmental Protection Agency's (EPA) Superfund National Priorities List or similar state lists. These proceedings seek cleanup costs, damages for personal injury or property damage and/or damages for injury to natural resources. Certain of these proceedings involve claims for substantial amounts. Although we may be jointly and severally liable for these costs, in most cases they are only one of a number of PRPs who may also be jointly and severally liable, and among whom costs may be shared or allocated. In addition, we are occasionally named as a party in a number of personal injury lawsuits filed in various jurisdictions alleging claims related to environmental conditions alleged to have resulted from its operations.

Obligations associated with environmental remediation and related matters are difficult to assess and estimate for numerous reasons including the:

- complexity and differing interpretations of governmental regulations,
- number of PRPs and their ability or willingness to fund such allocation of costs,
- financial capabilities of the PRPs and the allocation of costs among them,
- solvency of other PRPs,
- multiplicity of possible solutions,
- number of years of investigatory, remedial and monitoring activity required,
- uncertainty over the extent, if any, to which our former operations might have contributed to the conditions allegedly giving rise to such personal injury, property damage, natural resource and related claims, and

- number of years between former operations and notice of claims and lack of information and documents about the former operations.

In addition, the imposition of more stringent standards or requirements under environmental laws or regulations, new developments or changes regarding site cleanup costs or the allocation of costs among PRPs, solvency of other PRPs, the results of future testing and analysis undertaken with respect to certain sites or a determination that we are potentially responsible for the release of hazardous substances at other sites, could cause our expenditures to exceed our current estimates. Actual costs could exceed accrued amounts or the upper end of the range for sites for which estimates have been made, and costs may be incurred for sites where no estimates presently can be made. Further, additional environmental and related matters may arise in the future. If we were to incur any future liability, this could have a material adverse effect on our consolidated financial statements, results of operations and liquidity.

We record liabilities related to environmental remediation and related matters (including costs associated with damages for personal injury or property damage and/or damages for injury to natural resources) when estimated future expenditures are probable and reasonably estimable. We adjust such accruals as further information becomes available to us or as circumstances change. Unless the amounts and timing of such estimated future expenditures are fixed and reasonably determinable, we generally do not discount estimated future expenditures to their present value due to the uncertainty of the timing of the payout. We recognize recoveries of costs from other parties, if any, as assets when their receipt is deemed probable. At December 31, 2021 and 2022 we had not recognized any material receivables for recoveries.

We do not know and cannot estimate the exact time frame over which we will make payments for our accrued environmental and related costs. The timing of payments depends upon a number of factors, including but not limited to the timing of the actual remediation process; which in turn depends on factors outside of our control. At each balance sheet date, we estimate the amount of the accrued environmental and related costs which we expect to pay within the next twelve months, and we classify this estimate as a current liability. We classify the remaining accrued environmental costs as a noncurrent liability.

On a quarterly basis, we evaluate the potential range of our liability for environmental remediation and related costs at sites where we have been named as a PRP or defendant, including sites for which NL's wholly-owned environmental management subsidiary, NL Environmental Management Services, Inc., (EMS), has contractually assumed NL's obligations. At December 31, 2022, NL had accrued approximately \$92 million related to approximately 33 sites associated with remediation and related matters that NL believes are at the present time and/or in their current phase reasonably estimable. The upper end of the range of reasonably possible costs to NL for remediation and related matters for which NL believes it is possible to estimate costs is approximately \$119 million, including the amount currently accrued.

NL believes that it is not reasonably possible to estimate the range of costs for certain sites. At December 31, 2022, there were approximately five sites for which NL is not currently able to reasonably estimate a range of costs. For these sites, generally the investigation is in the early stages, and NL is unable to determine whether or not it actually had any association with the site, the nature of its responsibility, if any, for the contamination at the site, if any, and the extent of contamination at and cost to remediate the site. The timing and availability of information on these sites is dependent on events outside of NL's control, such as when the party alleging liability provides information to NL. At certain of these previously inactive sites, NL has received general and special notices of liability from the EPA and/or state agencies alleging that NL, sometimes with other PRPs, are liable for past and future costs of remediating environmental contamination allegedly caused by former operations. These notifications may assert that NL, along with any other alleged PRPs, are liable for past and/or future clean-up costs. As further information becomes available to us for any of these sites, which would allow us to estimate a range of costs, we would at that time adjust our accruals. Any such adjustment could result in the recognition of an accrual that would have a material effect on our consolidated financial statements, results of operations and liquidity.

We have also accrued approximately \$5 million at December 31, 2022 for other environmental cleanup matters which represents our best estimate of the liability.

In June 2008, NL received a Directive and Notice to Insurers from the New Jersey Department of Environmental Protection (NJDEP) regarding the Margaret's Creek site in Old Bridge Township, New Jersey. NJDEP alleged that a waste hauler transported waste from one of its former facilities for disposal at the site in the early 1970s. NJDEP referred the site to the EPA, and in November 2009, the EPA added the site to the National Priorities List under the name "Raritan Bay Slag Site." In 2012, EPA notified NL of its potential liability at this site. In May 2013, EPA issued its Record of Decision for the site. In June 2013, NL filed a contribution suit under CERCLA and the New Jersey Spill Act titled *NL Industries, Inc. v. Old Bridge Township, et al.* (United States District Court for the District of New Jersey, Civil Action No. 3:13-cv-03493-MAS-TJB) against the current owner, Old Bridge Township, and several federal and state entities NL alleges designed and operated the site and who have significant potential liability as compared to NL which is alleged to have been a potential source of material placed at the site by others. NL's suit also names certain former NL customers of the former NL facility alleged to be the source of some of the materials. In January 2014, EPA issued a Unilateral Administrative Order (UAO) to NL for clean-up of the site based on the EPA's preferred remedy set forth in the Record of Decision. NL has denied liability and will defend vigorously against all claims while continuing to seek contribution from other PRPs.

In August 2009, NL was served with a complaint in *Raritan Baykeeper, Inc. d/b/a NY/NJ Baykeeper et al. v. NL Industries, Inc. et al.* (United States District Court, District of New Jersey, Case No. 3:09-cv-04117). This is a citizen's suit filed by two local environmental groups pursuant to the Resource Conservation and Recovery Act and the Clean Water Act against NL, current owners, developers and state and local government entities. The complaint alleges that hazardous substances were and continue to be discharged from its former Sayreville, New Jersey property into the sediments of the adjacent Raritan River. The former Sayreville site is currently being remediated by owner/developer parties under the oversight of the NJDEP. The plaintiffs seek a declaratory judgment, injunctive relief, imposition of civil penalties and an award of costs. In June 2022, NL received a letter from the NJDEP informing NL that remediation of contaminated sites upriver of the former Sayreville site had progressed to the point that it was now appropriate for NL to resume investigating the sediments adjacent to the Sayreville site. NL informed the NJDEP by letter that it would resume that investigation. The lawsuit remains pending. NL continues to deny liability and will defend vigorously against all claims.

In June 2011, NL was served in *ASARCO LLC v. NL Industries, Inc., et al.* (United States District Court, Western District of Missouri, Case No. 4:11-cv-00138-DGK). The plaintiff brought this CERCLA contribution action against several defendants to recover a portion of the amount it paid in settlement with the U.S. Government during its Chapter 11 bankruptcy in relation to the Tar Creek site, the Cherokee County Superfund Site in southeast Kansas, the Oronogo-Duenweg Lead Mining Belt Superfund Site in Jasper County, Missouri and the Newton County Mine Tailing Site in Newton County, Missouri. NL has denied liability and will defend vigorously against all of the claims. In the second quarter of 2012, NL filed a motion to stay the case. In the first quarter of 2013, NL's motion was granted and the court entered an indefinite stay, which remains in place.

In September 2011, NL was served in *ASARCO LLC v. NL Industries, Inc., et al.* (United States District Court, Eastern District of Missouri, Case No. 4:11-cv-00864). The plaintiff brought this CERCLA contribution action against several defendants to recover a portion of the amount it paid in settlement with the U.S. Government during its Chapter 11 bankruptcy in relation to the Southeast Missouri Mining District. NL has denied liability and will defend vigorously against all of the claims. In May 2015, the trial court on its own motion entered an indefinite stay of the litigation, which remains in place.

In July 2012, NL was served in *EPEC Polymers, Inc., v. NL Industries, Inc.*, (United States District Court for the District of New Jersey, Case 3:12-cv-03842-PGS-TJB). The plaintiff, a landowner of property located across the Raritan River from NL's former Sayreville, New Jersey operation, claims that contaminants from NL's former Sayreville operation came to be located on its land. The complaint seeks compensatory and punitive damages and alleges, among other things, trespass, private nuisance, negligence, strict liability, and claims under CERCLA and the New Jersey Spill Act. NL has denied liability and will defend vigorously against all of the claims.

In September 2013, EPA issued to NL and 34 other PRPs general notice of potential liability and a demand for payment of past costs and performance of a Remedial Design for the Gowanus Canal Superfund Site in Brooklyn, New York. In March 2014, EPA issued a UAO to NL and approximately 27 other PRPs for performance of the Remedial Design at the site. EPA contends that NL is liable as the alleged successor to the Doehler Die Casting Company, and therefore

responsible for any potential contamination at the site resulting from Doehler's ownership/operation of a warehouse and a die casting plant it owned 90 years ago. In April 2019, EPA issued a second UAO to NL and approximately 27 other PRPs for performance of certain work related to the Remedial Design at the site. NL believes that it has no liability at the site. NL is currently in discussions with EPA regarding a *de minimis* settlement and is otherwise taking actions necessary to respond to the UAO. If these discussions are unsuccessful, NL will continue to deny liability and will defend vigorously against all of the claims.

In January 2020, NL was sued in *Atlantic Richfield, Co. v. NL Industries, Inc.*, (United States District Court for the District of Colorado, Case 1:20-cv-00234). This is a CERCLA cost recovery action brought by a past owner and operator of certain mining properties located in Rico, Colorado. NL has denied liability and will defend vigorously against all claims.

In December 2020, NL and several other defendants were sued in *California Department of Toxic Substances v. NL Industries, Inc.*, (United States District Court for the Central District of California, Case 2:20-cv-11293). This complaint by a California state agency asserts claims under CERCLA, a state environmental statute, and the common law relating to lead contamination allegedly connected to a secondary lead smelter located in Vernon, California. In October 2022, the trial court issued an order finding that NL and the other defendants are not liable under CERCLA for lead contamination in residential neighborhoods surrounding, but at a distance from, the former secondary lead smelter. The case will continue with regard to the former smelter property and an adjacent industrial area. NL has denied liability and will continue to defend vigorously against all claims.

Other Litigation

NL – NL has been named as a defendant in various lawsuits in several jurisdictions, alleging personal injuries as a result of occupational exposure primarily to products manufactured by our former operations containing asbestos, silica and/or mixed dust. In addition, some plaintiffs allege exposure to asbestos from working in various facilities previously owned and/or operated by NL. There are 109 of these types of cases pending, involving a total of approximately 583 plaintiffs. In addition, the claims of approximately 8,715 plaintiffs have been administratively dismissed or placed on the inactive docket in Ohio state courts. We do not expect these claims will be re-opened unless the plaintiffs meet the courts' medical criteria for asbestos-related claims. We have not accrued any amounts for this litigation because of the uncertainty of liability and inability to reasonably estimate the liability, if any. To date, NL has not been adjudicated liable in any of these matters. Based on information available to us, including:

- facts concerning historical operations,
- the rate of new claims,
- the number of claims from which NL has been dismissed, and
- its prior experience in the defense of these matters,

We believe the range of reasonably possible outcomes of these matters will be consistent with NL's historical costs (which are not material). Furthermore, we do not expect any reasonably possible outcome would involve amounts material to our consolidated financial position, results of operations or liquidity. NL has sought and will continue to vigorously seek, dismissal and/or a finding of no liability from each claim. In addition, from time to time, NL has received notices regarding asbestos or silica claims purporting to be brought against former subsidiaries, including notices provided to insurers with which it has entered into settlements extinguishing certain insurance policies. These insurers may seek indemnification from NL.

Other – In addition to the matters described above, we and our affiliates are also involved in various other environmental, contractual, product liability, patent (or intellectual property), employment and other claims and disputes incidental to present and former businesses. In certain cases, we have insurance coverage for these items, although we do not expect additional material insurance coverage for environmental matters. We currently believe that the disposition of all of these various other claims and disputes (including asbestos related claims), individually or in the aggregate, should

not have a material adverse effect on our consolidated financial position, results of operations or liquidity beyond the accruals already provided.

Insurance Coverage Claims – NL

NL is involved in certain legal proceedings with a number of its former insurance carriers regarding the nature and extent of the carriers' obligations to NL under insurance policies with respect to certain lead pigment and asbestos lawsuits. The issue of whether insurance coverage for defense costs or indemnity or both will be found to exist for NL's lead pigment and asbestos litigation depends upon a variety of factors and we cannot assure you that such insurance coverage will be available.

NL has agreements with certain of its former insurance carriers pursuant to which the carriers reimburse it for a portion of its future lead pigment litigation defense costs, and one such carrier reimburses NL for a portion of its future asbestos litigation defense costs. We are not able to determine how much NL will ultimately recover from these carriers for defense costs incurred by NL because of certain issues that arise regarding which defense costs qualify for reimbursement. While NL continues to seek additional insurance recoveries, we do not know if it will be successful in obtaining reimbursement for either defense costs or indemnity. Accordingly, we recognize insurance recoveries in income only when receipt of the recovery is probable and we are able to reasonably estimate the amount of the recovery.

In January 2014, NL was served with a complaint in *Certain Underwriters at Lloyds, London, et al v. NL Industries, Inc.* (Supreme Court of the State of New York, County of New York, Index No. 14/650103). The plaintiff, a former insurance carrier of NL, is seeking a declaratory judgment of its obligations to NL under insurance policies issued to NL by the plaintiff with respect to certain lead pigment lawsuits. Other insurers have been added as parties to the case and have also sought a declaratory judgment regarding their obligations under certain insurance policies. NL has filed a counterclaim seeking a declaratory judgment that all of the insurers are obligated to provide NL with certain coverage and seeking damages for breach of contract. In December 2020, the trial court denied the insurers' motion for summary judgment, finding that the arguments raised by the insurers did not bar NL from coverage under the relevant policies. We continue to believe the insurers' claims are without merit and NL intends to defend its rights and prosecute its claims in this action vigorously.

NL has settled insurance coverage claims concerning environmental claims with certain of its principal former insurance carriers. We do not expect further material settlements relating to environmental remediation coverage.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

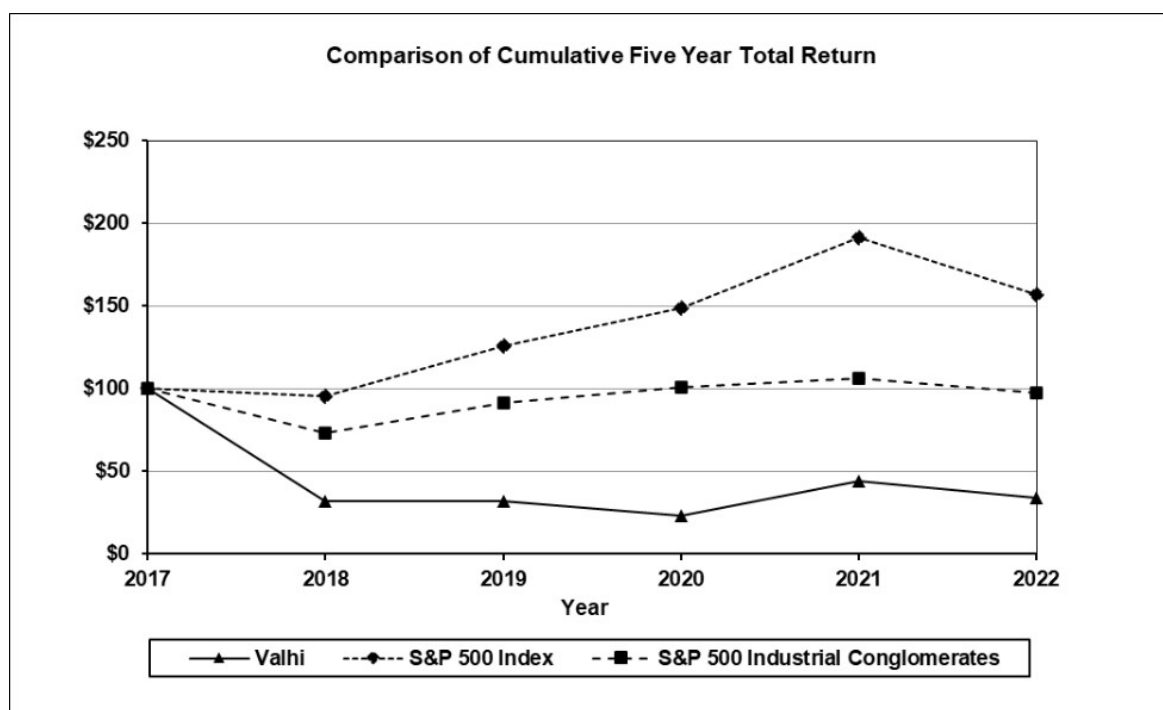
PART II

ITEM 5. MARKET FOR REGISTRANT’S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Common Stock and Dividends – Our common stock is listed and traded on the New York Stock Exchange (symbol: VHI). As of March 3, 2023, there were approximately 728 holders of record of our common stock.

Performance Graph – Set forth below is a 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 Price Index and the S&P 500 Industrial Conglomerates Index for the period from December 31, 2017 through December 31, 2022. The graph shows the value at December 31 of each year assuming an original investment of \$100 at December 31, 2017, and assumes the reinvestment of our regular quarterly dividends in shares of our stock.

	December 31,					
	2017	2018	2019	2020	2021	2022
Valhi common stock	\$ 100	\$ 32	\$ 32	\$ 23	\$ 44	\$ 34
S&P 500 Index	100	96	126	149	192	157
S&P 500 Industrial Conglomerates	100	73	91	101	106	97



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, as amended, 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 100,000 shares of our common stock can be awarded to non-employee

members of our board of directors. At December 31, 2022, an aggregate of 93,600 shares were available for future award under this plan. See Note 16 to our Consolidated Financial Statements.

Treasury Stock Purchases – In March 2005 and November 2006, our board of directors authorized the repurchase of shares of our common stock in open market transactions, including block purchases, or in privately negotiated transactions, which may include transactions with our affiliates. The aggregate number of shares authorized for repurchase is 833,333, and we have approximately 334,000 shares available for repurchase at December 31, 2022. We may purchase the 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 could terminate the program prior to completion. We will use our cash on hand to acquire the shares. Repurchased shares will be retired and cancelled or may be added to our treasury stock and used for employee benefit plans, future acquisitions or other corporate purposes. See Note 16 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 primarily a holding company. We operate through our wholly-owned and majority-owned subsidiaries, including NL Industries, Inc., Kronos Worldwide, Inc., CompX International, Inc., Tremont LLC, Basic Management, Inc. (“BMI”) and the LandWell Company (“LandWell”). Kronos (NYSE: KRO), NL (NYSE: NL) and CompX (NYSE American: CIX) each file periodic reports with the SEC.

We have three consolidated reportable operating segments:

- *Chemicals* – Our Chemicals Segment is operated through our majority control of Kronos. Kronos is a leading global producer and marketer of value-added TiO₂. TiO₂ is used to impart whiteness, brightness, opacity and durability to a wide variety of products, including paints, plastics, paper, fibers and ceramics. Additionally, TiO₂ is a critical component of everyday applications, such as coatings, plastics and paper, as well as many specialty products such as inks, cosmetics and pharmaceuticals.
- *Component Products* – We operate in the component products industry through our majority control of CompX. CompX is a leading manufacturer of security products used in the postal, recreational transportation, office and institutional furniture, cabinetry, tool storage, healthcare and a variety of other industries. CompX is also a leading manufacturer of wake enhancements systems, stainless steel exhaust systems, gauges, throttle controls, trim tabs and related hardware and accessories for the recreational marine.
- *Real Estate Management and Development* – We operate in real estate management and development through our majority control of BMI and LandWell. BMI owns real property in Henderson, Nevada and through its wholly-owned subsidiaries provides utility services to certain industrial and municipal customers. LandWell is engaged in efforts to develop certain land holdings for commercial, industrial and residential purposes in Henderson, Nevada.

Income from Continuing Operations Overview

Year Ended December 31, 2022 Compared to Year Ended December 31, 2021 –

We reported net income from continuing operations attributable to Valhi stockholders of \$90.2 million or \$3.16 per diluted share in 2022 compared to \$127.2 million or \$4.46 per diluted share in 2021.

Our net income from continuing operations attributable to Valhi stockholders decreased from 2021 to 2022 primarily due to the net effects of:

- lower operating income from our Chemicals Segment in 2022 compared to 2021;
- lower operating income from our Real Estate Management and Development Segment in 2022 compared to 2021 including aggregate charges of \$19.7 million in our Real Estate Management and Development Segment in 2022 related to the impairment of certain fixed assets and the bankruptcy filing of BWC in 2022; and
- recognition of a gain on sales of land not used in our operations of \$16.0 million in 2021.

Our diluted income from continuing operations per share in 2022 includes:

- aggregate charges of \$.35 per share related to the bankruptcy filing of BWC, including \$.29 per share related to the impairment of the water delivery system fixed assets, primarily recognized in the second quarter, and \$.04 per share loss on the deconsolidation of BWC and \$.02 per share of bad debt expense related to an intercompany receivable with BWC, both recognized in the third quarter;
- income of \$.28 per share related to tax increment infrastructure reimbursements recognized in the third and fourth quarters;
- a gain of \$.05 per share related to a business interruption insurance claim arising from Hurricane Laura in 2020 at our Chemicals Segment recognized in the third quarter; and
- income of \$.02 per share related to an energy utility infrastructure reimbursement recognized in the second quarter.

Our diluted income from continuing operations per share in 2021 includes:

- a gain of \$.43 per share related to sales of land not used in our operations recognized in the second and third quarters; and
- income of \$.28 per share related to tax increment infrastructure reimbursements recognized in the first and fourth quarters.

Year Ended December 31, 2021 Compared to Year Ended December 31, 2020 –

We reported net income from continuing operations attributable to Valhi stockholders of \$127.2 million or \$4.46 per diluted share in 2021 compared to \$50.9 million or \$1.79 per diluted share in 2020.

Our net income from continuing operations attributable to Valhi stockholders increased from 2020 to 2021 primarily due to the net effects of:

- higher operating income from all of our segments in 2021 compared to 2020;
- recognition of a gain on sales of land not used in our operations of \$16.0 million in 2021; and
- income from infrastructure reimbursement of \$15.3 million in 2021 compared to \$19.7 million in 2020.

Our diluted income from continuing operations per share in 2021 includes:

- a gain of \$.43 per share related to sales of land not used in our operations recognized in the second and third quarters; and
- income of \$.28 per share related to tax increment infrastructure reimbursements recognized in the first and fourth quarters.

Our diluted income from continuing operations per share in 2020 includes:

- income of \$.35 per share related to the tax increment infrastructure reimbursement recognized in the first quarter;
- a gain of \$.07 per share from the proceeds received in the third quarter related to a prior land sale; and
- a gain of \$.03 per share related to an insurance recovery for a property damage claim at our Chemicals Segment recognized in the first quarter.

We discuss these amounts more fully below.

Current Forecast for 2023 –

We currently expect consolidated operating income for 2023 to be consistent as compared to 2022 primarily due to the net effects of:

- higher operating income from our Real Estate Management and Development Segment in 2023 due to the aggregate \$19.7 million of charges recognized in 2022 related to BWC noted above which will not recur and higher expected infrastructure reimbursements;
- lower operating income from our Chemicals Segment in 2023 as the favorable impact of higher expected average TiO₂ selling prices is not expected to offset the negative impact of higher manufacturing costs; and
- lower operating income from our Component Products Segment in 2023 as marine sales are expected to normalize below 2022 record levels.

Our expectations for our future operating results are based upon a number of factors beyond our control, including worldwide growth of gross domestic product, competition in the marketplace, continued operation of competitors, technological advances, worldwide production capacity and the consequences arising directly or indirectly out of the COVID-19 pandemic. If actual developments differ from our expectations, our results of operations could be unfavorably affected.

Segment Operating Results – 2022 Compared to 2021 and 2021 Compared to 2020

Chemicals –

We consider TiO₂ to be a “quality of life” product, with demand affected by gross domestic product, or GDP, and overall economic conditions in our markets located in various regions of the world. Over the long-term, we expect demand for TiO₂ will grow by 2% to 3% per year, consistent with our expectations for the long-term growth in GDP. However, even if our Chemicals Segment and its competitors maintain consistent shares of the worldwide market, demand for TiO₂ in any interim or annual period may not change in the same proportion as the change in GDP, in part due to relative changes in the TiO₂ inventory levels of our Chemicals Segment’s customers. We believe our Chemicals Segment’s customers’ inventory levels are influenced in part by their expectation for future changes in TiO₂ selling prices as well as their expectation for future availability of product. Although certain of our Chemicals Segment’s TiO₂ grades are considered specialty pigments, the majority of its grades and substantially all of its 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 Chemicals Segment’s reported operating results are:

- TiO₂ selling prices,
- TiO₂ 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 Chemicals Segment’s key performance indicators are its TiO₂ average selling prices, its TiO₂ sales and production volumes and the cost of titanium-containing feedstock purchased from third parties. TiO₂ selling prices generally follow industry trends and selling prices will increase or decrease generally as a result of competitive market pressures.

	Years ended December 31,			% Change	
	2020	2021	2022	2020-21	2021-22
	(Dollars in millions)				
Net sales	\$ 1,638.8	\$ 1,939.4	\$ 1,930.2	18 %	— %
Cost of sales	1,291.0	1,494.5	1,540.2	16	3
Gross margin	\$ 347.8	\$ 444.9	\$ 390.0	28	(12)
Operating income	\$ 126.5	\$ 200.8	\$ 174.6	59	(13)
Percent of net sales:					
Cost of sales	79 %	77 %	80 %		
Gross margin	21	23	20		
Operating income	8	10	9		
TiO ₂ operating statistics:					
Sales volumes*	531	563	481	6 %	(15)%
Production volumes*	517	545	492	5 %	(10)%
Percent change in TiO ₂ net sales:					
TiO ₂ product pricing				8 %	21 %
TiO ₂ sales volumes				6	(15)
TiO ₂ product mix/other				1	(1)
Changes in currency exchange rates				3	(5)
Total				<u>18 %</u>	<u>— %</u>

* Thousands of metric tons

Industry Conditions and 2022 Overview – Our Chemicals Segment started 2022 with average TiO₂ selling prices 16% higher than at the beginning of 2021 and average TiO₂ selling prices increased 16% throughout 2022 in response to our Chemicals Segment rising production costs. Overall, our Chemicals Segment sales volumes declined in 2022 compared to 2021 primarily due to demand contraction in its European and export markets, particularly in the third and fourth quarters.

The following table shows our Chemicals Segment’s capacity utilization rates during 2021 and 2022. Throughout most of 2021 and continuing into the first quarter of 2022, our Chemicals Segment’s production facilities operated at full practical capacity. Due to the decreased demand in its European and export markets along with increased production costs, particularly energy costs in Europe, our Chemicals Segment curtailed production in the third and fourth quarters of 2022 at certain of its European facilities to align its production and inventory levels to anticipated near-term customer demand.

	Production Capacity Utilization Rates	
	2021	2022
First quarter	97%	100%
Second quarter	100%	95%
Third quarter	100%	93%
Fourth quarter	100%	65%
Overall	100%	89%

Net Sales – Chemicals Segment’s net sales in 2022 were consistent with net sales in 2021 primarily due to the net effects of a 21% increase in average TiO₂ selling prices (which increased net sales by approximately \$407 million) and a 15% decrease in sales volumes (which decreased net sales by approximately \$291 million). We estimate that changes in currency exchange rates (primarily the euro) decreased our Chemicals Segment’s net sales by approximately \$106 million, or 5% in 2022 as compared to 2021. TiO₂ selling prices will increase or decrease generally as a result of competitive market pressures, changes in the relative level of supply and demand as well as changes in raw material and other manufacturing costs.

Our Chemicals Segment’s sales volumes decreased 15% in 2022 as compared to 2021 primarily due to lower demand in its European and export markets which our Chemicals Segment began experiencing towards the end of the second quarter and which accelerated during the third and fourth quarters of 2022. Sales volumes were 40% lower in the fourth quarter of 2022 as compared to the fourth quarter of 2021. Our Chemicals Segment also experienced lower sales volumes in its North American market in the second half of 2022, although to a lesser extent than the declines in its European and export markets.

Our Chemicals Segment’s net sales increased \$300.6 million, or 18%, in 2021 compared to 2020, primarily due to an 8% increase in average TiO₂ selling prices (which increased net sales by approximately \$131 million) and a 6% increase in sales volumes (which increased net sales by approximately \$98 million). In addition to the impact of higher sales volumes and higher average selling prices, we estimate that changes in currency exchange rates (primarily the euro) increased our Chemicals Segment’s net sales by approximately \$43 million, or 3%, as compared to 2020.

Our Chemicals Segment’s sales volumes increased 6% in 2021 as compared to 2020 due to higher demand in its European, North American and Latin American markets, with a significant portion of the increase occurring in the second and third quarters as a result of the impact of the COVID-19 pandemic on the comparable periods in 2020.

Cost of Sales and Gross Margin – Cost of sales increased \$45.7 million, or 3%, in 2022 compared to 2021 primarily due to the net effects of higher production costs of approximately \$285 million (including higher costs for raw materials and energy), a 15% decrease in sales volumes and changes in currency exchange rates. Our Chemicals Segment’s cost of sales as a percentage of net sales increased to 80% in 2022 compared to 77% in 2021 due to the impact of higher production costs, including higher raw material and energy costs partially offset by the favorable effects of higher average TiO₂ selling prices. In addition, our Chemicals Segment’s cost of sales in 2022 includes approximately \$26 million of unabsorbed fixed production and other manufacturing costs associated with production curtailments at certain of its European facilities throughout the fourth quarter.

Gross margin as a percentage of net sales decreased to 20% in 2022 compared to 23% in 2021. Our Chemicals Segment's gross margin as a percentage of net sales in 2022 decreased primarily due to the net effect of higher average TiO₂ selling prices, lower production and sales volumes, higher production costs and fluctuations in currency exchange rates.

Cost of sales increased \$203.5 million, or 16%, in 2021 compared to 2020 due to a 6% increase in sales volumes and higher production costs of approximately \$69 million (including higher cost for raw materials and energy) and the effects of currency exchange rate fluctuations (primarily the Canadian dollar). Our Chemicals Segment's cost of sales as a percentage of net sales decreased to 77% in 2021 compared to 79% in 2020 primarily due to the favorable effects of higher average TiO₂ selling prices and increased coverage of fixed costs from higher production, partially offset by higher production costs (including higher raw material and energy costs) as well as the effects of fluctuations in currency exchange rates, as discussed below.

Gross margin as a percentage of net sales increased to 23% in 2021 compared to 21% in 2020. Our Chemicals Segment's gross margin as a percentage of net sales in 2021 increased primarily due to the net effect of higher average TiO₂ selling prices, higher production and sales volumes, higher production costs and fluctuations in currency exchange rates.

Operating Income – Our Chemicals Segment's operating income decreased by \$26.2 million, from \$200.8 million in 2021 to \$174.6 million in 2022. Operating income as a percentage of net sales was 9% in 2022 compared to 10% in 2021. This decrease was driven by the lower gross margin discussed above for the comparable periods. Our Chemicals Segment experienced an operating loss of \$15.3 million in the fourth quarter of 2022 compared to operating income of \$55.4 million in the fourth quarter of 2021. Our Chemicals Segment also recognized 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 13 to our Consolidated Financial Statements. We estimate that changes in currency exchange rates increased our Chemicals Segment's operating income by approximately \$23 million in 2022 as compared to 2021 as discussed in the Currency Exchange Rates section below.

Our Chemicals Segment's operating income increased by \$74.3 million, from \$126.5 million in 2020 to \$200.8 million in 2021. Operating income as a percentage of net sales was 10% in 2021 compared to 8% in 2020. This increase was driven by the higher gross margin discussed above for the comparable periods. We estimate that changes in currency exchange rates decreased our Chemicals Segment's operating income by approximately \$13 million in 2021 as compared to 2020 as discussed in the Currency Exchange Rates section below.

Our Chemicals Segment's operating income in 2020 was minimally impacted by the effects of Hurricane Laura which temporarily halted production at LPC on August 24, 2020 with resumption of operations on September 25, 2020. LPC believes insurance (subject to applicable deductibles) will cover a majority of its losses, including those related to property damage and the disruption of its operations. Our Chemicals Segment believes insurance (subject to applicable deductibles) will cover a majority of its losses from the hurricane, including property damage, business interruption losses related to its share of LPC's lost production and other costs resulting from the disruption of operations. As of December 31, 2021, our Chemicals Segment had not yet recognized any insurance recoveries because the ultimate disposition of its portion of the business interruption claim was not yet determinable; however, as of December 31, 2021 LPC had received a portion of the proceeds related to its property damage claim. On October 9, 2020 Hurricane Delta caused an additional temporary halt to production at the LPC facility. Damages resulting from Hurricane Delta were not as severe and production activities were resumed within five days from the time of initial shutdown prior to landfall of the hurricane. Similar to Hurricane Laura, losses determined to be incurred by LPC and our Chemicals Segment as a result of Hurricane Delta are expected to be recoverable from insurance (subject to applicable deductibles).

Our Chemicals Segment's operating income is net of amortization of purchase accounting adjustments made in conjunction with our acquisitions of interests in NL and Kronos. As a result, we recognize additional depreciation expense above the amounts Kronos reports separately, substantially all of which is included within cost of sales. We recognized additional depreciation expense of \$3.8 million in 2020, \$1.5 million in 2021 and \$1.3 million in 2022, which reduced our reported Chemicals Segment's operating income as compared to amounts reported by Kronos.

Currency Exchange Rates – Our Chemicals Segment has substantial operations and assets located outside the United States (primarily in Germany, Belgium, Norway and Canada). The majority of our Chemicals Segment’s 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 Chemicals Segment’s sales generated from its non-U.S. operations is denominated in the U.S. dollar (and consequently our Chemicals Segment’s non-U.S. operations will generally hold U.S. dollars from time to time). Certain raw materials used in all our Chemicals Segment’s 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 Chemicals Segment’s 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 Chemicals Segment’s non-U.S. operations are holding non-local currency (primarily U.S. dollars).

Overall, we estimate that fluctuations in currency exchange rates had the following effects on our Chemicals Segment’s sales and operating income for the periods indicated.

**Impact of changes in currency exchange rates
Year ended December 31, 2022 vs December 31, 2021**

	Transaction gains recognized			Translation gains/(losses) impact of rate changes	Total currency impact 2022 vs 2021
	2021	2022	Change		
			(In millions)		
Impact on:					
Net sales	\$ —	\$ —	\$ —	\$ (106)	\$ (106)
Operating income	2	12	10	13	23

The \$106 million decrease in net sales (translation losses) was caused primarily by a strengthening of the U.S. dollar relative to the euro, as euro-denominated sales were translated into fewer U.S. dollars in 2022 as compared to 2021. The strengthening of the U.S. dollar relative to the Canadian dollar and the Norwegian krone in 2022 did not have a significant effect on the reported amount of net sales, as a substantial portion of the sales generated by our Chemicals Segment’s Canadian and Norwegian operations are denominated in the U.S. dollar.

The \$23 million increase in operating income was comprised of the following:

- Higher net currency transaction gains of approximately \$10 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 Chemicals Segment’s non-U.S. operations, and in Norwegian krone denominated receivables and payables held by our Chemicals Segment’s non-U.S. operations, and
- Approximately \$13 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 2022 as compared to 2021, partially offset by net currency translation losses primarily caused by a strengthening of the U.S. dollar relative to the euro as the negative effects of the stronger U.S. dollar on euro-denominated sales more than offset the favorable effects of euro-denominated operating costs being translated into fewer U.S. dollars in 2022 as compared to 2021.

Impact of changes in currency exchange rates - 2021 vs. 2020

	<u>Transaction gains/(losses) recognized</u>			<u>Translation gains/(losses) impact of rate changes</u>	<u>Total currency impact 2021 vs. 2020</u>
	<u>2020</u>	<u>2021</u>	<u>Change</u>		
	<u>(In millions)</u>				
Impact on:					
Net sales	\$ —	\$ —	\$ —	\$ 43	\$ 43
Operating income	(4)	2	6	(19)	(13)

The \$43 million increase in net sales (translation gain) was caused primarily by a weakening of the U.S. dollar relative to the euro, as euro-denominated sales were translated into more U.S. dollars in 2021 as compared to 2020. The weakening of the U.S. dollar relative to the Canadian dollar and the Norwegian krone in 2021 did not have a significant effect on the reported amount of net sales, as a substantial portion of the sales generated by our Chemicals Segment's Canadian and Norwegian operations are denominated in the U.S. dollar.

The \$13 million decrease in operating income was comprised of the following:

- Higher net currency transaction gains of approximately \$6 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 Chemicals Segment's non-U.S. operations, and in Norwegian krone denominated receivables and payables held by our Chemicals Segment's non-U.S. operations, and
- Approximately \$19 million from net currency translation losses primarily caused by a weakening of the U.S. dollar relative to the Canadian dollar and Norwegian krone, as local currency-denominated operating costs were translated into more U.S. dollars in 2021 as compared to 2020, partially offset by net currency translation gains primarily caused by a weakening of the U.S. dollar relative to the euro as the positive effects of the weaker U.S. dollar on euro-denominated sales more than offset the unfavorable effects of euro-denominated operating costs being translated into more U.S. dollars in 2021 as compared to 2020.

Outlook – As previously reported, late in the third quarter of 2022, demand in Europe and the export markets began to rapidly deteriorate as many of our Chemicals Segment's customers in those regions reduced their production rates in response to economic conditions and geopolitical uncertainties. This weakness continued through the fourth quarter. In addition, in the second half of 2022 our Chemicals Segment experienced rapidly rising costs particularly in Europe, led by natural gas, electricity and certain key raw materials. In response to this decline in demand coupled with increased production costs, our Chemicals Segment implemented production curtailments at certain of its European facilities throughout the fourth quarter to manage inventory levels. Our Chemicals Segment also experienced declining demand in North America in the late second half of 2022, but to a lesser extent than its European and export markets.

At the beginning of 2023 our Chemicals Segment began to see pockets of improving demand in Europe and certain export markets bolstered by customer inventory replenishment after significant destocking in the fourth quarter of 2022. Our Chemicals Segment is experiencing continued weak demand in North America in the first quarter of 2023. Our Chemicals Segment expects customer demand to gradually return during the first half of the year particularly in Europe and export markets. Accordingly, at the beginning of 2023, our Chemicals Segment began a measured ramp up of production with the expectation of operating its facilities at full practical capacity by the end of the second quarter of 2023. Our Chemicals Segment's selling prices have remained stable at the beginning of 2023; however, our Chemicals Segment expects selling prices to rise throughout the last three quarters of 2023 in response to higher production costs. Based on the net effects of these factors, our Chemicals Segment expects to report lower operating results for the full year of 2023 as compared to 2022.

Our Chemicals Segment will continue to monitor current and anticipated near-term customer demand levels and will align its production and inventories accordingly. The long-term outlook for the TiO₂ industry remains very positive,

and the steps we are taking in the near term are intended to preserve our Chemicals Segment global market share and position its business to profitably grow in the future.

Our expectations for the TiO₂ industry and our Chemicals Segment operations are based on a number of factors outside our control. As noted above, our Chemicals Segment has experienced global market disruptions including high energy costs and availability concerns and future impacts on its operations will depend on, among other things, future energy costs and availability and the impact economic conditions and geopolitical events have on its operations or its customers' and suppliers' operations, all of which remain uncertain and cannot be predicted.

Component Products –

Our Component Products Segment reported operating income of \$25.4 million in 2022 compared to operating income of \$20.5 million in 2021 and \$11.8 million in 2020. The increase in operating income in 2022 over 2021 is primarily due to higher marine components sales and to a lesser extent higher security products sales. Our Components Products Segment's operating income was negatively impacted by the COVID-19 pandemic in 2020, primarily in the second and third quarters, which significantly impacts operating income comparisons for the comparative periods. Beginning in the third quarter of 2020 and continuing through 2021, our Component Products Segment's sales volumes generally improved at both security products and marine components reporting units and the increase in operating income in 2021 over 2020 primarily resulted from the higher sales volumes.

Our Component Products Segment's product offerings consist of a large number of products that have a wide variation in selling price and manufacturing cost, which results in certain practical limitations on our ability to quantify the impact of changes in individual product sales quantities and selling prices on our net sales, cost of sales and gross margin. In addition, small variations in period-to-period net sales, cost of sales and gross margin can result from changes in the relative mix of our products sold. The key performance indicator for our Component Products Segment is operating income margins.

	Years ended December 31,			% Change	
	2020	2021	2022	2020-21	2021-22
	(Dollars in millions)				
Net sales:					
Security products	\$ 87.9	\$ 105.1	\$ 114.5	20 %	9 %
Marine components	26.6	35.7	52.1	34	46
Total net sales	114.5	140.8	166.6	23	18
Cost of sales	81.7	98.1	117.8	20	20
Gross margin	\$ 32.8	\$ 42.7	\$ 48.8	30	14
Operating income	\$ 11.8	\$ 20.5	\$ 25.4	74	24
Percent of net sales:					
Cost of sales	71 %	70 %	71 %		
Gross margin	29	30	29		
Operating income	10	15	15		

Net Sales – Our Component Products Segment's net sales increased \$25.8 million in 2022 compared to 2021 due to higher marine component sales primarily to the towboat market and, to a lesser extent, higher security products sales across a variety of markets. Marine components net sales increased \$16.4 million, or 46%, in 2022 as compared to 2021. Relative to prior year, marine component sales were \$11.5 million higher to the towboat market (primarily to original equipment boat manufacturers), \$2.1 million higher to the engine builder market and \$2.0 million higher to the industrial market. Security products net sales increased \$9.4 million, or 9%, in 2022 as compared to 2021. Relative to prior year, security products sales were \$3.8 million higher to the government security market, \$1.8 million higher to the office furniture market, \$1.5 million higher to distributors, \$1.0 million higher to the tool storage market and \$.9 million higher to the gas station security market.

Our Component Products Segment's net sales increased \$26.3 million in 2021 compared to 2020 primarily due to higher sales at both the security products and marine components reporting units, particularly in the second quarter of 2021, as many of our Component Products Segment's customers were temporarily closed or reduced production during the second quarter of 2020 due to government ordered closures or reduced demand resulting from the COVID-19 pandemic. Beginning in the third quarter of 2020 and continuing through 2021, marine components sales exceeded pre-pandemic levels. Marine components net sales increased \$9.1 million, or 34%, in 2021 as compared to 2020 primarily due to increased sales of \$7.2 million to several original equipment boat manufacturers in the towboat market. Security products sales generally improved since third quarter of 2020 but did not recover to pre-pandemic levels until the second quarter of 2021 when sales improved in markets that had been slower to recover from the COVID-19 pandemic, particularly sales to distributors and the office furniture market. Relative to prior year, sales increased \$17.2 million, or 20%, primarily due to \$7.2 million higher sales to the government security market, \$4.9 million higher sales to the transportation market and \$2.0 million higher sales to distribution customers.

Cost of Sales and Gross Margin – Our Component Products Segment's cost of sales increased in 2022 compared to 2021 primarily due to the effects of higher sales, as well as increased production costs at both security products and marine components. Our Component Products Segment's gross margin as a percentage of net sales decreased over the same period primarily due to the decrease in the security products gross margin percentage. Security products gross margin as a percentage of net sales for 2022 decreased as compared to 2021 primarily due to higher cost of sales, most significantly in the third and fourth quarters of 2022, as price increases and surcharges did not fully offset higher cost inventory sold in the latter half of the year. Marine components gross margin as a percentage of net sales increased slightly in 2022 compared to 2021 with increased sales due to price increases and surcharges more than offsetting higher production costs, as well as increased coverage of cost of sales from higher sales.

Our Component Products Segment's cost of sales increased in 2021 compared to 2020 primarily due to the effects of higher sales, as well as increased production costs at both security products and marine components. Our Component Products Segment's gross margin as a percentage of net sales increased over the same period due to the increase in the security products gross margin percentage partially offset by the decrease in the marine components gross margin percentage. Security products gross margin as a percentage of net sales for 2021 increased as compared to 2020 due to increased coverage of fixed costs from higher sales, partially offset by higher production costs including increased raw materials costs across a variety of commodities and component inputs, higher shipping costs, and increased labor costs primarily due to higher overtime costs and increased headcount. Marine components gross margin as a percentage of net sales decreased in 2021 compared to 2020 as increased coverage of fixed costs from higher sales were more than offset by higher production costs including raw materials costs (primarily stainless steel), higher shipping costs and increased labor costs resulting from higher overtime costs and increased headcount.

Operating Income – Our Component Products Segment operating income increased in 2022 compared to 2021. Operating margin increased in 2022 compared to 2021 primarily due to the factors impacting net sales, cost of sales and gross margin discussed above. Operating costs and expenses consist primarily of sales and administrative-related personnel costs, sales commissions and advertising expenses directly related to product sales and administrative costs relating to business unit and corporate management activities, as well as gains and losses on disposal of property and equipment. Operating costs and expenses increased \$1.2 million in 2022 compared to 2021 predominantly due to higher salary and employment related costs.

Our Component Products Segment operating income increased in 2021 compared to 2020. Operating margin increased in 2021 compared to 2020 primarily due to the factors impacting net sales, cost of sales and gross margin discussed above. Operating costs and expenses increased \$1.2 million in 2021 compared to 2020 primarily due to higher salary and benefits costs.

General – Our Component Products Segment's profitability primarily depends on its ability to utilize its production capacity effectively, which is affected by, among other things, the demand for its products and its ability to control manufacturing costs, primarily comprised of labor costs and materials. The materials used in our Component Products Segment's products consist of purchased components and raw materials some of which are subject to fluctuations in the commodity markets such as zinc, brass and stainless steel. Total material costs represented approximately 47% of our Component Products Segment's cost of sales in 2022, with commodity-related raw materials representing

approximately 17% of our Component Products Segment’s cost of sales. Prices for the primary commodity-related raw materials used in the manufacture of its locking mechanisms, primarily zinc and brass, generally increased throughout 2021 and the first half of 2022. Prices began to stabilize in the latter half of 2022, although at elevated levels. The prices for stainless steel, the primary raw material used for the manufacture of marine exhaust headers and pipes and wake enhancement systems, experienced significant volatility during 2021 and 2022. Based on current economic conditions, we expect the prices for our Component Products Segment’s primary commodity-related raw materials including zinc, brass, stainless steel and other manufacturing materials in 2023 to be relatively stable, although at the elevated levels our Component Products Segment experienced in the second half of 2022.

Our Component Products Segment occasionally enters into short-term commodity-related raw material supply arrangements to mitigate the impact of future increases in commodity related raw material costs. See Item 1 – “Business – Component Products Segment – CompX International, Inc. – Raw Materials.”

Outlook – While our Component Products Segment continued to experience strong demand at both its reporting units during the fourth quarter of 2022, the order rate and backlog at both reporting units began to soften late in the fourth quarter. Our Component Products Segment operated its manufacturing facilities at elevated production rates throughout 2022 in line with the strong demand and it continues to monitor demand levels and will adjust production rates accordingly. While labor markets continue to be competitive in each of the regions in which our Component Products Segment operates and labor costs continue to rise, our Component Products Segment has been able to achieve and maintain more balanced staffing levels aligned with current and forecasted demand, particularly at its marine components reporting unit. Our Component Products Segment continues to face shortages related to certain electronic components; however, its supply chains are generally stable and recently transportation and logistical delays have been minimal.

Our Component Products Segment expects gross margins at its security products reporting unit will continue to be challenged during 2023 as higher cost inventory continues to work its way through cost of sales and anticipated reduced demand may limit its ability to implement further price increases. While our Component Products Segment expects its marine components net sales to remain strong during the first quarter, it expects net sales will decline as compared to 2022 as marine market demand is being challenged by higher interest rates and several original equipment boat manufacturers, including certain of its customers, have publicly announced reduced production schedules in 2023 compared to 2022. Our Component Products Segment currently expects its marine components reporting unit gross margins as a percentage of net sales in 2023 to be comparable to 2022. Based on the softening demand and general economic conditions in North America, our Component Products Segment currently expects to report lower net sales and operating income at both reporting units during 2023 compared to 2022. Our Component Products Segment is focused on managing inventory levels to support anticipated lower demand in 2023. With raw materials and other components more readily available, our Component Products Segment believes it will be able to achieve additional operating efficiencies during the year although the extent and impact of such efficiencies is not yet known.

Our Component Products Segment’s expectations for its operations and the markets it serves are based on a number of factors outside its control. As noted above, there continue to be some global and domestic supply chain challenges and any future impacts on operations will depend on, among other things, any future disruption in our Component Products Segment’s operations or its suppliers’ operations, the impact of economic conditions and geopolitical events on demand for its products or its customers’ and suppliers’ operations, all of which remain uncertain and cannot be predicted.

Real Estate Management and Development –

	Years ended December 31,		
	2020	2021	2022
	(In millions)		
Net sales:			
Land sales	\$ 87.0	\$ 207.8	\$ 120.9
Water delivery sales	7.6	6.8	3.6
Utility and other	1.8	1.6	1.2
Total net sales	96.4	216.2	125.7
Cost of sales	64.9	123.6	74.1
Gross margin	\$ 31.5	\$ 92.6	\$ 51.6
Operating income	\$ 47.8	\$ 97.3	\$ 39.4

General – Our Real Estate Management and Development Segment consists of BMI and LandWell. BMI provides certain utility services, among other things, to an industrial park located in Henderson, Nevada, and prior to BWC’s bankruptcy filing on September 10, 2022 was responsible for the delivery of water to the City of Henderson and various other users through a water delivery system owned and operated by BWC. LandWell is actively engaged in efforts to develop certain real estate in Henderson, Nevada including approximately 2,100 acres zoned for residential/planned community purposes and approximately 400 acres zoned for commercial and light industrial use.

LandWell began marketing land for sale in the residential/planned community in December 2013 and at December 31, 2022 approximately 90 saleable acres remain. LandWell has been actively marketing and selling the land zoned for commercial and light industrial use and at December 31, 2022 approximately 20 saleable acres remain. Contracts for land sales are negotiated on an individual basis and sales terms and prices will vary based on such factors as location (including location within a planned community), expected development work, and individual buyer needs. Although land may be under contract, we do not recognize revenue until we have satisfied the criteria for revenue recognition set forth in ASC Topic 606. In some instances, we will receive cash proceeds at the time the contract closes and record deferred revenue for some or all of the cash amount received, with such deferred revenue being recognized in subsequent periods. Substantially all of the land in the residential/planned community has been sold; however, we expect the development work to take three to five years to complete.

Net Sales and Operating Income – Substantially all of the net sales from our Real Estate Management and Development segment in 2022 consisted of revenues from land sales. We recognized \$120.9 million in revenues on land sales during 2022 compared to \$207.8 million in 2021. Cost of sales related to land sales revenues was \$69.7 million in 2022 compared to \$117.0 million in 2021. Land sales revenue decreased substantially in 2022 primarily due to two land parcels with no post-closing obligations that closed during the fourth quarter of 2021 for \$70 million which were immediately recognized as revenue. Excluding these two parcels that closed in 2021, land sales declined 12% in 2022 primarily due to a decrease in acreage sold and the relative timing of development spending. Substantially all of the land sales revenue we recognized in 2022 was under the cost-based inputs method of revenue recognition for acreage sold in prior years and to a lesser extent current year land sales. In 2021 land sales were heavily weighted towards the end of the year. Land sales revenue in the fourth quarter of 2022 was \$20.0 million compared to \$150.8 million in the fourth quarter of 2021, including approximately \$70 million noted above. Included in operating income was income related to the tax increment reimbursement note receivables of \$15.2 million and \$15.3 million in 2022 and 2021, respectively. See Note 7 to our Consolidated Financial Statements.

We recognized \$207.8 million in revenues on land sales during 2021 compared to \$87.0 million in 2020. Cost of sales related to land sales revenues was \$117.0 million in 2021 compared to \$57.9 million in 2020. Land sales revenue increased in 2021 as compared to 2020 primarily due to an increase in the amount of acreage sold, increased selling price per acre sold and an increase in infrastructure development spending. As noted above, land sales are generally recognized over time using cost-based inputs and in the second quarter of 2020, in an effort to conserve resources in response to the pandemic, we reduced infrastructure development spending to only those expenditures necessary to fulfill our contractual obligations. We returned to more normalized infrastructure development spending late in 2020 and continued to increase infrastructure development spending throughout 2021. Typically land sales have been heavily weighted towards the end

of the year. In the fourth quarter of 2021, land sales revenue was \$150.8 million including approximately \$70 million related to two parcels as compared to land sales revenue of \$70.2 million in the fourth quarter of 2020, including approximately \$55 million related to a single parcel. The contracts for these parcels contained no post-closing obligations therefore we recognized the full \$70 million and \$55 million in revenue in the fourth quarters of 2021 and 2020, respectively. Operating income in 2021 also includes \$15.3 million of income related to the recognition of tax increment reimbursement note receivables compared to \$19.1 million of such income in 2020, as discussed in Note 7 to our Consolidated Financial Statements.

The remainder of net sales and cost of sales related to this segment primarily relates to water delivery fees and expenses. BMI provides certain utility services, among other things, to an industrial park located in Henderson, Nevada and prior to BWC's bankruptcy filing on September 10, 2022 was responsible for the delivery of water to the City of Henderson and various other users under long-term contracts through a water delivery system owned and operated by BWC. BWC's water delivery system operated on Lake Mead in Nevada. Due to the Western drought, water levels in Lake Mead have been declining for much of the last twenty years. As a result of water release curtailments upstream of Lake Mead which began late in the second quarter, Lake Mead water levels have dropped precipitously to historically low levels. On June 30, 2022 BWC was no longer able to pump water without the risk of damaging the system and consequently ceased operations at its water intake facility to best preserve the system. Current estimates of Lake Mead water levels do not indicate lake levels will be sufficient to enable BWC to resume pumping water for the foreseeable future. We considered BWC's inability to pump water from Lake Mead to be a triggering event under the ASC 360 *Property, Plant, and Equipment*, which caused us to evaluate the water system fixed assets for impairment. Because BWC was unable to deliver water under its current contracts and therefore unable to generate revenue, we determined the water system's assets were fully impaired except to the extent certain equipment had alternative use outside of BWC's operations, in which case those assets were written down to estimated salvage value. The \$16.4 million impairment charge primarily recognized in the second quarter of 2022 represents the write down of the book value to the estimated salvage value of the assets. Without the ability to pump and deliver water to its customers, BWC's operating expenses exceeded its revenues, and on September 10, 2022 BWC and its subsidiaries voluntarily filed for Chapter 11 bankruptcy protection in the United States Bankruptcy Court for the District of Nevada. Because BWC has filed for bankruptcy protection, we and BMI can no longer affirmatively assert we control BWC and, as such, in accordance with ASC 810, *Consolidation*, we deconsolidated BWC as of the date of the bankruptcy filing and recognized a loss of \$2.0 million in the third quarter of 2022 on the deconsolidation. In addition, BMI had an outstanding intercompany accounts receivable balance with BWC on the date of the bankruptcy filing, and we recognized \$1.3 million of bad debt expense to fully reserve this balance during the third quarter of 2022. Operating income comparisons between 2022 and 2021 are affected by the aggregate \$19.7 million in charges related to BWC recognized in 2022. See Notes 2 and 9 to our Consolidated Financial Statements.

Outlook – LandWell is focused on developing the land it manages, primarily to residential builders, for the residential/planned community in Henderson. At December 31, 2022, substantially all of the land in the residential/planned community had been sold with approximately 90 saleable acres remaining. While we expect to sell the remaining acres over the next one to three years, due to the current economic conditions, we are unsure of the timing of any sales that may occur. At December 31, 2022 we have deferred revenue of \$123.0 million related to land sales closed in 2022 and prior years. Because we recognize revenue over time using cost-based inputs, we will continue to recognize revenue on land previously sold over the development period, although we have already received substantially all the cash proceeds related to these sales. We currently expect to take three to five years to complete our post-closing obligations. Any delays or curtailments in infrastructure development related to post-closing obligation activities will lower the amount of revenue we recognize on previously closed land sales. Under LandWell's development agreement with the City of Henderson, the issuance of a specified number of housing permits requires LandWell to complete certain large infrastructure projects. LandWell began construction on several of these community-wide large projects in late 2021 with the construction expected to continue for the next three to five years. We expect these land development costs in 2023 to be consistent with 2022. Because these large projects relate to the entirety of the residential/planned community, the costs associated with these large projects are not part of the cost-based inputs used to recognize revenue and therefore this spending will not correlate to revenue recognition. However, this spending is expected to be eligible for tax increment reimbursement and delays or curtailments in eligible infrastructure development activities will also delay LandWell's ability to submit completed costs to the City of Henderson for approval of additional tax increment reimbursement note receivables.

As noted above, BWC filed for Chapter 11 bankruptcy protection on September 10, 2022. BWC is operating under court protection, and a portion of BWC's water delivery system is still operating with water provided by the regional water authority in order to continue to provide water to its industrial customers for an interim period. We cannot predict the timing or the outcome of the bankruptcy reorganization, and we may incur additional costs before the bankruptcy proceedings are concluded.

General Corporate Items, Interest Expense, Income Taxes, Noncontrolling Interest and Related Party Transactions

Insurance Recoveries – NL has agreements with certain insurance carriers pursuant to which the carriers reimburse NL for a portion of its past lead pigment and asbestos litigation defense costs. Insurance recoveries include amounts NL received from these insurance carriers. In addition, Kronos recognized \$1.5 million of insurance recoveries in 2020 related to a property damage claim. See Note 13 to our Consolidated Financial Statements.

The agreements with certain of NL's insurance carriers also include reimbursement for a portion of its future litigation defense costs. We are not able to determine how much we will ultimately recover from these carriers for defense costs incurred by NL because of certain issues that arise regarding which defense costs qualify for reimbursement. Accordingly, these insurance recoveries are recognized when the receipt is probable and the amount is determinable. See Note 18 to our Consolidated Financial Statements.

Gain on Land Sales – In 2021, we sold two parcels of land (including one parcel in the second quarter and one parcel in the third quarter) not used in our operating activities. See Note 13 to our Consolidated Financial Statements.

Other Components of Net Periodic Pension and OPEB Expense – We recognized other components of net periodic pension and OPEB expense of \$13.9 million in 2022, \$17.0 million in 2021 and \$20.1 million in 2020. The change in expense is primarily due to pension costs as a result of actuarial amortizations and expected returns on plan assets. See Note 11 to our Consolidated Financial Statements.

Changes in the Market Value of Valhi Common Stock held by Subsidiaries – Our subsidiaries Kronos and NL hold shares of our common stock. As discussed in Note 16 to our Consolidated Financial Statements, we account for our proportional interest in these shares of our common stock as treasury stock, at Kronos' and NL's historical cost basis. The remaining portion of these shares of our common stock, which are attributable to the noncontrolling interest of Kronos and NL, are reflected in our Consolidated Balance Sheets at fair value. Any unrealized gains or losses on the shares of our common stock attributable to the noncontrolling interest of Kronos and NL are recognized in the determination of each of Kronos and NL's respective net income or loss. Under the principles of consolidation, we eliminate any gains or losses associated with our common stock to the extent of our proportional ownership interest in each subsidiary. The \$1.6 million loss in 2022, the \$3.3 million gain in 2021 and the \$1.7 million loss in 2020 recognized in our Consolidated Financial Statements represent the unrealized gain (loss) in respect of these shares during such periods attributable to the noncontrolling interest of Kronos and NL.

Other General Corporate Items – Corporate expenses were 5% higher at \$36.6 million in 2022 compared to \$34.7 million in 2021 due primarily to higher litigation and related costs in 2022. Included in corporate expense are:

- litigation and related costs at NL of \$4.2 million in 2022 and \$1.9 million in 2021; and
- environmental remediation and related costs of \$1.7 million in 2022 compared to \$1.6 million in 2021.

Corporate expenses of \$34.7 million in 2021 were comparable to \$34.3 million in 2020. Included in corporate expense are:

- litigation and related costs at NL of \$1.9 million in each of 2021 and 2020; and
- environmental remediation and related costs of \$1.6 million in 2021 compared to \$.7 million in 2020.

Overall, we currently expect that our net general corporate expenses in 2023 will be higher than 2022 primarily due to higher expected litigation fees and related costs and higher environmental remediation and related costs.

The level of our litigation and related expenses varies from period to period depending upon, among other things, the number of cases in which we are currently involved, the nature of such cases and the current stage of such cases (e.g. discovery, pre-trial motions, trial or appeal, if applicable). See Note 18 to our Consolidated Financial Statements. If our current expectations regarding the number of cases in which we expect to be involved during 2023, or the nature of such cases were to change, our corporate expenses could be higher than we currently estimate.

Obligations for environmental remediation and related costs are difficult to assess and estimate, and it is possible that actual costs for environmental remediation and related costs will exceed accrued amounts or that costs will be incurred in the future for sites in which we cannot currently estimate the liability. If these events occur in 2023, our corporate expense could be higher than we currently estimate. In addition, we adjust our accruals for environmental remediation and related costs as further information becomes available to us or as circumstances change. Such further information or changed circumstances could result in an increase or reduction in our accrued environmental remediation and related costs. See Note 18 to our Consolidated Financial Statements.

Interest Expense – Interest expense decreased to \$27.9 million in 2022 from \$32.5 million in 2021 primarily due to lower average debt levels and the effects of changes in currency exchange rates somewhat offset by higher interest rates on variable-rate indebtedness in 2022. Interest expense decreased to \$32.5 million in 2021 from \$36.2 million in 2020 primarily due to lower average debt levels in 2021.

We expect interest expense will be higher in 2023 as compared to 2022 primarily as lower average debt balances will be more than offset by higher average interest rates on variable-rate indebtedness.

Provision for Income Taxes – We recognized income tax expense of \$33.8 million in 2022 compared to \$60.1 million in 2021. The decrease is primarily due to lower earnings in 2022 and the jurisdictional mix of such earnings. We recognized income tax expense of \$60.1 million in 2021 compared to \$15.9 million in 2020. The increase is primarily due to higher earnings in 2021 and the jurisdictional mix of such earnings.

Our earnings are subject to income tax in various U.S. and non-U.S. jurisdictions. Generally, our consolidated effective income tax rate is higher than the U.S. federal statutory tax rate of 21% primarily because 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. However, in 2022 our consolidated effective income tax rate is lower than the U.S. federal statutory rate of 21% due to the effect of a tax benefit relating to the release of a portion of our valuation allowance associated with the 2022 utilization of a portion of our business interest expense carryforwards. Also, in 2020 our consolidated effective income tax rate is lower than the U.S. federal statutory rate of 21% due to the effect of lower earnings and tax benefits associated with losses incurred in certain high tax jurisdictions.

Our consolidated effective income tax rate in 2023 is expected to be higher than the U.S. federal statutory rate of 21% because the income tax rates applicable to the earnings (losses) of our non-U.S. operations will be higher than the income tax rates applicable to our U.S. operations due to the expected mix of earnings.

See Note 14 to our Consolidated Financial Statements for more information about our 2022 income tax items, including a tabular reconciliation of our statutory tax expense to our actual tax expense.

Discontinued Operations – On January 26, 2018, we completed the sale of our former Waste Management Segment to JFL-WCS Partners, LLC, an entity sponsored by certain investment affiliates of J.F. Lehman & Company, for consideration consisting of the assumption of all of the Waste Management Segment's third-party indebtedness and other liabilities. We recognized a pre-tax gain of approximately \$4.9 million in the fourth quarter of 2020 related to proceeds received from JFL Partners in final settlement of an earn-out provision in the sale agreement. Amounts related to our former Waste Management Segment are classified as part of discontinued operations. See Note 3 to our Consolidated Financial Statements.

Noncontrolling Interest in Net Income of Subsidiaries – Noncontrolling interest in operations of subsidiaries decreased from 2021 to 2022 primarily due to lower operating income at BMI and LandWell. Noncontrolling interest in operations of subsidiaries increased from 2020 to 2021 primarily due to higher operating income from all of our segments.

Related Party Transactions – We are a party to certain transactions with related parties. See Note 17 to our Consolidated Financial Statements.

Foreign Operations

We have substantial operations located outside the United States, principally our Chemicals Segment's operations in Europe and Canada. The functional currency of these operations is the local currency. As a result, the reported amount of our assets and liabilities related to these foreign operations will fluctuate based upon changes in currency exchange rates. At December 31, 2022, 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, which requires management to make estimates, judgments and assumptions that we believe are reasonable based on our historical experience, observance of known trends in our Company and industry as a whole and information available from outside sources. Our estimates affect the reported amounts of assets and liabilities and related disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expense during the reporting period. Actual results may differ significantly from those initial estimates.

We believe the most critical accounting policies and estimates involving significant judgment primarily relate to goodwill, long-lived assets, revenue recognized over time using cost-based inputs, defined benefit pension plans, income taxes and litigation and environmental liabilities.

Goodwill – Our net goodwill totaled \$379.7 million at December 31, 2022 primarily resulting from our various step acquisitions of Kronos and NL (which occurred before the implementation of the current accounting standards related to noncontrolling interest) and to a lesser extent CompX's purchase of various businesses. In accordance with the applicable accounting standards for goodwill, we do not amortize goodwill.

We perform a goodwill impairment test annually in the third quarter of each year. Goodwill is also evaluated for impairment at other times whenever an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying value. An entity may first assess qualitative factors to determine whether it is necessary to complete the quantitative impairment test using a more-likely-than-not criteria. If an entity believes it is more-likely-than-not the fair value of a reporting unit is greater than its carrying value, including goodwill, the quantitative impairment test can be bypassed. Alternatively, an entity has an unconditional option to bypass the qualitative assessment and proceed directly to performing the quantitative impairment test.

When performing a qualitative assessment considerable management judgment is necessary to evaluate the qualitative impact of events and circumstances on the fair value of a reporting unit. Events and circumstances considered in our impairment evaluations, such as historical profits and stability of the markets served, are consistent with factors utilized with our internal projections and operating plan. However, future events and circumstances could result in materially different findings which could result in the recognition of a material goodwill impairment.

Evaluations of possible impairment utilizing the quantitative impairment test require us to estimate, among other factors: forecasts of future operating results, revenue growth, operating margin, tax rates, capital expenditures, depreciation, working capital, weighted average cost of capital, long-term growth rates, risk premiums, terminal values, and fair values of our reporting units and assets. The goodwill impairment test is subject to uncertainties arising from such events as changes in competitive conditions, the current general economic environment, material changes in growth rate assumptions that could positively or negatively impact anticipated future operating conditions and cash flows, changes in the discount rate, and the impact of strategic decisions. If any of these factors were to materially change such change may require revaluation of our goodwill. Changes in estimates or the application of alternative assumptions could produce significantly different results.

A reporting unit can be a segment or an operating division based on the operations of the segment. For example, our Chemicals Segment produces a globally coordinated homogeneous product whereas our Component Products Segment operates as two distinct reporting units. If the fair value of the reporting unit is less than its book value, the goodwill is written down to estimated fair value.

For our Chemicals Segment, we use Level 1 inputs of publicly traded market prices to compare the book value to assess impairment. We also consider control premiums when assessing fair value. When we performed our annual goodwill impairment test in the third quarter of 2022 for our Chemicals Segment goodwill, we concluded there was no impairment of such goodwill. However, future events and circumstances could change (i.e. a significant decline in quoted market prices) and result in a materially different finding which could result in the recognition of a material impairment with respect to such goodwill.

Substantially all of the goodwill for our Component Products Segment relates to its security products reporting unit. In 2022, we used the qualitative assessment for our annual impairment test and determined it was not necessary to perform the quantitative goodwill impairment test, as we concluded it is more-likely-than-not that the fair value of the security products reporting unit exceeded its carrying amount.

Long-lived assets – The net book value of our property and equipment totaled \$523.8 million at December 31, 2022. We assess property and equipment for impairment only when circumstances indicate an impairment may exist. Our determination is based upon, among other things, our estimates of the amount of future net cash flows to be generated by the long-lived asset (Level 3 inputs) and our 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.

Due to the Western drought, water levels in Lake Mead have been declining for much of the last twenty years. As a result of water release curtailments upstream of Lake Mead which began late in the second quarter, Lake Mead water levels have dropped precipitously to historically low levels. On June 30, 2022 BWC was no longer able to pump water without the risk of damaging the system and consequently ceased operations at its water intake facility to best preserve the system. Current estimates of Lake Mead water levels do not indicate lake levels will be sufficient to enable BWC to resume pumping water for the foreseeable future. We considered BWC's inability to pump water from Lake Mead to be a triggering event under the ASC 360 *Property, Plant, and Equipment*, which caused us to evaluate the water system fixed assets for impairment. Because BWC was unable to deliver water under its current contracts and therefore unable to generate revenue, we determined the water system's assets were fully impaired except to the extent certain equipment had alternative use outside of BWC's operations, in which case those assets were written down to estimated salvage value. The \$16.4 million impairment charge primarily recognized in the second quarter of 2022 represents the write down of the book value to the estimated salvage value of the assets. See Note 2 to our Consolidated Financial Statements.

Other than the \$16.4 million fixed asset impairment discussed above, we did not evaluate any other long-lived assets for impairment during 2022 because no such impairment indicators were present.

Revenue recognized over time using cost-based inputs – Certain real estate land sales by our Real Estate Management and Development Segment (generally land sales associated with our residential/planned community) require us to complete property development and improvements after title passes to the buyer and we have received all or a substantial portion of the selling price. Generally, all of the land sales associated with the residential/planned community have been recognized over time using cost-based inputs of accounting in accordance with ASC 606. Under such method, revenues and profits are recognized in the same proportion of our progress towards completion of our contractual obligations, with our progress measured by costs incurred as a percentage of total costs estimated to be incurred. Such costs incurred and total estimated costs include amounts specifically identifiable with the parcels sold as well as certain development costs for the entire residential/planned community which are allocated to the parcels sold under applicable GAAP. Estimates of total costs expected to be incurred require significant management judgment, and the amount of revenue and profits that have been recognized to date are subject to revisions throughout the development period. The

impact on the amount of revenue recognized resulting from any future change in the estimate of total costs estimated to be incurred would be accounted for prospectively in accordance with GAAP.

Defined benefit pension plans – We maintain various defined benefit pension plans in the U.S., Europe and Canada. See Note 11 to our Consolidated Financial Statements. We recognized consolidated defined benefit pension plan expense of \$33.8 million in 2020, \$32.1 million in 2021 and \$25.4 million in 2022. The amount of funding requirements for these defined benefit pension plans is generally based upon applicable regulations (such as ERISA in the U.S.) and will generally differ from pension expense for financial reporting purposes. We made contributions to all of our defined benefit pension plans of \$18.4 million in 2020, \$20.3 million in 2021 and \$16.6 million in 2022.

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 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 funded status of our defined benefit pension plans as either an asset (for overfunded plans) or a liability (for underfunded plans) in our Consolidated Balance 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, 2022, approximately 64%, 15%, 8% and 8% of the projected benefit obligations related to our plans in Germany, Canada, Norway and the U.S., respectively. We use several different discount rate assumptions in determining our consolidated defined benefit pension plan obligation and expense. This is because we maintain defined benefit pension plans in several different countries in Europe and North America and the interest rate environment differs from country to country.

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

	Discount rates used for:		
	Obligations at December 31, 2020 and expense in 2021	Obligations at December 31, 2021 and expense in 2022	Obligations at December 31, 2022 and expense in 2023
Kronos and NL Plans:			
Germany	.7%	1.2%	3.7%
Canada	2.4%	2.9%	5.1%
Norway	1.7%	1.9%	3.6%
U.S.	2.2%	2.6%	5.3%

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, 2022, the fair value of plan assets for all defined benefit plans comprised \$39.1 million related to U.S. plans and \$390.5 million related to non-U.S. plans. Substantially all of plan assets attributable to non-U.S. plans related to plans maintained by Kronos, and approximately 70% and 30% of the plan assets attributable to U.S. plans related to plans maintained by NL and Kronos, respectively. At December 31, 2022, approximately 54%, 20%, 11% and 9% 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.

The assumed long-term rates of return on plan assets used for purposes of determining net period pension cost for 2020, 2021 and 2022 were as follows:

	2020	2021	2022
Kronos and NL plans:			
Germany	1.0%	2.0%	2.0%
Canada	3.5%	3.1%	3.8%
Norway	4.0%	2.8%	3.0%
U.S.	4.5%	4.0%	4.0%

Our long-term rate of return on plan asset assumptions in 2023 used for purposes of determining our 2023 defined benefit pension plan expense for Germany, Canada, Norway and the U.S. are 4.8%, 4.4%, 4.8% 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. See Note 11 to our Consolidated Financial Statements for additional discussion of actuarial assumptions used in determining defined benefit pension assets, liabilities and expenses.

Based on the actuarial assumptions described above and our current expectation for what actual average currency exchange rates will be during 2023, we expect our defined benefit pension expense will approximate \$11 million in 2023. In comparison, we expect to be required to contribute approximately \$18 million to such plans during 2023.

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, 2022, our aggregate projected benefit obligations would have increased by approximately \$19 million at that date and our defined benefit pension expense would be expected to increase by approximately \$.1 million during 2023. 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 million during 2023.

Income taxes – We operate globally through our Chemicals Segment 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 Chemicals Segment’s 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 Chemicals Segment’s operations. Our provision for income taxes and deferred tax assets and liabilities reflect 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.

For example, at December 31, 2022 our Chemicals Segment has substantial net operating loss (NOL) carryforwards in Germany (the equivalent of \$414 million for German corporate tax purposes) and in Belgium (the equivalent of \$13 million for Belgian corporate tax purposes). At December 31, 2022, we have concluded that no deferred income tax asset valuation allowance is required to be recognized with respect to such carryforwards, principally because (i) such carryforwards have an indefinite carryforward period, (ii) we have utilized a portion of such carryforwards during the most recent three-year period and (iii) we currently expect to utilize the remainder of such carryforwards over the long term. However, prior to the complete utilization of such carryforwards, if we were to generate additional losses in our German or Belgian operations for an extended period of time, or if applicable law were to change such that the carryforward period was no longer indefinite, 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.

Contingencies – We are involved in numerous legal and environmental actions in part due to NL’s former involvement in the manufacture of lead-based products. We record accruals for these environmental, legal and other contingencies and commitments when such contingencies become probable, and amounts can be reasonably estimated. However, new information may become available to us, or circumstances (such as applicable laws and regulations) may change, thereby resulting in an increase or decrease in the amount we are required to accrue for such matters (and therefore a decrease or increase in our reported net income in the period of such change). At December 31, 2022 we have recorded total accrued environmental liabilities of \$97.3 million.

Obligations for environmental remediation and related costs are difficult to assess, and it is possible that actual costs for environmental remediation and related costs will exceed accrued amounts or that costs will be incurred in the future for sites in which we cannot currently estimate the liability. If these events occur in 2023, our corporate expense could be higher than we currently estimate. In addition, we adjust our accruals for environmental remediation and related costs (and potential range of our liabilities) as further information becomes available to us or as circumstances change which involves our judgment regarding current facts and circumstances for each site and is subject to various assumptions and estimates. Such further information or changed circumstances could result in an increase in our accrued environmental remediation and related costs. See Note 18 to our Consolidated Financial Statements.

LIQUIDITY AND CAPITAL RESOURCES

Consolidated Cash Flows

Operating Activities –

Trends in cash flows as a result of our operating income (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 Chemicals Segment's non-U.S. subsidiaries. For example, during 2022, relative changes in currency exchange rates resulted in a \$5.1 million decrease in the reported amount of our cash, cash equivalents and restricted cash compared to a \$10.6 million decrease in 2021 and a \$13.8 million increase in 2020.

Cash flows from operating activities decreased to \$34.9 million in 2022 from \$459.7 million in 2021. This \$424.8 million decrease in cash provided by operations was primarily due to the net effect of the following items:

- consolidated operating income of \$239.4 million in 2022, a decrease of \$79.2 million compared to operating income of \$318.6 million in 2021;
- changes in receivables, inventories, payables and accrued liabilities in 2022 used \$92.7 million in net cash compared to \$180.4 million in net cash provided in 2021, an increase in the amount of cash used of \$273.1 million compared to 2021, primarily due to the relative changes in our inventories, receivables, prepaids, land held for development, payables and accruals;
- lower net cash paid for income taxes in 2022 of \$22.2 million primarily due to decreased earnings; and
- higher net contributions to our TiO₂ manufacturing joint venture in 2022 of \$14.3 million.

Cash flows from operating activities increased to \$459.7 million in 2021 from \$152.2 million in 2020. This \$307.5 million increase in cash provided by operations was primarily due to the net effect of the following items:

- consolidated operating income of \$318.6 million in 2021, an increase of \$132.5 million compared to operating income of \$186.1 million in 2020;
- changes in receivables, inventories, payables and accrued liabilities in 2021 provided \$180.4 million in net cash compared to \$33.5 million in net cash used in 2020, a decrease in the amount of cash used of \$213.9 million compared to 2020, primarily due to the relative changes in our inventories, receivables, prepaids, land held for development, payables and accruals;
- higher net cash paid for income taxes in 2021 of \$41.8 million due to increased earnings; and
- higher net distributions from our TiO₂ manufacturing joint venture in 2021 of \$16.6 million.

Changes in working capital were affected by accounts receivable and inventory changes, as shown below:

- Kronos' average days sales outstanding ("DSO") decreased from December 31, 2021 to December 31, 2022, primarily due to the relative changes in the timing of collections.
- Kronos' average days sales in inventory ("DSI") increased from December 31, 2021 to December 31, 2022 primarily due to higher inventory volumes attributable to production volumes exceeding sales volumes in 2022 compared to 2021 and due to supply disruptions and other transportation delays impacting the timing of raw material shipments at the end of 2021.
- CompX's average DSO was generally consistent from December 31, 2021 to December 31, 2022 and is primarily impacted by the timing of sales and collections in the last month of the year.

- CompX's average DSI increased from December 31, 2021 to December 31, 2022 due to increased inventories of certain components and raw materials that had longer lead times or for which CompX has experienced availability issues and from the timing of sales relative to the end of the fourth quarter, primarily at CompX's security products reporting unit.

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

	<u>December 31,</u> <u>2020</u>	<u>December 31,</u> <u>2021</u>	<u>December 31,</u> <u>2022</u>
Kronos:			
Days sales outstanding	68 days	65 days	64 days
Days sales in inventory	74 days	59 days	79 days
CompX:			
Days sales outstanding	33 days	42 days	41 days
Days sales in inventory	75 days	96 days	99 days

We do not have complete access to the cash flows of our majority-owned subsidiaries, due in part to limitations contained in certain credit agreements of our subsidiaries and because we do not own 100% of these subsidiaries. A detail of our consolidated cash flows from operating activities is presented in the table below. Intercompany dividends have been eliminated.

	Years ended December 31,		
	<u>2020</u>	<u>2021</u>	<u>2022</u>
	(In millions)		
Cash provided by (used in) operating activities:			
Kronos	\$ 102.5	\$ 206.5	\$ 81.7
Valhi exclusive of subsidiaries	57.2	122.1	68.8
CompX	14.9	10.5	16.9
NL exclusive of subsidiaries	7.3	15.3	39.2
Tremont exclusive of subsidiaries	36.7	58.8	12.7
BMI	39.0	59.7	12.1
LandWell	81.9	302.1	(22.0)
Eliminations and other	(187.3)	(315.3)	(174.5)
Total	<u>\$ 152.2</u>	<u>\$ 459.7</u>	<u>\$ 34.9</u>

Investing Activities –

We disclose capital expenditures by our business segments in Note 2 to our Consolidated Financial Statements.

During 2022:

- we had net purchases of \$70.7 million of marketable securities; and
- \$8.6 million of BWC's cash, cash equivalents and restricted cash was removed as part of its deconsolidation in the third quarter (see Note 2 to our Consolidated Financial Statements).

During 2021 we:

- had net proceeds from the sale of land not used in our operations of \$23.4 million (including \$8.4 million in the second quarter and \$15.0 million in the third quarter); and
- had net proceeds of \$1.2 million of marketable securities.

During 2020 we:

- had proceeds from the settlement of an earn-out provision related to the 2018 sale of our Waste Management Segment of \$4.9 million; and
- had net proceeds of \$.9 million of marketable securities.

Financing Activities –

During 2022:

- we borrowed \$.1 million and repaid \$51.6 million on Valhi's credit facility with Contran;
- we repaid \$8.4 million on BWC's loan from Western Alliance Bank (see Note 9 to our Consolidated Financial Statements);
- Kronos acquired 217,778 shares of its common stock for an aggregate purchase price of \$2.3 million; and
- CompX acquired 78,900 shares of its Class A common stock for an aggregate purchase price of \$ 1.7 million.

During 2021:

- we repaid \$97.8 million on Valhi's credit facility with Contran and repaid \$1.5 million under Tremont's deferred payment obligation;
- CompX acquired 75,000 shares of its Class A common stock in market transactions for an aggregate purchase price of \$1.3 million; and
- Kronos acquired 14,409 shares of its common stock in market transactions for an aggregate purchase price of \$.2 million.

During 2020:

- we repaid \$42.3 million on Valhi's credit facility with Contran;
- Kronos acquired 122,489 shares of its common stock in market transactions for an aggregate purchase price of \$1.0 million; and
- we repaid \$11.6 million under Tremont's promissory note payable and deferred payment obligation.

We paid aggregate cash dividends on our common stock of \$13.6 million in 2020 and \$9.0 million in each of 2021 and 2022. Distributions to noncontrolling interest in 2020, 2021 and 2022 are primarily comprised of: CompX dividends paid to shareholders other than NL; Kronos dividends paid to shareholders other than us and NL, and BMI and LandWell dividends paid to shareholders other than us.

Outstanding Debt Obligations

At December 31, 2022, our consolidated indebtedness was comprised of:

- Valhi's \$121.4 million outstanding on its \$175 million amended credit facility with Contran which is due no earlier than December 31, 2024;
- €400 million aggregate outstanding on Kronos' 3.75% Senior Secured Notes due in September 2025 (Senior Secured Notes), which had a \$424.1 million carrying amount, net of unamortized debt issuance costs;
- \$12.9 million on LandWell's bank loan due April 2036; and

- approximately \$1.1 million of other indebtedness.

Certain of our credit facilities require the respective borrowers to maintain a number of covenants and restrictions which, among other things, restrict our ability to incur additional debt, incur liens, pay dividends or merge or consolidate with, or sell or transfer substantially all of our assets to, another entity, and contain other provisions and restrictive covenants customary in lending transactions of this type. Certain of our credit agreements contain provisions which could result in the acceleration of indebtedness prior to their stated maturity for reasons other than defaults for failure to comply with typical financial or payment covenants. For example, certain credit agreements allow the lender to accelerate the maturity of the indebtedness upon a change of control (as defined in the agreement) of the borrower. In addition, certain credit agreements could result in the acceleration of all or a portion of the indebtedness following a sale of assets outside the ordinary course of business. Kronos had no outstanding borrowings on its \$225 million global revolving credit facility (“Global Revolver”) at December 31, 2022 and approximately \$211 million was available for borrowings thereunder. Kronos’ Senior Secured Notes and its Global Revolver contain a number of covenants and restrictions which, among other things, restrict its 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 its assets to, another entity, and contain other provisions and restrictive covenants customary in lending transactions of these types. The terms of all of our debt instruments are discussed in Note 9 to our Consolidated Financial Statements. We are in compliance with all of our debt covenants at December 31, 2022. We believe that we will be able to continue to comply with the financial covenants contained in our credit facilities through their maturity; however, if future operating results differ materially from our expectations we may be unable to maintain compliance.

Future Cash Requirements

Liquidity –

Our primary source of liquidity on an ongoing basis is our cash flows from operating activities and borrowings under various lines of credit and notes. We generally use these amounts to (i) fund capital expenditures, (ii) repay short-term indebtedness incurred primarily for working capital purposes and (iii) provide for the payment of dividends (including dividends paid to us by our subsidiaries) or treasury stock purchases. From time-to-time we will incur indebtedness, generally to (i) fund short-term working capital needs, (ii) refinance existing indebtedness, (iii) make investments in marketable and other securities (including the acquisition of securities issued by our subsidiaries and affiliates) or (iv) fund major capital expenditures or the acquisition of other assets outside the ordinary course of business. Occasionally we sell assets outside the ordinary course of business, and we generally use the proceeds to (i) repay existing indebtedness (including indebtedness which may have been collateralized by the assets sold), (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.

We routinely compare our liquidity requirements and alternative uses of capital against the estimated future cash flows we expect to receive from our subsidiaries, and the estimated sales value of those units. As a result of this process, we have in the past sought, and may in the future seek, to raise additional capital, refinance or restructure indebtedness, repurchase indebtedness in the market or otherwise, modify our dividend policies, consider the sale of our interests in our subsidiaries, affiliates, business units, marketable securities or other assets, or take a combination of these and other steps, to increase liquidity, reduce indebtedness and fund future activities. Such activities have in the past and may in the future involve related companies. From time to time we and our subsidiaries may enter into intercompany loans as a cash management tool. Such notes are structured as revolving demand notes and pay and receive interest on terms we believe are more favorable than current debt and investment market rates. The companies that borrow under these notes have sufficient borrowing capacity to repay the notes at any time upon demand. All of these notes and related interest expense and income are eliminated in our Consolidated Financial Statements.

We periodically evaluate acquisitions of interests in or combinations with companies (including our affiliates) that may or may not be engaged in businesses related to our current businesses. We intend to consider such acquisition activities in the future and, in connection with this activity, may consider issuing additional equity securities and increasing indebtedness. From time to time, we also evaluate the restructuring of ownership interests among our respective subsidiaries and related companies.

We believe we will be able to comply with the financial covenants contained in our credit facilities through their maturities; however, if future operating results differ materially from our expectations we may be unable to maintain compliance. Based upon our expectations of our operating performance, and the anticipated demands on our cash resources, we expect to have sufficient liquidity to meet our short-term (defined as the twelve-month period ending December 31, 2023) and long-term obligations (defined as the five-year period ending December 31, 2027). In this regard, see the discussion above in “*Outstanding Debt Obligations.*” If actual developments differ from our expectations, our liquidity could be adversely affected.

At December 31, 2022, we had credit available under existing facilities of approximately \$265 million, which was comprised of:

- \$211 million under Kronos’ global revolving credit facility; and
- \$54⁽¹⁾ million under Valhi’s Contran credit facility.

(1) Amounts available under this facility are at the sole discretion of Contran.

At December 31, 2022, we had an aggregate of \$638.3 million of restricted and unrestricted cash, cash equivalents and marketable securities attributable to continuing operations. A detail by entity is presented in the table below.

	Total	Held outside
	amount	U.S.
	(In millions)	
Kronos	\$ 334.6	\$ 148.8
CompX	59.9	—
NL exclusive of its subsidiaries	107.8	—
BMI	11.6	—
Tremont exclusive of its subsidiaries	9.7	—
LandWell	112.9	—
Valhi exclusive of its subsidiaries	1.8	—
Total cash and cash equivalents, restricted cash and marketable securities	<u>\$ 638.3</u>	<u>\$ 148.8</u>

Following the 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.

Capital Expenditures and Other Investments –

We currently expect our aggregate capital expenditures for 2023 will be approximately \$49 million (including approximately \$18 million contractually committed at December 31, 2022) as follows:

- \$46 million by our Chemicals Segment, including approximately \$20 million in the area of environmental compliance, protection and improvement; and
- \$3 million by our Component Products Segment.

In addition, LandWell expects to spend approximately \$63 million on land development costs during 2023, including \$53 million contractually committed at December 31, 2022. Land development costs are included in the determination of cash provided by operating activities.

Capital spending for 2023 is expected to be funded through cash generated from operations or borrowing under our existing credit facilities. Planned capital expenditures in 2023 at Kronos and CompX will primarily be to maintain and improve our existing facilities and, as it relates to CompX, to address capability needs. In addition, Kronos’ capital expenditures in the area of environmental compliance, protection and improvement include expenditures which are

primarily focused on increased operating efficiency but also result in improved environmental protection, such as lower emissions from our manufacturing plants.

Repurchases of our Common Stock and Common Stock of our Subsidiaries –

We have in the past, and may in the future, make repurchases of our common stock in market or privately-negotiated transactions. At December 31, 2022, we had approximately .3 million shares of our common stock available for repurchase under the authorizations described in Note 16 to our Consolidated Financial Statements.

At December 31, 2022, Kronos had approximately 1.3 million shares of its common stock available for repurchase under the authorization described in Note 3 to our Consolidated Financial Statements.

At December 31, 2022, CompX had approximately .5 million shares of its Class A common stock available for repurchase under the authorization described in Note 3 to our Consolidated Financial Statements.

Dividends –

Because our operations are conducted primarily through subsidiaries and affiliates, our long-term ability to meet parent company level corporate obligations is largely dependent on the receipt of dividends or other distributions from our subsidiaries and affiliates. Kronos paid a regular dividend of \$.19 per share in each quarter of 2022 for which we received \$44.1 million. In February 2023 the Kronos board of directors approved a regular quarterly dividend of \$.19 per share. If Kronos were to pay its \$.19 per share dividend in each quarter of 2023 based on the 58.0 million shares we held of Kronos common stock at December 31, 2022, during 2023 we would receive aggregate regular dividends from Kronos of \$44.1 million. NL paid a quarterly dividend of \$.07 per share in 2022 for which we received \$11.3 million. NL declared a special dividend of \$.35 per share in August 2022 for which we received \$14.1 million. In February 2023 the NL board of directors approved a quarterly dividend of \$.07 per share. If NL were to pay its \$.07 per share dividend in each quarter of 2023 based on the 40.4 million shares we held of NL common stock at December 31, 2022, during 2023 we would receive aggregate quarterly dividends from NL of \$11.3 million. BMI and LandWell pay cash dividends from time to time, but the timing and amount of such dividends are uncertain. In this regard, we received aggregate dividends from BMI and LandWell of \$43.0 million in 2020, \$74.8 million in 2021 and \$16.6 million in 2022. We do not know if we will receive distributions from BMI and LandWell during 2023. All of our ownership interest in CompX is held through our ownership in NL, as such we do not receive any dividends from CompX. Instead any dividend paid by CompX is paid to NL.

Our subsidiaries have various credit agreements with unrelated third-party lenders which contain customary limitations on the payment of dividends, typically a percentage of net income or cash flow; however, these restrictions in the past have not significantly impacted their ability to pay dividends.

Investment in our Subsidiaries and Affiliates and Other Acquisitions –

We have in the past, and may in the future, purchase the securities of our subsidiaries and affiliates or third parties in market or privately-negotiated transactions. We base our purchase decision on a variety of factors, including an analysis of the optimal use of our capital, taking into account the market value of the securities and the relative value of expected returns on alternative investments. In connection with these activities, we may consider issuing additional equity securities or increasing our indebtedness. We may also evaluate the restructuring of ownership interests of our businesses among our subsidiaries and related companies.

We generally do not guarantee any indebtedness or other obligations of our subsidiaries or affiliates. See Note 17 to our Consolidated Financial Statements. Our subsidiaries are not required to pay us dividends. If one or more of our subsidiaries were unable to maintain its current level of dividends, either due to restrictions contained in a credit agreement or to satisfy its liabilities or otherwise, our ability to service our liabilities or to pay dividends on our common stock could be adversely impacted. If this were to occur, we might consider reducing or eliminating our dividends or selling interests in subsidiaries or other assets. If we were required to liquidate assets to generate funds to satisfy our liabilities, we may be required to sell our subsidiaries' securities for less than what we believe is the long-term value of such assets.

We have a \$50 million revolving credit facility with a subsidiary of NL secured with approximately 35.2 million shares of the common stock of Kronos Worldwide, Inc. held by NL's subsidiary as collateral. Outstanding borrowings under the credit facility bear interest at the prime rate plus 1.875% per annum, payable quarterly, with all amounts due on the maturity date. In November 2022, Valhi and the subsidiary of NL entered into a first amendment to the revolving credit facility to extend the latest maturity date (and consequently the latest borrowing date) from December 31, 2023 to December 31, 2030. The related collateral arrangements remained unchanged by this amendment. The maximum principal amount which may be outstanding from time-to-time under the credit facility is limited to 50% of the amount of the most recent closing price of the Kronos stock. The credit facility contains a number of covenants and restrictions which, among other things, restrict NL's subsidiary's ability to incur additional debt, incur liens, and merge or consolidate with, or sell or transfer substantially all of NL's subsidiary's assets to, another entity, and require NL's subsidiary to maintain a minimum specified level of consolidated net worth. Upon an event of default (as defined in the credit facility), Valhi will be entitled to terminate its commitment to make further loans to NL's subsidiary, declare the outstanding loans (with interest) immediately due and payable, and exercise its rights with respect to the collateral under the loan documents. Such collateral rights include, upon certain insolvency events with respect to NL's subsidiary or NL, the right to purchase all of the Kronos common stock at a purchase price equal to the aggregate market value, less amounts owing to Valhi under the loan documents, and up to 50% of such purchase price may be paid by Valhi in the form of an unsecured promissory note bearing interest at the prime rate plus 2.75% per annum, payable quarterly, with all amounts due no later than five years from the date of purchase, with the remainder of such purchase price payable in cash at the date of purchase. We also eliminate any such intercompany borrowings in our Consolidated Financial Statements. There is \$.5 million outstanding under this facility at December 31, 2022.

We have an unsecured revolving demand promissory note with Kronos which, as amended, provides for borrowings from Kronos of up to \$25 million. We eliminate any such intercompany borrowings in our Consolidated Financial Statements. The facility, as amended, is due on demand, but in any event no earlier than December 31, 2024. There was no outstanding balance at December 31, 2022. We had no borrowings with Kronos in 2020, 2021 and 2022 and we could borrow the full \$25.0 million under our current intercompany facility with Kronos at December 31, 2022. Kronos' obligation to loan us money under this note is at Kronos' discretion.

We have an unsecured revolving demand promissory note with CompX which, as amended, provides for borrowings from CompX of up to \$25 million. We eliminate these intercompany borrowings in our Consolidated Financial Statements. The facility, as amended, is due on demand, but in any event no earlier than December 31, 2024. We had gross borrowings of \$29.1 million and gross repayments of \$33.4 million with CompX for a total outstanding balance of \$29.5 million at December 31, 2020. We had gross borrowings of \$29.8 million and gross repayments of \$40.6 million with CompX for a total outstanding balance of \$18.7 million at December 31, 2021. We had gross borrowings of \$24.3 million and gross repayments of \$29.8 million with CompX for a total outstanding balance of \$13.2 million at December 31, 2022. We could borrow an additional \$11.8 million under our current intercompany facility with CompX at December 31, 2022. CompX's obligation to loan us money under this note is at CompX's discretion.

Commitments and Contingencies

We are subject to certain commitments and contingencies, as more fully described in the Notes to our Consolidated Financial Statements and in this Management's Discussion and Analysis of Financial Condition and Results of Operations, including:

- certain income contingencies in various U.S. and non-U.S. jurisdictions;
- certain environmental remediation matters involving NL and BMI;
- certain litigation related to NL's former involvement in the manufacture of lead pigment and lead-based paint; and
- certain other litigation to which we are a party.

In addition to those legal proceedings described in Note 18 to our Consolidated Financial Statements, various legislation and administrative regulations have, from time to time, been proposed that seek to (i) impose various obligations

on present and former manufacturers of lead pigment and lead-based paint (including NL) with respect to asserted health concerns associated with the use of such products and (ii) effectively overturn court decisions in which NL and other pigment manufacturers have been successful. Examples of such proposed legislation include bills which would permit civil liability for damages on the basis of market share, rather than requiring plaintiffs to prove that the defendant's product caused the alleged damage, and bills which would revive actions barred by the statute of limitations. While no legislation or regulations have been enacted to date that are expected to have a material adverse effect on our consolidated financial position, results of operations or liquidity, enactment of such legislation could have such an effect.

As described in the Notes 7, 9 and 18 to our Consolidated Financial Statements, we are a party to various debt, lease and other agreements which contractually and unconditionally commit us to pay certain amounts in the future. Our obligations related to the long-term supply contracts for the purchase of TiO₂ feedstock are more fully described in Note 18 to our Consolidated Financial Statements and above in "Business – Chemicals Segment – Kronos Worldwide, Inc. – Raw Materials." CompX has purchase obligations of \$17.7 million (\$16.3 million payable in 2023 and \$1.4 million payable in 2024) which consist of open purchase orders and contractual obligations, primarily commitments to purchase raw materials and for capital projects in process at December 31, 2022. The timing and amount for purchase obligations are based on the contractual payment amount and the contractual payment date for those commitments.

Recent Accounting Pronouncements

Not applicable.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

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

Interest Rates – We are exposed to market risk from changes in interest rates, primarily related to our indebtedness and or investment in marketable debt securities. At December 31, 2022 we have \$74.5 million invested in marketable debt securities at an average interest rate of approximately 3%.

At December 31, 2022 our aggregate indebtedness was split between 78% of fixed-rate instruments (December 31, 2021 – 74%) and 22% of variable-rate borrowings (December 31, 2021 – 26%). The fixed-rate debt instruments minimize earnings volatility that would result from changes in interest rates. The Kronos Global Revolver is a variable-rate instrument; however, Kronos had no borrowings under this facility during 2021 or 2022. The following table presents principal amounts and weighted average interest rates for our aggregate outstanding indebtedness at December 31, 2022.

	<u>Indebtedness Amount</u>		<u>Year end interest rate</u>	<u>Maturity date</u>
	<u>Carrying value</u>	<u>Fair value</u>		
	<u>(In millions)</u>			
Fixed-rate indebtedness:				
Kronos fixed-rate Senior Notes	\$ 424.1	\$ 374.2	3.75%	2025
LandWell bank note payable	12.9	12.9	4.76%	2036
Total fixed-rate indebtedness	<u>\$ 437.0</u>	<u>\$ 387.1</u>	3.78%	
Variable-rate indebtedness:				
Valhi Contran credit facility	\$ 121.4	\$ 121.4	8.50%	2024

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 worldwide, primarily titanium-containing feedstocks, are purchased primarily in U.S. dollars, while labor and other production and administrative costs are purchased primarily in local currencies. Consequently, the translated U.S. dollar value of our non-U.S. sales and operating results are subject to currency exchange rate fluctuations which may favorably or unfavorably impact reported earnings. 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, 2022.

Also, we are subject to currency exchange rate risk associated with Kronos' Senior Notes, as such indebtedness is denominated in euros. At December 31, 2022, we had the equivalent of \$426.5 million outstanding under Kronos' euro-denominated Senior Notes (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 such date would be approximately \$43 million.

See Notes 1 and 19 to our Consolidated Financial Statements for a discussion of the assumptions we used to estimate the fair value of the financial instruments to which we are a party at December 31, 2021 and 2022.

Raw Materials – Our Chemicals Segment is 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.

Our Component Products Segment will occasionally enter into short term commodity-related raw material supply arrangements to mitigate the impact of future increases in commodity-related raw material costs. We do not have long-term supply agreements for our raw material requirements because either we believe the risk of unavailability of those raw materials is low and we believe the downside risk of price volatility to be too great or because long-term supply agreements for those materials are generally not available. We do not engage in commodity raw material hedging programs.

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 interest rates discussed above ignores the potential effect on other variables that affect our results of operations and cash flows, such as demand for our products, sales volumes and selling prices and operating expenses. Contrary to the above assumptions, changes in interest rates rarely result in simultaneous comparable shifts along the yield curve. Accordingly, the amounts we present above are not necessarily an accurate reflection of the potential losses we would incur assuming the hypothetical changes in market prices were actually to occur.

The above discussion and estimated sensitivity analysis amounts include forward-looking statements of market risk which assume hypothetical changes in market prices. 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 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 Michael S. Simmons, our Vice Chairman of the Board, President and Chief Executive Officer, and Amy Allbach Samford, our Executive Vice President and Chief Financial Officer, have evaluated the design and effectiveness of our disclosure controls and procedures as of December 31, 2022. Based upon their evaluation, these executive officers have concluded that our disclosure controls and procedures were 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, 2022.

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, 2022, 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 financial reporting of equity method investees and (ii) internal control over the preparation of any financial statement schedules which would be required by Article 12 of Regulation S-X. However, our assessment of internal control over financial reporting with respect to equity method investees did include controls over the recording of amounts related to our investments that are recorded in the consolidated financial statements, including controls over the selection of accounting methods for our investments, the recognition of equity method earnings and losses and the determination, valuation and recording of our investment account balances.

Changes in Internal Control over Financial Reporting –

There has been no change to our internal control over financial reporting during the quarter ended December 31, 2022 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 2022, our chief executive officer filed such annual certification with the NYSE. The 2022 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, 2022 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 2023 definitive proxy statement we will file with the SEC pursuant to Regulation 14A within 120 days after the end of the fiscal year covered by this report (the “Valhi Proxy Statement”).

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item is incorporated by reference to our 2023 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 2023 proxy statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTORS INDEPENDENCE

The information required by this Item is incorporated by reference to our 2023 proxy statement. See also Note 17 to our Consolidated Financial Statements.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this Item is incorporated by reference to our 2023 proxy statement.

PART IV

ITEM 15. EXHIBITS

(a) and (c) Financial Statements

The Registrant

Our Consolidated Financial Statements 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 have retained a signed original of any of these exhibits that contain signatures, and we will provide such exhibit to the Commission or its staff upon request. We will furnish a copy of any of the exhibits listed below upon request and payment of \$4.00 per exhibit to cover our costs of furnishing the exhibits. Such requests should be directed to the attention of our Corporate Secretary at our corporate offices located at 5430 LBJ Freeway, Suite 1700, Dallas, Texas 75240. Pursuant to Item 601(b)(4)(iii) of Regulation S-K, we will furnish to the Commission upon request any instrument defining the rights of holders of long-term debt issues and other agreements related to indebtedness which do not exceed 10% of our consolidated total assets as of December 31, 2022.

Item No.	Exhibit Index
2.1	<u>Purchase Agreement by and between JFL-WCS Partners, LLC, as Purchaser, and Andrews County Holdings, Inc., as Seller, dated as of December 19, 2017 – incorporated by reference to Exhibit 2.1 to our Current Report on Form 8-K (File No. 1-5467) dated January 26, 2018 and filed on January 26, 2018.</u>
2.2	<u>Amendment to Purchase Agreement by and between JFL-WCS Partners, LLC, as Purchaser, and Andrews County Holdings, Inc., as Seller, dated as of January 19, 2018 – incorporated by reference to Exhibit 2.2 to our Current Report on Form 8-K (File No. 1-5467) dated January 26, 2018 and filed on January 26, 2018.</u>
3.1	<u>Restated Third Amended and Restated Certificate of Incorporation of Valhi, Inc., as amended by Certificate of Amendment filed on May 29, 2020 (effective June 1, 2020) and by Certificate of Elimination of the 6% Series A Preferred Stock filed on August 10, 2020 – incorporated by reference to Exhibit 3.1 to our Quarterly Report on Form 10-Q (File No. 1-5467) for the quarter ended September 30, 2020.</u>
3.2	<u>Amended and Restated By-Laws of Valhi, Inc. – incorporated by reference to Exhibit 3.1 of our Current Report on Form 8-K (File No. 1-5467) dated March 4, 2021.</u>
4.1	<u>Description of Capital Stock – incorporated by reference to Exhibit 99.2 of our Current Report on Form 8-K dated May 6, 2021 (file No. 1-5467) and filed on May 6, 2021.</u>
10.1	<u>Intercorporate Services Agreement between Valhi, Inc. and Contran Corporation effective as of January 1, 2004 – incorporated by reference to Exhibit 10.1 to our Quarterly Report on Form 10-Q for the quarter ended March 31, 2004.</u>
10.2	<u>Intercorporate Services Agreement between Contran Corporation and NL Industries, Inc. effective as of January 1, 2004 – incorporated by reference to Exhibit 10.1 to NL’s Quarterly Report on Form 10-Q (File No. 1-640) for the quarter ended March 31, 2004.</u>
10.3	<u>Intercorporate Services Agreement between Contran Corporation and CompX International Inc. effective January 1, 2004 – incorporated by reference to Exhibit 10.2 to CompX’s Annual Report on Form 10-K (File No. 1-13905) for the year ended December 31, 2003.</u>
10.4	<u>Intercorporate Services Agreement between Contran Corporation and Kronos Worldwide, Inc. effective January 1, 2004 – incorporated by reference to Exhibit No. 10.1 to Kronos’ Quarterly Report on Form 10-Q (File No. 1-31763) for the quarter ended March 31, 2004.</u>
10.5	<u>Tax Agreement between Valhi, Inc. and Contran Corporation dated January 1, 2020 incorporated by reference to Exhibit 10.5 to our Annual Report on Form 10-K (file No. 1-5467) for the year ended December 31, 2019.</u>
10.6*	<u>Valhi, Inc. 2021 Non-employee Director Stock Plan – incorporated by reference to Exhibit 4.4 of the Registration statement on Form S-8 of the Registrant (File No. 333-256546). Filed on May 27, 2021.</u>
10.7*	<u>Kronos Worldwide, Inc. 2012 Director Stock Plan – incorporated by reference to Exhibit 4.4 of the Registration statement on Form S-8 of the Registrant (File No. 333-113425). Filed on May 31, 2012.</u>
10.8*	<u>CompX International Inc. 2012 Director Stock Plan – incorporated by reference to Exhibit 4.4 of the Registration statement on Form S-8 of the Registrant (File No. 333-47539). Filed on May 31, 2012.</u>
10.9*	<u>NL Industries, Inc. 2012 Director Stock Plan – incorporated by reference to Exhibit 4.4 of the Registration statement on Form S-8 of the Registrant (File No. 001-00640). Filed on May 31, 2012.</u>

Item No.	Exhibit Index
10.10	<u>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 10.10 to our Annual Report on Form 10-K for the year ended December 31, 2018 (file No. 1-5467) filed on March 11, 2019.</u>
10.11	Formation Agreement dated as of October 18, 1993 among Tioxide Americas Inc., Kronos Louisiana, Inc. and Louisiana Pigment Company, L.P. – incorporated by reference to Exhibit 10.2 of NL’s Quarterly Report on Form 10-Q (File No. 1-640) for the quarter ended September 30, 1993. (P)
10.12	Joint Venture Agreement dated as of October 18, 1993 between Tioxide Americas Inc. and Kronos Louisiana, Inc. – incorporated by reference to Exhibit 10.3 of NL’s Quarterly Report on Form 10-Q (File No. 1-640) for the quarter ended September 30, 1993. (P)
10.13	Kronos Offtake Agreement dated as of October 18, 1993 by and between Kronos Louisiana, Inc. and Louisiana Pigment Company, L.P. – incorporated by reference to Exhibit 10.4 of NL’s Quarterly Report on Form 10-Q (File No. 1-640) for the quarter ended September 30, 1993. (P)
10.14	Amendment No. 1 to Kronos Offtake Agreement dated as of December 20, 1995 between Kronos Louisiana, Inc. and Louisiana Pigment Company, L.P. – incorporated by reference to Exhibit 10.22 of NL’s Annual Report on Form 10-K (File No. 1-640) for the year ended December 31, 1995. (P)
10.15	Allocation Agreement dated as of October 18, 1993 between Tioxide Americas Inc., ICI American Holdings, Inc., Kronos Worldwide, Inc. (f/k/a Kronos, Inc.) and Kronos Louisiana, Inc. – incorporated by reference to Exhibit 10.10 to NL’s Quarterly Report on Form 10-Q (File No. 1-640) for the quarter ended September 30, 1993. (P)
10.16	Lease Contract dated June 21, 1952, between Farbenfabrieken Bayer Aktiengesellschaft and Titangesellschaft mit beschränkter Haftung (German language version and English translation thereof) - incorporated by reference to Exhibit 10.14 of NL’s Annual Report on Form 10-K (File No. 1-640) for the year ended December 31, 1985. (P)
10.17	<u>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 Annual Report on Form 10-K of Kronos Worldwide, Inc. (File No. 001-31763) for the year ended December 31, 2015.</u>
10.18	<u>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 (File No. 001-31763) dated September 13, 2017 and filed by Kronos Worldwide, Inc. on September 13, 2017.</u>
10.19	<u>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 (File No. 001-31763) dated September 13, 2017 and filed by Kronos Worldwide, Inc. on September 13, 2017.</u>
10.20**	<u>Unsecured Revolving Demand Promissory Note dated December 31, 2022 in the principal amount of \$175.0 million executed by Valhi, Inc. and payable to the order of Contran Corporation.</u>
10.21	<u>Collateral Agreement dated March 12, 2013 between Valhi, Inc. and Contran Corporation – incorporated by reference to Exhibit 10.23 to our Annual Report on Form 10-K for the year ended December 31, 2018 (file No. 1-5467) filed on March 11, 2019.</u>

Item No.	Exhibit Index
10.22	Credit Agreement dated as of April 20, 2021 by and among Kronos Worldwide, Inc., 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 of Kronos’ Quarterly Report on Form 10-Q (File No. 1-31763) for the quarter ended March 31, 2021.
10.23	Guaranty and Security Agreement dated as of April 20, 2021, by and among Kronos Worldwide, Inc., 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 of Kronos’ Quarterly Report on Form 10-Q (File No. 1-31763) for the quarter ended March 31, 2021.
21.1**	Subsidiaries of Valhi, Inc.
23.1**	Consent of PricewaterhouseCoopers LLP with respect to Valhi’s Consolidated Financial Statements
31.1**	Certification
31.2**	Certification
32.1**	Certification
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)
* Management contract, compensatory plan or agreement.	
** 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.

VALHI, INC.
(Registrant)

By: /s/ Michael S. Simmons
Michael S. Simmons, March 9, 2023
(Vice Chairman of the Board, 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 9, 2023
(Chair of the Board (non-executive))

/s/ Michael S. Simmons
Michael S. Simmons, March 9, 2023
(Vice Chairman of the Board, President and Chief
Executive Officer)

/s/ Thomas E. Barry
Thomas E. Barry, March 9, 2023
(Director)

/s/ Amy Allbach Samford
Amy Allbach Samford, March 9, 2023
(Executive Vice President and Chief Financial Officer)

/s/ Terri L. Herrington
Terri L. Herrington, March 9, 2023
(Director)

/s/ Patty S. Brinda
Patty S. Brinda, March 9, 2023
(Vice President and Controller)

/s/ Kevin B. Kramer
Kevin B. Kramer, March 9, 2023
(Director)

/s/ W. Hayden McIlroy
W. Hayden McIlroy, March 9, 2023
(Director)

/s/ Mary A. Tidlund
Mary A. Tidlund, March 9, 2023
(Director)

VALHI, 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 Valhi, Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Valhi, Inc. and its subsidiaries (the “Company”) as of December 31, 2022 and 2021, and the related consolidated statements of income, of comprehensive income, of stockholders’ equity and of cash flows for each of the three years in the period ended December 31, 2022, 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, 2022, 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, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022 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, 2022, 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.

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 matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that (i) relate 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 matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Income Taxes -- Chemicals Segment

As described in Note 14 to the consolidated financial statements, the Company recorded a provision for income taxes of \$33.8 million and recorded noncurrent deferred tax asset and deferred tax liability amounts of \$40.5 million and \$63.5 million, respectively, for the year ended December 31, 2022. As disclosed by management, the Company operates globally through its Chemicals Segment. 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 Chemicals Segment'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 it operates. Significant judgments and estimates are required by management in determining the Company's consolidated provision for income taxes due to the global nature of the Chemicals Segment'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 for the Chemicals Segment 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 in jurisdictions in which the Chemicals Segment operates.

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 in which the Chemicals Segment operates, the recognition and measurement of deferred tax assets and liabilities, the application of tax laws and regulations in the various jurisdictions in which the Chemicals Segment 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 in certain jurisdictions in which the Chemicals Segment operates; (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.

Environmental Remediation and Related Matters -- NL Industries, Inc.

As described in Note 18 to the consolidated financial statements, management evaluates the potential range of the Company's liability for environmental remediation and related costs at sites where NL Industries, Inc. ("NL"), a majority-owned subsidiary of the Company, has been named as a potentially responsible party (PRP) or defendant. As of December 31, 2022, management accrued approximately \$92 million related to approximately 33 of NL's sites associated with remediation and related matters. Liabilities related to environmental remediation and related matters (including costs associated with damages for property damage and/or damages for injury to natural resources) are recorded when management determines that estimated future expenditures are probable and reasonably estimable. As disclosed by management, environmental remediation and related costs accruals (and the potential range of the liabilities) are adjusted as further information becomes available or as circumstances change which involves management's judgment regarding current facts and circumstances for each site and is subject to various assumptions and estimates.

The principal considerations for our determination that performing procedures relating to environmental remediation and related matters is a critical audit matter are the significant judgment by management when assessing the accruals and the potential range of the Company's liabilities and when determining whether estimated future expenditures are probable and reasonably estimable, which in turn led to a high degree of auditor judgment, subjectivity and effort in performing procedures and evaluating evidence related to management's assessment of the accruals and the potential range of the liabilities.

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 management's evaluation of NL's environmental remediation and related matters (including costs and estimates associated with damages for property damage and/or damages for injury to natural resources), including controls over determining whether estimated future expenditures are probable and reasonably estimable, as well as the related financial statement disclosures. These procedures also included, among others, (i) obtaining the rollforward of NL's environmental accrual activity for each matter and, for a sample of sites, reviewing and discussing site activity with management, (ii) obtaining and evaluating responses to letters of audit inquiry from NL's internal and external legal counsel, and (iii) evaluating the sufficiency of the Company's environmental remediation and related matters disclosures related to NL.

/s/ PricewaterhouseCoopers LLP
Dallas, Texas
March 9, 2023

We have served as the Company's auditor since 1987.

VALHI, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(In millions)

ASSETS	December 31,	
	2021	2022
Current assets:		
Cash and cash equivalents	\$ 698.4	\$ 478.5
Restricted cash equivalents	52.6	46.3
Marketable securities	2.6	75.1
Accounts and other receivables, net	380.7	271.0
Refundable income taxes	4.5	8.0
Receivables from affiliates	18.5	2.9
Inventories, net	458.7	640.8
Prepaid expenses and other	57.2	66.9
Total current assets	1,673.2	1,589.5
Other assets:		
Marketable securities	3.3	1.2
Investment in TiO ₂ manufacturing joint venture	101.9	112.9
Goodwill	379.7	379.7
Deferred income taxes	86.8	40.5
Pension asset	9.0	9.3
Other assets	187.7	178.8
Total other assets	768.4	722.4
Property and equipment:		
Land	50.3	47.8
Buildings	252.6	244.1
Equipment	1,194.6	1,152.3
Mining properties	26.3	13.5
Construction in progress	82.9	77.2
	1,606.7	1,534.9
Less accumulated depreciation and amortization	1,043.1	1,011.1
Net property and equipment	563.6	523.8
Total assets	\$ 3,005.2	\$ 2,835.7

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

LIABILITIES AND STOCKHOLDERS' EQUITY	December 31,	
	2021	2022
Current liabilities:		
Current maturities of long-term debt	\$ 3.1	\$ 1.8
Accounts payable	152.7	199.4
Accrued liabilities	264.8	243.6
Accrued litigation settlement	11.8	11.8
Payables to affiliates	18.8	22.9
Income taxes	12.3	13.3
Total current liabilities	463.5	492.8
Noncurrent liabilities:		
Long-term debt	649.9	557.7
Deferred income taxes	46.2	63.5
Payable to affiliate - income taxes	44.5	33.4
Long-term litigation settlement	38.5	27.4
Accrued pension costs	291.1	131.6
Accrued environmental remediation and related costs	94.1	93.5
Other liabilities	219.0	129.0
Total noncurrent liabilities	1,383.3	1,036.1
Equity:		
Preferred stock, \$.01 par value; 500,000 shares authorized and nil shares issued	—	—
Common stock, \$.01 par value; 50.0 million shares authorized; 29.6 million shares issued and outstanding	.3	.3
Additional paid-in capital	669.0	669.5
Retained earnings	401.1	482.3
Accumulated other comprehensive loss	(191.3)	(143.9)
Treasury stock, at cost - 1.1 million shares	(49.6)	(49.6)
Total Valhi stockholders' equity	829.5	958.6
Noncontrolling interest in subsidiaries	328.9	348.2
Total equity	1,158.4	1,306.8
Total liabilities and equity	\$ 3,005.2	\$ 2,835.7

Commitments and contingencies (Notes 9, 14, 17 and 18)

See accompanying Notes to Consolidated Financial Statements.

VALHI, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME
(In millions, except per share data)

	Years ended December 31,		
	2020	2021	2022
Revenues and other income:			
Net sales	\$ 1,849.7	\$ 2,296.4	\$ 2,222.5
Other income, net	28.4	39.0	43.7
Total revenues and other income	<u>1,878.1</u>	<u>2,335.4</u>	<u>2,266.2</u>
Cost and expenses:			
Cost of sales	1,437.6	1,716.2	1,732.1
Selling, general and administrative	283.6	311.9	304.0
Fixed asset impairment	—	—	16.4
Loss on deconsolidation of Basic Water Company ("BWC")	—	—	2.0
Other components of net periodic pension and OPEB expense	20.1	17.0	13.9
Interest	36.2	32.5	27.9
Total costs and expenses	<u>1,777.5</u>	<u>2,077.6</u>	<u>2,096.3</u>
Income from continuing operations before income taxes	100.6	257.8	169.9
Income tax expense	15.9	60.1	33.8
Net income from continuing operations	84.7	197.7	136.1
Income from discontinued operations, net of tax	4.3	—	—
Net income	89.0	197.7	136.1
Noncontrolling interest in net income of subsidiaries	33.8	70.5	45.9
Net income attributable to Valhi stockholders	<u>\$ 55.2</u>	<u>\$ 127.2</u>	<u>\$ 90.2</u>
Amounts attributable to Valhi stockholders:			
Income from continuing operations	\$ 50.9	\$ 127.2	\$ 90.2
Income from discontinued operations	4.3	—	—
Net income attributable to Valhi stockholders	<u>\$ 55.2</u>	<u>\$ 127.2</u>	<u>\$ 90.2</u>
Basic and diluted net income per share:			
Income from continuing operations	\$ 1.79	\$ 4.46	\$ 3.16
Income from discontinued operations	.15	—	—
Net income per basic and diluted share	<u>\$ 1.94</u>	<u>\$ 4.46</u>	<u>\$ 3.16</u>
Basic and diluted weighted average shares outstanding	<u>28.5</u>	<u>28.5</u>	<u>28.5</u>

See accompanying Notes to Consolidated Financial Statements.

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

	Years ended December 31,		
	2020	2021	2022
Net income	\$ 89.0	\$ 197.7	\$ 136.1
Other comprehensive income (loss), net of tax:			
Currency translation	12.5	(6.8)	(26.1)
Defined benefit pension plans	(10.4)	45.3	89.4
Other	(.7)	(.3)	1.0
Total other comprehensive income, net	1.4	38.2	64.3
Comprehensive income	90.4	235.9	200.4
Comprehensive income attributable to noncontrolling interest	33.9	80.6	62.8
Comprehensive income attributable to Valhi stockholders	\$ 56.5	\$ 155.3	\$ 137.6

See accompanying Notes to Consolidated Financial Statements.

VALHI, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

Years ended December 31, 2020, 2021 and 2022

(In millions)

	Valhi Stockholders' Equity							
	Preferred stock	Common stock	Additional paid-in capital	Retained earnings	Accumulated other comprehensive loss	Treasury stock	Non- controlling interest	Total equity
Balance at December 31, 2019	\$ 667.3	\$.3	\$ 3.3	\$ 239.4	\$ (220.7)	\$ (49.6)	\$ 340.1	\$ 980.1
Net income	—	—	—	55.2	—	—	33.8	89.0
Cash dividends - \$.48 per share	—	—	(2.2)	(11.4)	—	—	—	(13.6)
Dividends paid to noncontrolling interest	—	—	—	—	—	—	(49.4)	(49.4)
Other comprehensive income, net	—	—	—	—	1.3	—	.1	1.4
Contribution of preferred stock	(667.3)	—	667.3	—	—	—	—	—
Equity transactions with noncontrolling interest and other, net	—	—	(.1)	(.3)	—	—	(.2)	(.6)
Balance at December 31, 2020	—	.3	668.3	282.9	(219.4)	(49.6)	324.4	1,006.9
Net income	—	—	—	127.2	—	—	70.5	197.7
Cash dividends - \$.32 per share	—	—	—	(9.0)	—	—	—	(9.0)
Dividends paid to noncontrolling interest	—	—	—	—	—	—	(74.4)	(74.4)
Other comprehensive income, net	—	—	—	—	28.1	—	10.1	38.2
Equity transactions with noncontrolling interest and other, net	—	—	.7	—	—	—	(1.7)	(1.0)
Balance at December 31, 2021	—	.3	669.0	401.1	(191.3)	(49.6)	328.9	1,158.4
Net income	—	—	—	90.2	—	—	45.9	136.1
Cash dividends - \$.32 per share	—	—	—	(9.0)	—	—	—	(9.0)
Dividends paid to noncontrolling interest	—	—	—	—	—	—	(38.9)	(38.9)
Other comprehensive income, net	—	—	—	—	47.4	—	16.9	64.3
Equity transactions with noncontrolling interest and other, net	—	—	.5	—	—	—	(4.6)	(4.1)
Balance at December 31, 2022	\$ —	\$.3	\$ 669.5	\$ 482.3	\$ (143.9)	\$ (49.6)	\$ 348.2	\$ 1,306.8

See accompanying Notes to Consolidated Financial Statements.

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

	Years ended December 31,		
	2020	2021	2022
Cash flows from operating activities:			
Net income	\$ 89.0	\$ 197.7	\$ 136.1
Depreciation and amortization	68.5	59.3	58.5
Net gain from:			
Sale of business	(4.9)	—	—
Land sales	(5)	(16.0)	—
Fixed asset impairment	—	—	16.4
Loss on deconsolidation of BWC	—	—	2.0
Noncash interest expense	2.9	2.9	2.2
Benefit plan expense greater than cash funding	15.2	11.4	8.6
Deferred income taxes	(7.0)	12.1	.6
Distributions from (contributions to) TiO ₂ manufacturing joint venture, net	(12.8)	3.8	(10.5)
Other, net	8.3	2.3	10.1
Change in assets and liabilities:			
Accounts and other receivables, net	(3.1)	(64.6)	81.1
Inventories, net	13.1	58.3	(204.2)
Land held for development, net	16.8	49.6	21.4
Accounts payable and accrued liabilities	(32.8)	154.3	3.9
Income taxes	6.5	(1.6)	(5)
Accounts with affiliates	(4.3)	(24.3)	9.4
Other noncurrent assets	(49.5)	(15.9)	(3.4)
Other noncurrent liabilities	53.5	53.7	(83.9)
Other, net	(6.7)	(23.3)	(12.9)
Net cash provided by operating activities	<u>152.2</u>	<u>459.7</u>	<u>34.9</u>
Cash flows from investing activities:			
Capital expenditures	(65.5)	(64.1)	(67.6)
Cash, cash equivalents and restricted cash of BWC	—	—	(8.6)
Purchases of marketable securities	(3.4)	(4.0)	(73.6)
Proceeds from disposal of marketable securities	4.3	5.2	2.9
Proceeds from sale of business	4.9	—	—
Proceeds from land sales	—	23.4	—
Other, net	2.7	2.1	.2
Net cash used in investing activities	<u>(57.0)</u>	<u>(37.4)</u>	<u>(146.7)</u>
Cash flows from financing activities:			
Principal payments on indebtedness	(58.5)	(102.3)	(62.0)
Valhi cash dividends paid	(13.6)	(9.0)	(9.0)
Distributions to noncontrolling interest in subsidiaries	(49.4)	(74.4)	(38.9)
Subsidiary treasury stock acquired	(1.0)	(1.5)	(4.0)
Other, net	—	(1.9)	(.1)
Net cash used in financing activities	<u>(122.5)</u>	<u>(189.1)</u>	<u>(114.0)</u>

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

	Years ended December 31,		
	2020	2021	2022
Cash, cash equivalents and restricted cash and cash equivalents - net change from:			
Operating, investing and financing activities	\$ (27.3)	\$ 233.2	\$ (225.8)
Effect of exchange rates on cash	13.8	(10.6)	(5.1)
Balance at beginning of year	583.8	570.3	792.9
Balance at end of year	<u>\$ 570.3</u>	<u>\$ 792.9</u>	<u>\$ 562.0</u>
Supplemental disclosures:			
Cash paid for:			
Interest, net of amounts capitalized	\$ 33.1	\$ 29.2	\$ 25.8
Income taxes, net	24.1	65.9	43.7
Noncash investing activities:			
Change in accruals for capital expenditures	5.9	4.6	6.6

See accompanying Notes to Consolidated Financial Statements.

VALHI, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 2022

Note 1 – Summary of significant accounting policies:

Nature of our business. Valhi, Inc. (NYSE: VHI) is primarily a holding company. We operate through our wholly-owned and majority-owned subsidiaries, including NL Industries, Inc., Kronos Worldwide, Inc., CompX International Inc., Tremont LLC, Basic Management, Inc. (“BMI”) and The LandWell Company (“LandWell”). Kronos (NYSE: KRO), NL (NYSE: NL) and CompX (NYSE American: CIX) each file periodic reports with the Securities and Exchange Commission (“SEC”). In January 2018, we sold Waste Control Specialists LLC (“WCS”), see Note 3.

Organization. We are majority owned by a wholly-owned subsidiary of Contran Corporation (“Contran”), which owns approximately 92% of our outstanding common stock at December 31, 2022. A majority of Contran’s outstanding voting stock is held directly by Lisa K. Simmons and various family trusts established for the benefit of Ms. Simmons, Thomas C. Connelly (the husband of Ms. Simmons’ late sister) and their children and for which Ms. Simmons or Mr. Connelly, as applicable, serve as trustee (collectively, the “Other Trusts”). With respect to the Other Trusts for which Mr. Connelly serves as trustee, he is required to vote the shares of Contran voting stock held in such trusts in the same manner as Ms. Simmons. Such voting rights of Ms. Simmons last through April 22, 2030 and are personal to Ms. Simmons. 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, 2022, Ms. Simmons and the Family Trust may be deemed to control Contran and us.

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

Management’s estimates. The preparation of our Consolidated Financial Statements in conformity with accounting principles generally accepted in the United States of America (“GAAP”), requires us to make estimates and assumptions that affect the reported amounts of our assets and liabilities and disclosures of contingent assets and liabilities at each balance sheet date and the reported amounts of our revenues and expenses during each reporting period. Actual results may differ significantly from previously-estimated amounts under different assumptions or conditions.

Principles of consolidation. Our Consolidated Financial Statements include the financial position, results of operations and cash flows of Valhi and our majority-owned and wholly-owned subsidiaries. We eliminate all material intercompany accounts and balances. Changes in ownership are accounted for as equity transactions with no gain or loss recognized on the transaction unless there is a change in control.

Foreign currency translation. The financial statements of our foreign subsidiaries are translated to U.S. dollars. The functional currency of our foreign subsidiaries is generally the local currency of the country. Accordingly, we translate the assets and liabilities at year-end exchange rates, while we translate their revenues and expenses at average exchange rates prevailing during the year. We accumulate the resulting translation adjustments in stockholders’ equity as part of accumulated other comprehensive income (loss), net of related deferred income taxes and noncontrolling interest. We recognize currency transaction gains and losses in income.

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

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

Restricted cash and cash equivalents. We classify cash and cash equivalents that have been segregated or are otherwise limited in use as restricted. Such restrictions principally include amounts pledged as collateral with respect to performance obligations or letters of credit required by regulatory agencies for various environmental remediation sites, cash held in escrow under various hold-back agreements with third-party homebuilders associated with our Real Estate Management and Development Segment and cash pledged under debt agreement covenants or legal settlements. To the extent the restricted amount relates to a recognized liability, we classify the restricted amount as current or noncurrent according to the corresponding liability. To the extent the restricted amount does not relate to a recognized liability, we classify restricted cash as a current asset. Restricted cash and cash equivalents classified as a current asset are presented separately on our Consolidated Balance Sheets, and restricted cash and cash equivalents classified as a noncurrent asset are presented as a component of other assets on our Consolidated Balance Sheets, as disclosed in Note 7.

Marketable securities and securities transactions. We carry marketable debt and equity 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. Any unrealized gains or losses on our marketable equity securities are recognized in other income, net on our Consolidated Statements of Income. We accumulate unrealized gains and losses on marketable debt securities as part of accumulated other comprehensive income (loss), net of related deferred income taxes. See Notes 6, 11 and 13. We base realized gains and losses upon the specific identification of the securities sold.

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

Inventories and cost of sales. We state inventories at the lower of cost or net realizable value. 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, shipping and handling, 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 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.

Land held for development. Land held for development relates to BMI and LandWell. The primary asset of LandWell is certain real property in Henderson, Nevada some of which we are developing for residential lots in a master planned community. Land held for development was recorded at the estimated acquisition date fair value based on a value per developable acre at the time of purchase. Development costs, including infrastructure improvements, real estate taxes, capitalized interest and other costs, some of which may be allocated, are capitalized during the period incurred. We allocate costs to each parcel sold on a pro-rata basis associated with the relevant development activity, and the land basis of parcels expected to be sold within one year are presented in prepaid expenses and other on our Consolidated Balance Sheets. As land parcels are sold, costs of land sales, including land and development costs, are allocated based on specific

identification, relative sales value, square footage or a combination of these methods. All sales and marketing activities and general overhead are charged to selling, general and administrative expense as incurred.

Investment in TiO₂ manufacturing joint venture. We account for our investment in a 50%-owned manufacturing joint venture by the equity method. Distributions received from such investee are classified for statement of cash flow purposes using the “nature of distribution” approach under ASC Topic 230. See Note 7.

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 in our Consolidated Balance Sheets. See Notes 7 and 10. 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 facilities 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.

Goodwill and other intangible assets; amortization expense. Goodwill represents the excess of cost over fair value of individual net assets acquired in business combinations. Goodwill is not subject to periodic amortization. We amortize other intangible assets by the straight-line method over their estimated lives and state them net of accumulated amortization. We evaluate goodwill for impairment, annually or when events or changes in circumstances indicate the carrying value may not be recoverable. We evaluate other intangible assets for impairment when events or changes in circumstances indicate the carrying value may not be recoverable. See Note 8.

Property and equipment; depreciation expense. We state property and equipment at acquisition cost, including capitalized interest on borrowings during the actual construction period of major capital projects. In 2020, 2021 and 2022 we capitalized \$.8 million, \$1.4 million and \$1.7 million, respectively, of interest costs. 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 accelerated depreciation methods for income tax purposes, as permitted. Upon the sale or retirement of an asset, we remove the related cost and accumulated depreciation from the accounts and recognize any gain or loss in income currently.

We expense expenditures for maintenance, repairs and minor renewals as incurred that do not improve or extend the life of the assets, including planned major maintenance.

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 or asset group to the asset's net carrying value to determine if a write-down to fair value is required.

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 deferred financing costs and any premium or discount associated with the issuance of indebtedness as interest expense, and compute amortization by either the interest method or the straight-line method over the term of the applicable issue. See Note 9.

Employee benefit plans. Accounting and funding policies for our defined benefit pension and defined contribution retirement plans are described in Note 11. 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 10.

Income taxes. We and our qualifying subsidiaries are members of Contran's consolidated U.S. federal income tax group (the "Contran Tax Group"). 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 17. As a member of the Contran Tax Group, we are a party to a tax sharing agreement which provides that we compute our tax 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 Contran 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 cash payments for income taxes to Contran of \$6.3 million in 2020, \$25.5 million in 2021 and \$17.5 million in 2022.

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 our Chemicals Segment's non-U.S. subsidiaries which are not deemed to be permanently reinvested. At December 31, 2022, we continue to assert indefinite reinvestment as it relates to our outside basis difference attributable to our Chemicals Segment's investments in non-U.S. subsidiaries, other than post-1986 undistributed earnings of our Chemicals Segment's European subsidiaries and all undistributed earnings of our Chemicals Segment's 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 Chemicals Segment's 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 U.S. Federal tax code imposes a tax on global intangible low-tax 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). 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 (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. 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 Chemicals Segment’s 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 where we believe 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 14.

Environmental remediation and related costs. We record liabilities related to environmental remediation and related costs when estimated future expenditures are probable and reasonably estimable. We adjust these accruals as further information becomes available to us or as circumstances change. We generally do not discount estimated future expenditures to their present value due to the uncertainty of the timing of the ultimate payout. We recognize any recoveries of remediation costs from other parties when we deem their receipt to be probable. We expense any environmental remediation related legal costs as incurred. At December 31, 2021 and 2022 we had not recognized any material receivables for recoveries. See Note 18.

Revenue recognition. *Chemicals and Component Products Segments* – 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 ASC 606, *Revenue from Contracts with Customers*, we record revenue when we satisfy our performance obligations 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). In such arrangements shipping and handling are considered fulfillment activities, and accordingly, such costs are accrued when the related revenue is recognized.

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 we have not assessed whether a contract has a significant financing component. We state sales net of price, early payment and distributor discounts as well as 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. We occasionally receive partial or full consideration from our customers prior to the completion of our performance obligation (shipment of product). We record estimated deferred revenue on the amount to which we are most-likely to be entitled and deferred revenue is recognized into revenue as our performance obligation has been satisfied. Deferred revenue has not been material in the past. 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.

Real Estate Management and Development Segment – Revenues from our Real Estate Management and Development Segment involve providing certain utility services, among other things, to an industrial park located in Henderson, Nevada and prior to the bankruptcy filing on September 10, 2022 of Basic Water Company (“BWC”), a wholly-owned subsidiary of BMI, we were responsible for the delivery of water to the City of Henderson and various other users through a water distribution system owned and operated by BWC. See Note 2. These sales involve single performance obligations and we record revenue when we satisfy our performance obligations to our customers generally after the service is performed and our customers become obligated to pay us and it is probable we will receive payment. Revenue is recorded in an amount that reflects the net consideration we expect to receive in exchange for our services. Prices for our products are based on contracted rates and 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 we have not assessed whether a contract has a significant financing component.

Our revenues also are related to efforts to develop certain real estate in Henderson, Nevada, including approximately 2,100 acres zoned for residential/planned community purposes and approximately 400 acres zoned for commercial and light industrial use. Contracts for land sales are negotiated on an individual basis, involve single performance obligations, and generally require us to complete property development and improvements after title passes to the buyer and we have received all or a substantial portion of the selling price. We recognize land sales revenue associated with the residential/planned community over time using cost-based input methods. Land sales associated with the residential/planned community have variable consideration components which are based on a percentage of the builder’s ultimate selling price of a residential housing unit to their customer (ranging from 2.5% to 3.5% of such sales price). The amount we recognize when a parcel is sold to a home builder is 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. By recognizing revenue over time using cost-based input methods, revenues (including variable consideration) and profits are recognized in the same proportion of our progress towards completion of our contractual obligations, with our progress measured by costs incurred as a percentage of total costs estimated to be incurred relative to the parcels sold. Estimates of total costs expected to be incurred require significant management judgment, and the amount of revenue and profits that have been recognized to date are subject to revisions throughout the development period. The impact on the amount of revenue recognized resulting from any future change in the estimate of total costs estimated to be incurred would be accounted for prospectively in accordance with GAAP. We record estimated deferred revenue on the amount to which we are most-likely to be entitled and deferred revenue is recognized into revenue as the housing units are sold.

Selling, general and administrative expenses; shipping and handling costs; advertising costs; research and development costs. Selling, general and administrative expenses include costs related to marketing, sales, distribution, shipping and handling, research and development, legal, environmental remediation and administrative functions such as accounting, treasury and finance, and include costs for salaries and benefits not associated with our manufacturing process,

travel and entertainment, promotional materials and professional fees. Shipping and handling costs of our Chemicals Segment were approximately \$112 million in 2020, \$132 million in 2021 and \$122 million in 2022. Shipping and handling costs of our Component Products Segment are not material. We expense advertising and research and development costs as incurred. Advertising costs were approximately \$1 million in each of 2020 and 2021 and \$2 million in 2022. Research and development costs were approximately \$16 million in 2020, \$17 million in 2021 and \$16 million in 2022.

Note 2 – Business and geographic segments:

Business segment	Entity	% controlled at December 31, 2022
Chemicals	Kronos	81%
Component products	CompX	87%
Real estate management and development	BMI and LandWell	63% - 77%

Our control of Kronos includes 50% we hold directly and 31% held directly by NL. We own 83% of NL. Our control of CompX is through NL. We own 63% of BMI. Our control of LandWell includes the 27% we hold directly and 50% held by BMI.

We are organized based upon our operating subsidiaries. Our operating segments are defined as components of our consolidated operations about which separate financial information is available that is regularly evaluated by our chief operating decision maker in determining how to allocate resources and in assessing performance. Each operating segment is separately managed and each operating segment represents a strategic business unit offering different products.

We have the following three consolidated reportable operating segments.

- *Chemicals* – Our Chemicals Segment is operated through our majority control of Kronos. Kronos is a leading global producer and marketer of value-added titanium dioxide pigments (“TiO₂”). TiO₂ is used to impart whiteness, brightness, opacity and durability to a wide variety of products, including paints, plastics, paper, fibers and ceramics. Additionally, TiO₂ is a critical component of everyday applications, such as coatings, plastics and paper, as well as many specialty products such as inks, cosmetics and pharmaceuticals. See Note 7.
- *Component Products* – We operate in the component products industry through our majority control of CompX. CompX is a leading manufacturer of security products used in the postal, recreational transportation, office and institutional furniture, cabinetry, tool storage, healthcare and a variety of other industries. CompX is also a leading manufacturer of wake enhancement systems, stainless steel exhaust systems, gauges, throttle controls, trim tabs and related hardware and accessories for the recreational marine industry. All CompX production facilities are in the United States.
- *Real Estate Management and Development* – We operate in real estate management and development through our majority control of BMI and LandWell. BMI owns real property in Henderson, Nevada and through its wholly-owned subsidiaries provides utility services to certain industrial and municipal customers. LandWell is engaged in efforts to develop certain land holdings for commercial, industrial and residential purposes in Henderson, Nevada.

We evaluate segment performance based on segment operating income, which we define as income before income taxes and interest expense, exclusive of certain non-recurring items (such as gains or losses on disposition of business units and other long-lived assets outside the ordinary course of business and certain legal settlements) and certain general corporate income and expense items (including securities transactions gains and losses and interest and dividend income), which are not attributable to the operations of the reportable operating segments. The accounting policies of our reportable operating segments are the same as those described in Note 1. Segment results we report may differ from amounts separately reported by our various subsidiaries and affiliates due to purchase accounting adjustments and related amortization or differences in how we define operating income. Intersegment sales are not material.

Interest income included in the calculation of segment operating income is not material in 2020, 2021 or 2022. Capital expenditures include additions to property and equipment. Depreciation and amortization related to each reportable operating segment includes amortization of any intangible assets attributable to the segment. Amortization of deferred financing costs and any premium or discount associated with the issuance of indebtedness is included in interest expense.

Segment assets are comprised of all assets attributable to each reportable operating segment, including goodwill and other intangible assets. Our investment in the TiO₂ manufacturing joint venture (see Note 7) is included in the Chemicals Segment's assets. Corporate assets are not attributable to any operating segment and consist principally of cash and cash equivalents, restricted cash and restricted cash equivalents and marketable securities.

	Years ended December 31,		
	2020	2021	2022
	(In millions)		
Net sales:			
Chemicals	\$ 1,638.8	\$ 1,939.4	\$ 1,930.2
Component products	114.5	140.8	166.6
Real estate management and development	96.4	216.2	125.7
Total net sales	<u>\$ 1,849.7</u>	<u>\$ 2,296.4</u>	<u>\$ 2,222.5</u>
Cost of sales:			
Chemicals	\$ 1,291.0	\$ 1,494.5	\$ 1,540.2
Component products	81.7	98.1	117.8
Real estate management and development	64.9	123.6	74.1
Total cost of sales	<u>\$ 1,437.6</u>	<u>\$ 1,716.2</u>	<u>\$ 1,732.1</u>
Gross margin:			
Chemicals	\$ 347.8	\$ 444.9	\$ 390.0
Component products	32.8	42.7	48.8
Real estate management and development	31.5	92.6	51.6
Total gross margin	<u>\$ 412.1</u>	<u>\$ 580.2</u>	<u>\$ 490.4</u>
Operating income:			
Chemicals	\$ 126.5	\$ 200.8	\$ 174.6
Component products	11.8	20.5	25.4
Real estate management and development	47.8	97.3	39.4
Total operating income	186.1	318.6	239.4
General corporate items:			
Interest income and other	4.7	4.0	10.4
Insurance recoveries	1.6	.1	.1
Gain on land sales	.5	16.0	—
Other components of net periodic pension and OPEB expense	(20.1)	(17.0)	(13.9)
Changes in market value of Valhi common stock held by subsidiaries	(1.7)	3.3	(1.6)
General expenses, net	(34.3)	(34.7)	(36.6)
Interest expense	(36.2)	(32.5)	(27.9)
Income from continuing operations before income taxes	<u>\$ 100.6</u>	<u>\$ 257.8</u>	<u>\$ 169.9</u>

Included in the determination of Chemicals operating income is a business interruption insurance settlement gain of \$2.7 million recognized in the third quarter of 2022. See Note 13. Infrastructure reimbursements and land related income is included in the determination of Real Estate Management and Development operating income. See Notes 7 and 13.

BMI provides certain utility services, among other things, to an industrial park located in Henderson, Nevada and prior to BWC's bankruptcy filing on September 10, 2022 was responsible for the delivery of water to the City of Henderson and various other users under long-term contracts through a water delivery system owned and operated by BWC. BWC's water delivery system operated on Lake Mead in Nevada. Due to the Western drought, water levels in Lake Mead have been declining for much of the last twenty years. As a result of water release curtailments upstream of Lake Mead which

began late in the second quarter, Lake Mead water levels have dropped precipitously to historically low levels. On June 30, 2022 BWC was no longer able to pump water without the risk of damaging the system and consequently ceased operations at its water intake facility to best preserve the system. Current estimates of Lake Mead water levels do not indicate lake levels will be sufficient to enable BWC to resume pumping water for the foreseeable future. We considered BWC's inability to pump water from Lake Mead to be a triggering event under the ASC 360 *Property, Plant, and Equipment*, which caused us to evaluate the water system fixed assets for impairment. Because BWC was unable to deliver water under its current contracts and therefore unable to generate revenue, we determined the water system's assets were fully impaired except to the extent certain equipment had alternative use outside of BWC's operations, in which case those assets were written down to estimated salvage value. The \$16.4 million impairment charge primarily recognized in the second quarter of 2022 represents the write down of the book value to the estimated salvage value of the assets. Without the ability to pump and deliver water to its customers, BWC's operating expenses exceeded its revenues, and on September 10, 2022 BWC and its subsidiaries voluntarily filed for Chapter 11 bankruptcy protection in the United States Bankruptcy Court for the District of Nevada. Because BWC has filed for bankruptcy protection, we and BMI can no longer affirmatively assert we control BWC and, as such, in accordance with ASC 810, *Consolidation*, we deconsolidated BWC as of the date of the bankruptcy filing and recognized a loss of \$2.0 million in the third quarter of 2022 on the deconsolidation. In addition, BMI had an outstanding intercompany accounts receivable balance with BWC on the date of the bankruptcy filing, and we recognized \$1.3 million of bad debt expense to fully reserve this balance during the third quarter of 2022. All of these charges are included in the determination of the Real Estate Management and Development's operating income in 2022.

	Years ended December 31,		
	2020	2021	2022
	(In millions)		
Depreciation and amortization:			
Chemicals	\$ 61.9	\$ 52.8	\$ 53.1
Component products	3.8	3.8	4.0
Real estate management and development	2.8	2.7	1.4
Total	\$ 68.5	\$ 59.3	\$ 58.5
Capital expenditures:			
Chemicals	\$ 62.8	\$ 58.6	\$ 63.2
Component products	1.7	4.1	3.7
Real estate management and development	1.0	1.4	.7
Total	\$ 65.5	\$ 64.1	\$ 67.6
	December 31,		
	2020	2021	2022
	(In millions)		
Total assets:			
Operating segments:			
Chemicals	\$ 2,400.7	\$ 2,373.1	\$ 2,293.5
Component products	138.0	146.4	131.3
Real estate management and development	171.3	259.3	219.2
Corporate and eliminations	179.3	226.4	191.7
Total	\$ 2,889.3	\$ 3,005.2	\$ 2,835.7

Geographic information. We attribute net sales to the place of manufacture (point-of-origin) and the location of the customer (point-of-destination); we attribute property and equipment to their physical location. At December 31, 2022 the net assets of our non-U.S. subsidiaries included in consolidated net assets approximated \$699 million (in 2021 the total approximated \$575 million).

	Years ended December 31,		
	2020	2021	2022
	(In millions)		
Net sales - point of origin:			
United States	\$ 1,189.8	\$ 1,409.1	\$ 1,518.9
Germany	836.0	971.7	895.4
Canada	319.5	371.9	389.4
Belgium	249.5	295.7	306.5
Norway	211.8	257.2	273.5
Eliminations	(956.9)	(1,009.2)	(1,161.2)
Total	<u>\$ 1,849.7</u>	<u>\$ 2,296.4</u>	<u>\$ 2,222.5</u>
Net sales - point of destination:			
North America	\$ 778.2	\$ 999.7	\$ 985.4
Europe	783.8	945.7	879.0
Asia and other	287.7	351.0	358.1
Total	<u>\$ 1,849.7</u>	<u>\$ 2,296.4</u>	<u>\$ 2,222.5</u>

	December 31,		
	2020	2021	2022
	(In millions)		
Net property and equipment:			
United States	\$ 67.8	\$ 63.6	\$ 45.8
Germany	237.5	214.8	204.7
Canada	88.6	91.1	88.3
Belgium	108.4	107.7	101.4
Norway	88.1	86.4	83.6
Total	<u>\$ 590.4</u>	<u>\$ 563.6</u>	<u>\$ 523.8</u>

Note 3 – Business combinations, dispositions and related transactions:

Kronos Worldwide, Inc.

Prior to 2020, Kronos' board of directors authorized the repurchase of up to 2.0 million shares of its common stock in open market transactions, including block purchases, or in privately-negotiated transactions at unspecified prices and over an unspecified period of time. Kronos may repurchase its 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, Kronos may terminate the program prior to its completion. Kronos uses cash on hand or other sources of liquidity to acquire the shares. Repurchased shares are added to Kronos' treasury shares and subsequently cancelled upon approval of the Kronos board of directors. In 2020, Kronos acquired 122,489 shares of its common stock in market transactions for an aggregate purchase price of \$1.0 million and subsequently cancelled all such shares. In 2021, Kronos acquired 14,409 shares of its common stock in market transactions for an aggregate purchase price of \$.2 million and subsequently cancelled all such shares. In 2022, Kronos acquired 217,778 shares of its common stock in market transactions for an aggregate purchase price of \$2.5 million. Of these shares, 73,881 shares were purchased in the first quarter and subsequently cancelled, and 143,897 shares were purchased in the fourth quarter and are accounted for as Kronos' treasury stock at December 31, 2022. At December 31, 2022, 1,331,332 shares are available for repurchase under this stock repurchase program.

CompX International Inc.

Prior to 2020, CompX's board of directors authorized various repurchases of its Class A common stock in open market transactions, including block purchases, or in privately-negotiated transactions at unspecified prices and over an unspecified period of time. CompX may repurchase its 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, CompX may terminate the program prior to its completion. CompX would generally use cash on hand to acquire the shares. Repurchased shares will be added to CompX's treasury and cancelled. CompX did not make any repurchases under the plan during 2020. In 2021 CompX acquired 75,000 shares of its Class A common stock in market transactions for an aggregate purchase price of \$1.3 million and subsequently cancelled all such shares. During the second quarter of 2022, CompX acquired 78,900 shares of its Class A common stock for an aggregate amount of \$1.7 million and subsequently cancelled all such shares. Of the shares repurchased in 2022, 70,000 shares were purchased in a market transaction, and 8,900 shares were purchased from two affiliates in two separate private transactions that were also approved in advance by CompX's independent directors. At December 31, 2022, 523,647 shares were available for purchase under these authorizations.

NL Industries, Inc.

During the second quarter of 2022, NL purchased 2,000 shares of its common stock from Kronos for a nominal amount in a private transaction that was approved in advance by NL's independent directors and subsequently cancelled all such shares.

Discontinued Operations – Waste Control Specialists LLC

Pursuant to an agreement we entered into in December 2017, on January 26, 2018 we completed the sale of our former Waste Management Segment to JFL-WCS Partners, LLC ("JFL Partners"), an entity sponsored by certain investment affiliates of J.F. Lehman & Company, for consideration consisting of the assumption of all of WCS' third-party indebtedness and other liabilities. We recognized a pre-tax gain of \$4.9 million (\$4.3 million, net of tax) in the fourth quarter of 2020 related to proceeds received from JFL Partners in final settlement of an earn-out provision in the sale agreement.

Note 4 – Accounts and other receivables, net:

	December 31,	
	2021	2022
	(In millions)	
Trade accounts receivable:		
Kronos	\$ 326.3	\$ 220.3
CompX	15.6	17.9
BMI/LandWell	2.8	2.3
VAT and other receivables	38.0	35.4
Allowance for doubtful accounts	(2.0)	(4.9)
Total	<u>\$ 380.7</u>	<u>\$ 271.0</u>

Note 5 – Inventories, net:

	December 31,	
	2021	2022
	(In millions)	
Raw materials:		
Chemicals	\$ 76.3	\$ 145.3
Component products	5.0	6.2
Total raw materials	81.3	151.5
Work in process:		
Chemicals	30.4	32.0
Component products	16.8	20.0
Total in-process products	47.2	52.0
Finished products:		
Chemicals	246.4	350.7
Component products	3.8	5.1
Total finished products	250.2	355.8
Supplies (chemicals)	80.0	81.5
Total	\$ 458.7	\$ 640.8

Note 6 – Marketable securities:

	Market value	Cost or amortized cost	Unrealized loss, net
	(In millions)		
December 31, 2021:			
Current assets	\$ 2.6	\$ 2.6	\$ —
Noncurrent assets	\$ 3.3	\$ 3.3	\$ —
December 31, 2022:			
Current assets	\$ 75.1	\$ 75.7	\$ (.6)
Noncurrent assets	\$ 1.2	\$ 1.2	\$ —

	Fair Value Measurements		
	Total	Quoted Prices in Active Markets (Level 1) (In millions)	Significant Other Observable Inputs (Level 2)
December 31, 2021:			
Current assets - fixed income securities	\$ 2.6	\$ —	\$ 2.6
Noncurrent assets:			
Fixed income securities	\$ 1.3	\$ —	\$ 1.3
Mutual funds	2.0	2.0	—
Total	\$ 3.3	\$ 2.0	\$ 1.3
December 31, 2022:			
Current assets:			
Fixed income securities	\$ 73.3	\$ —	\$ 73.3
Mutual funds	1.8	1.8	—
Total	\$ 75.1	\$ 1.8	\$ 73.3
Noncurrent assets - fixed income securities			
	\$ 1.2	\$ —	\$ 1.2

Our marketable securities are primarily invested in U.S. government treasuries. The fair value of our marketable securities are either determined using Level 1 inputs (because the securities are actively traded) or determined using Level 2 inputs (because although these securities are traded, in many cases the market is not active and the year-end valuation is generally based on the last trade of the year, which may be several days prior to December 31).

Note 7 – Investment in TiO₂ manufacturing joint venture and other assets:

	December 31,	
	2021	2022
	(In millions)	
Other assets:		
Restricted cash and cash equivalents	\$ 41.9	\$ 37.2
Note receivables - OPA	38.7	49.3
Land held for development	36.0	29.7
IBNR receivables	34.4	16.8
Operating lease right-of-use assets	19.9	21.5
Other	16.8	24.3
Total	\$ 187.7	\$ 178.8

Investment in TiO₂ manufacturing joint venture. Our Chemicals Segment owns a 50% interest in Louisiana Pigment Company, L.P. (“LPC”). LPC is a manufacturing joint venture whose other 50%-owner is Venator Investments LLC (“Venator Investments”). Venator Investments is a wholly-owned subsidiary of Venator Group, of which Venator Materials PLC owns 100% and is the ultimate parent. LPC owns and operates a chloride-process TiO₂ plant near Lake Charles, Louisiana.

Kronos and Venator Investments are both required to purchase one-half of the TiO₂ produced by LPC, unless Kronos and Venator Investments agree otherwise. LPC operates on a break-even basis and, accordingly, we report no equity in earnings of LPC. Each owner’s acquisition transfer price for its share of the TiO₂ produced is equal to its share of the joint venture’s production costs and interest expense, if any. Kronos’ share of net cost is reported as cost of sales as the related TiO₂ acquired from LPC is sold. We report distributions Kronos receives from LPC, which generally relate to excess cash generated by LPC from its non-cash production costs, and contributions Kronos makes to LPC, which

generally relate to cash required by LPC when it builds working capital, as part of our cash flows from operating activities in our Consolidated Statements of Cash Flows. The components of our net cash distributions from (contributions to) LPC are shown in the table below.

	Years ended December 31,		
	2020	2021	2022
	(In millions)		
Distributions from LPC	\$ 32.7	\$ 28.5	\$ 58.3
Contributions to LPC	(45.5)	(24.7)	(68.8)
Net distributions (contributions)	<u>\$ (12.8)</u>	<u>\$ 3.8</u>	<u>\$ (10.5)</u>

Summary balance sheets of LPC are shown below:

	December 31,	
	2021	2022
	(In millions)	
ASSETS		
Current assets	\$ 111.7	\$ 122.2
Property and equipment, net	142.6	147.4
Total assets	<u>\$ 254.3</u>	<u>\$ 269.6</u>
LIABILITIES AND PARTNERS' EQUITY		
Other liabilities, primarily current	\$ 47.8	\$ 41.2
Partners' equity	206.5	228.4
Total liabilities and partners' equity	<u>\$ 254.3</u>	<u>\$ 269.6</u>

Summary income statements of LPC are shown below:

	Years ended December 31,		
	2020	2021	2022
	(In millions)		
Revenues and other income:			
Kronos	\$ 167.8	\$ 188.6	\$ 225.6
Venator Investments	168.3	189.6	225.9
Total	<u>336.1</u>	<u>378.2</u>	<u>451.5</u>
Cost and expenses:			
Cost of sales	335.7	377.8	451.1
General and administrative	.4	.4	.4
Total	<u>336.1</u>	<u>378.2</u>	<u>451.5</u>
Net income	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>

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. Also see Note 10. Our Chemicals Segment's principal German operating subsidiary leases the land under its Leverkusen TiO₂ production facility pursuant to a lease with Bayer AG that expires in 2050. The Leverkusen facility itself, which Kronos owns and which represents approximately one-third of its current TiO₂ production capacity, is located within Bayer's extensive manufacturing complex.

During 2020, 2021 and 2022, our operating lease expense approximated \$7.6 million, \$7.7 million and \$5.5 million, respectively, (which approximates the amount of cash paid during the period for our operating leases included in the determination of our cash flows from operating activities). During 2020, 2021 and 2022, variable lease expense and short-term lease expense were not material. During 2020, 2021 and 2022, we entered into new operating leases which resulted in the recognition of \$2.5 million, \$3.8 million and \$6.6 million, respectively, in right-of-use operating lease assets

and corresponding liabilities on our Consolidated Balance Sheets. At December 31, 2021 and 2022, the weighted average remaining lease term of our operating leases was approximately 17 years and 15 years, respectively, and the weighted average discount rate associated with such leases was approximately 5.0% in both 2021 and 2022. 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, 2022, maturities of our operating lease liabilities were as follows:

Years ending December 31,	Amount
	(In millions)
2023	\$ 4.5
2024	3.3
2025	2.7
2026	2.4
2027	1.5
2028 and thereafter	17.0
Total remaining lease payments	31.4
Less imputed interest	10.2
Total lease obligations	21.2
Less current obligations	3.8
Long term lease obligations	<u>\$ 17.4</u>

With respect to our land lease associated with our Chemical Segment's Leverkusen facility, we periodically establish the amount of rent for such land lease by agreement with Bayer for periods of at least two years at a time. The lease agreement provides for no formula, index or other mechanism to determine changes in the rent of such land lease; rather, any change in the rent is subject solely to periodic negotiation between Bayer and us. As such, we will account for any change in the rent associated with such lease as a lease modification. Of the \$21.2 million total lease obligations at December 31, 2022, approximately \$7.2 million relates to our Leverkusen facility land lease.

At December 31, 2022, we have no significant lease commitments that have not yet commenced.

Land held for development. The land held for development relates to BMI and LandWell and is discussed in Note 1.

Note receivables – OPA. Under an Owner Participation Agreement ("OPA") entered into by LandWell with the Redevelopment Agency of the City of Henderson, Nevada, if LandWell develops certain real property for commercial and residential purposes in a master planned community in Henderson, Nevada, the cost of certain public infrastructure may be reimbursed to us through tax increment. The maximum reimbursement under the OPA is \$209 million, and is subject to, among other things, completing construction of approved qualifying public infrastructure, transferring title of such infrastructure to the City of Henderson, receiving approval from the Redevelopment Agency of the funds expended to be eligible for tax increment reimbursement and the existence of a sufficient property tax valuation base and property tax rates in order to generate tax increment reimbursement funds. We are entitled to receive 75% of the tax increment generated by the master planned community through the expiration of the Redevelopment Plan, subject to the qualifications and limitations indicated above. The OPA note receivables represent public infrastructure costs previously incurred for which the Redevelopment Agency has provided its approval for tax increment reimbursement but we have not yet received such reimbursement through tax increment receipts, and are evidenced by a promissory note issued to LandWell by the City of Henderson.

During 2020, 2021 and 2022, we received approval for additional tax increment reimbursement of \$19.1 million (all in the first quarter), \$15.3 million (\$6.2 million in the first quarter and \$9.1 million in the fourth quarter), and \$15.2 million (\$10.0 million in the third quarter and \$5.2 million in the fourth quarter), respectively, which were recognized as other income and are evidenced by a promissory note issued to LandWell by the City of Henderson. The note receivables bear interest at 6% annually and in 2021, the City of Henderson extended the Redevelopment Plan for an additional 15

years which allows us to collect any remaining amounts due under the OPA through 2051. Any unpaid balances at the end of the agreement are forfeited. See Note 13.

Other. We have certain related party transactions with LPC, as more fully described in Note 17.

IBNR receivables relate to certain insurance liabilities, the risk of which we have reinsured with certain third party insurance carriers. We report the insurance liabilities related to these IBNR receivables which have been reinsured as part of noncurrent accrued insurance claims and expenses. Certain of our insurance liabilities are classified as current liabilities and the related IBNR receivables are classified with prepaid expenses and other on our Consolidated Balance Sheets. See Notes 10 and 17.

Note 8 – Goodwill:

We have assigned goodwill to each of our reporting units (as that term is defined in ASC Topic 350-20-20, *Goodwill*) which corresponds to our operating segments. All of our goodwill related to our Chemicals Segment is from our various step acquisitions of NL and Kronos which occurred prior to 2020, as goodwill was determined prior to the adoption of the equity transaction framework provisions of ASC Topic 810. Substantially all of the net goodwill related to the Component Products Segment was generated from CompX’s acquisitions of certain business units and the step acquisitions of CompX. The Component Products Segment goodwill is assigned to the security products reporting unit within that operating segment.

	<u>Operating segment</u>		<u>Total</u>
	<u>Chemicals</u>	<u>Component Products (In millions)</u>	
Balance at December 31, 2020, 2021 and 2022	\$ 352.6	\$ 27.1	\$ 379.7

We test for goodwill impairment at the reporting unit level. In determining the estimated fair value of the reporting units, we use appropriate valuation techniques, such as discounted cash flows and, with respect to our Chemicals Segment, we consider quoted market prices, a Level 1 input, while discounted cash flows are a Level 3 input. We also consider control premiums when assessing fair value using quoted market prices. If the carrying amount of the reporting unit’s net assets exceeds its fair value, an impairment charge is recorded for the amount by which such carrying amount exceeds the reporting unit’s fair value (not to exceed the amount of goodwill recognized). As permitted by GAAP, during 2020, 2021 and 2022 we used the qualitative assessment of ASC 350-20-35 for the Component Products security products reporting unit’s annual impairment test and determined it was not necessary to perform a quantitative goodwill impairment test.

We review goodwill for each of our reporting units for impairment during the third quarter of each year. Goodwill is also evaluated for impairment at other times whenever an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying value. If the fair value of an evaluated asset is less than its book value, the asset is written down to fair value. In 2020, 2021 and 2022, no goodwill impairment was indicated as part of our annual impairment review of goodwill.

Prior to 2020, we recorded an aggregate \$16.5 million goodwill impairment, mostly with respect to our Component Products Segment. Our consolidated gross goodwill at December 31, 2022 is \$396.2 million.

Note 9 – Long-term debt:

	December 31,	
	2021	2022
	(In millions)	
Valhi:		
Contran credit facility	\$ 172.9	\$ 121.4
Subsidiary debt:		
Kronos:		
Senior Notes	448.8	424.1
LandWell:		
Note payable to Western Alliance Business Trust	13.5	12.9
BMI:		
BWC Bank loan from Western Alliance Bank	15.4	—
Other	2.4	1.1
Total subsidiary debt	480.1	438.1
Total debt	653.0	559.5
Less current maturities	3.1	1.8
Total long-term debt	\$ 649.9	\$ 557.7

Valhi – Contran credit facility – We have an unsecured revolving credit facility with Contran which, as amended, provides for borrowings from Contran of up to \$175 million. The facility, as amended, bears interest at prime plus 1% (8.50% at December 31, 2022), and is due on demand, but in any event no earlier than December 31, 2024. The facility contains no financial covenants or other financial restrictions. Valhi pays an unused commitment fee quarterly to Contran on the available balance (except during periods during which Contran would be a net borrower from Valhi). The average interest rate on the credit facility for the year ended December 31, 2022 was 5.86%. During 2022 we had borrowings of \$1 million and repayments of \$51.6 million under this facility, and at December 31, 2022 an additional \$53.6 million was available for borrowings under this facility.

Kronos – Senior Secured Notes – On September 13, 2017, Kronos International, Inc. (“KII”), Kronos’ wholly-owned subsidiary, issued €400 million aggregate principal amount of its 3.75% Senior Secured Notes due September 15, 2025 (the “Senior Notes”), at par value (\$477.6 million when issued). The Senior Notes:

- bear interest at 3.75% per annum, payable semi-annually on March 15 and September 15 of each year, payments began on March 15, 2018;
- have a maturity date of September 15, 2025. Kronos may redeem the Senior Notes at 100.938% of the principal amount, declining to 100% on or after September 15, 2023. If Kronos experiences certain specified change of control events, it would be required to make an offer to purchase the Senior Notes at 101% of the principal amount. Kronos would also be required to make an offer to purchase a specified portion of the Senior Notes at par value in the event that it generates 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;
- are fully and unconditionally guaranteed, jointly and severally, on a senior secured basis by Kronos Worldwide, Inc. and each of its 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 foreign subsidiary that is directly owned by KII or any guarantor;
- contain a number of covenants and restrictions which, among other things, restrict Kronos’ 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 its 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 Kronos' other indebtedness in excess of \$50.0 million.

The carrying value of the Senior Notes at December 31, 2022 is stated net of unamortized debt issuance costs of \$2.4 million (December 31, 2021 - \$3.5 million).

Revolving credit facility – On April 20, 2021, Kronos entered into a \$225 million global revolving credit facility (“Global Revolver”) which matures in April 2026. Borrowings under the Global Revolver are available for Kronos' general corporate purposes. Available borrowings are based on formula-determined amounts of eligible trade receivables and inventories, as defined in the agreement, less any outstanding letters of credit issued under the Global Revolver.

Borrowings by Kronos' Canadian, Belgian and German subsidiaries are limited to \$25 million, €30 million and €60 million, respectively. Any amounts outstanding under the Global Revolver bear interest, at Kronos' option, at the applicable non-base rate (LIBOR, CDOR or EURIBOR, dependent 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%. 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 2022, Kronos had no borrowings or repayments under its Global Revolver and at December 31, 2022, approximately \$211 million was available for borrowing under this revolving facility.

Other – In December 2019, LandWell entered into a \$15.0 million loan agreement with Western Alliance Business Trust. The agreement requires semi-annual payments of principal and interest on April 15 and October 15 aggregating \$1.3 million annually beginning on April 15, 2020 through the maturity date in April 2036 and is payable from the tax increment reimbursement funds received under the OPA. The agreement bears interest at a fixed 4.76% rate and is collateralized by all tax increment reimbursement funds LandWell receives under the OPA. See Note 7.

In February 2017, BWC entered into a \$20.5 million loan agreement with Western Alliance Bank. In 2022, BWC repaid \$8.4 million on this loan prior to September 10, 2022. As a result of BWC's bankruptcy filing, BWC is no longer consolidated in our Consolidated Financial Statements, including the loan from Western Alliance Bank (see Note 2).

Aggregate maturities of long-term debt – Aggregate maturities of debt at December 31, 2022 are presented in the table below.

Years ending December 31,	Amount
	(In millions)
Gross amounts due each year:	
2023	\$ 1.8
2024	122.1
2025	427.3
2026	.8
2027	.8
2028 and thereafter	9.1
Subtotal	561.9
Less amounts representing original issue discount and debt issuance costs	2.4
Total long-term debt	<u>\$ 559.5</u>

We are in compliance with all of our debt covenants at December 31, 2022.

Note 10 – Accounts payable and accrued liabilities:

	December 31,	
	2021	2022
	(In millions)	
Accounts payable:		
Kronos	\$ 143.6	\$ 177.2
CompX	3.4	3.5
BMI/LandWell	5.3	18.7
Other	.4	—
Total	<u>\$ 152.7</u>	<u>\$ 199.4</u>
Current accrued liabilities:		
Deferred income	\$ 125.8	\$ 110.7
Employee benefits	39.9	34.4
Accrued sales discounts and rebates	28.7	25.6
Interest	5.3	4.9
Operating lease liabilities	3.7	3.8
Environmental remediation and related costs	3.5	3.8
Other	57.9	60.4
Total	<u>\$ 264.8</u>	<u>\$ 243.6</u>
Noncurrent accrued liabilities:		
Accrued development costs	\$ 55.4	\$ 48.1
Deferred income	81.6	25.9
Insurance claims and expenses	36.4	18.7
Operating lease liabilities	15.8	17.4
Other postretirement benefits	10.2	7.1
Employee benefits	6.1	4.8
Reserve for uncertain tax positions	3.5	.3
Other	10.0	6.7
Total	<u>\$ 219.0</u>	<u>\$ 129.0</u>

The risks associated with certain of our accrued insurance claims and expenses have been reinsured, and the related IBNR receivables are recognized as noncurrent assets to the extent the related liability is classified as a noncurrent liability. See Note 7. Our reserve for uncertain tax positions is discussed in Note 14.

Note 11 – Defined contribution and defined benefit retirement:

Defined contribution plans. Certain of our subsidiaries maintain various defined contribution pension plans for our employees worldwide. Defined contribution plan expense approximated \$6.6 million in 2020, \$7.8 million in 2021 and \$8.0 million in 2022.

Defined benefit plans. Kronos and NL sponsor various defined benefit pension plans worldwide. The benefits under our defined benefit 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 foreign) 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).

In accordance with applicable U.K. pension regulations, we entered into an agreement in March 2021 for the bulk annuity purchase, or “buy-in” with a specialist insurer of defined benefit pension plans. Following the buy-in, individual policies will replace the bulk annuity policy in a “buy-out” which is expected to be completed in 2023. The buy-out is expected to be completed with existing plan funds. At the completion of the buy-out we will remove the assets and liabilities of the U.K. pension plan from our Consolidated Financial Statements and a final plan settlement gain or loss (which we are currently unable to estimate) will be included in net periodic pension cost. At December 31, 2022 the U.K. plan had a benefit obligation of \$7.8 million, plan assets of \$9.3 million and a pension plan asset of \$1.5 million was recognized in our Consolidated Balance Sheet.

We expect to contribute the equivalent of approximately \$18 million to all of our defined benefit pension plans during 2023. Benefit payments to plan participants out of plan assets are expected to be the equivalent of:

Years ending December 31,	Amount
	(In millions)
2023	\$ 26.5
2024	28.0
2025	28.4
2026	29.6
2027	31.7
Next 5 years	173.2

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

	Years ended December 31,	
	2021	2022
	(In millions)	
Change in projected benefit obligations (“PBO”):		
Balance at beginning of the year	\$ 63.2	\$ 58.0
Interest cost	1.3	1.4
Actuarial gains	(1.8)	(11.8)
Settlements	(.5)	—
Benefits paid	(4.2)	(4.2)
Balance at end of the year	<u>\$ 58.0</u>	<u>\$ 43.4</u>
Change in plan assets:		
Fair value at beginning of the year	\$ 53.3	\$ 52.4
Actual return on plan assets	1.7	(10.7)
Employer contributions	1.6	1.6
Benefits paid	(4.2)	(4.2)
Fair value at end of the year	<u>\$ 52.4</u>	<u>\$ 39.1</u>
Funded status	<u>\$ (5.6)</u>	<u>\$ (4.3)</u>
Amounts recognized in the Consolidated Balance Sheets:		
Accrued pension costs:		
Current	\$ (.1)	\$ (.1)
Noncurrent	(5.5)	(4.2)
Total	(5.6)	(4.3)
Accumulated other comprehensive loss - actuarial losses	33.2	32.2
Total	<u>\$ 27.6</u>	<u>\$ 27.9</u>
Accumulated benefit obligations (“ABO”)	<u>\$ 58.0</u>	<u>\$ 43.4</u>

The total net underfunded status of our U.S. defined benefit pension plans decreased from \$5.6 million at December 31, 2021 to \$4.3 million at December 31, 2022 due to the change in our PBO during 2022 exceeding the change in our plan assets during 2022. The decrease in our PBO in 2022 was primarily attributable to higher actuarial gains due to the increase in discount rates from year end 2021. The decrease in our plan assets in 2022 was primarily attributable to negative plan asset returns in 2022.

The components of our net periodic defined benefit pension cost for U.S. plans are presented in the table below. The amounts shown below for the amortization of recognized actuarial losses for 2020, 2021 and 2022 were recognized as components of our accumulated other comprehensive income (loss) at December 31, 2019, 2020 and 2021, respectively, net of deferred income taxes and noncontrolling interest.

	Years ended December 31,		
	2020	2021	2022
	(In millions)		
Net periodic pension cost for U.S. plans:			
Interest cost	\$ 1.9	\$ 1.3	\$ 1.4
Expected return on plan assets	(2.1)	(2.1)	(2.0)
Recognized net actuarial losses	2.1	2.1	1.9
Settlements	—	(.5)	—
Total	<u>\$ 1.9</u>	<u>\$.8</u>	<u>\$ 1.3</u>

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

	December 31,	
	2021	2022
	(In millions)	
Plans for which the ABO exceeds plan assets:		
Projected benefit obligations	\$ 58.0	\$ 43.4
Accumulated benefit obligations	58.0	43.4
Fair value of plan assets	52.4	39.1

The discount rate assumptions used in determining the actuarial present value of the benefit obligation for our U.S. defined benefit pension plans as of December 31, 2021 and 2022 are 2.6% and 5.3%, respectively. The impact of assumed increases in future compensation levels does not have an effect on the benefit obligation as the plans are 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 plans for 2020, 2021 and 2022 are presented in the table below. The impact of assumed increases in future compensation levels does not have an effect on the periodic pension cost as the plans are frozen with regards to compensation.

	Years ended December 31,		
	2020	2021	2022
Discount rate	3.1%	2.2%	2.6%
Long-term return on plan assets	4.5%	4.0%	4.0%

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

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

	Years ended December 31,	
	2021	2022
	(In millions)	
Change in PBO:		
Balance at beginning of the year	\$ 855.8	\$ 758.1
Service cost	14.7	11.3
Interest cost	8.3	10.6
Participants' contributions	2.0	1.7
Actuarial gains	(43.9)	(198.6)
Settlements	—	(1.4)
Change in currency exchange rates	(55.2)	(51.2)
Benefits paid	(23.6)	(21.9)
Balance at end of the year	<u>\$ 758.1</u>	<u>\$ 508.6</u>
Change in plan assets:		
Fair value at beginning of the year	\$ 494.8	\$ 481.5
Actual return on plan assets	16.7	(52.5)
Employer contributions	18.7	15.0
Participants' contributions	2.0	1.7
Settlements	—	(1.2)
Change in currency exchange rates	(27.1)	(32.1)
Benefits paid	(23.6)	(21.9)
Fair value at end of the year	<u>\$ 481.5</u>	<u>\$ 390.5</u>
Funded status	<u>\$ (276.6)</u>	<u>\$ (118.1)</u>
Amounts recognized in the Consolidated Balance Sheets:		
Noncurrent pension asset	\$ 9.0	\$ 9.3
Noncurrent accrued pension costs	(285.6)	(127.4)
Total	<u>(276.6)</u>	<u>(118.1)</u>
Accumulated other comprehensive loss:		
Actuarial losses	238.3	90.0
Prior service cost	.4	.4
Total	<u>238.7</u>	<u>90.4</u>
Total	<u>\$ (37.9)</u>	<u>\$ (27.7)</u>
ABO	<u>\$ 733.8</u>	<u>\$ 493.9</u>

The total net underfunded status of our non-U.S. defined benefit pension plans decreased from \$276.6 million at December 31, 2021 to \$118.1 million at December 31, 2022 due to the change in our PBO during 2022 exceeding the change in plan assets during 2022. The decrease in our PBO in 2022 was primarily attributable to higher actuarial gains due to the increase in discount rates from year end 2021 and favorable foreign currency fluctuations, primarily from the strengthening of the U.S. dollar relative to the euro. The decrease in our plan assets in 2022 was primarily attributable to the net effects of negative plan asset returns in 2022, unfavorable currency fluctuations, primarily from the strengthening of the U.S. dollar relative to the euro, and employer contributions.

The components of our net periodic pension benefit cost for our non-U.S. plans are presented in the table below. The amounts shown below for the amortization of prior service cost and recognized net actuarial losses for 2020, 2021 and 2022 were recognized as components of our accumulated other comprehensive income (loss) at December 31, 2019, 2020 and 2021, respectively, net of deferred income taxes and noncontrolling interest.

	Years ended December 31,		
	2020	2021	2022
	(In millions)		
Net periodic pension cost for non-U.S. plans:			
Service cost	\$ 13.3	\$ 14.7	\$ 11.3
Interest cost	10.1	8.3	10.6
Expected return on plan assets	(9.0)	(11.4)	(11.1)
Recognized net actuarial losses	17.3	19.5	12.8
Amortization of prior service cost	.2	.2	.1
Settlements	—	—	.4
Total	<u>\$ 31.9</u>	<u>\$ 31.3</u>	<u>\$ 24.1</u>

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,	
	2021	2022
	(In millions)	
Plans for which the ABO exceeds plan assets:		
Projected benefit obligations	\$ 695.2	\$ 403.5
Accumulated benefit obligations	674.4	392.4
Fair value of plan assets	409.4	276.0

The key actuarial assumptions used to determine our non-U.S. benefit obligations as of December 31, 2021 and 2022 are as follows:

	December 31,	
	2021	2022
Discount rate	1.5%	3.9%
Increase in future compensation levels	2.6%	2.7%

A summary of our key actuarial assumptions used to determine non-U.S. net periodic benefit cost for 2020, 2021 and 2022 are as follows:

	Years ended December 31,		
	2020	2021	2022
Discount rate	1.4%	1.0%	1.5%
Increase in future compensation levels	2.6%	2.6%	2.6%
Long-term return on plan assets	2.0%	2.4%	2.5%

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 for all of our periodic defined benefit plans for actuarial losses and prior service cost at December 31, 2021 and 2022 have not 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. These amounts, net of deferred income taxes and noncontrolling interest, are recognized in our accumulated other comprehensive income (loss) at December 31, 2021 and 2022. We expect approximately \$3.8 million and \$.1 million of the unrecognized

actuarial losses and prior service cost, respectively, will be recognized as components of our periodic defined benefit pension cost in 2023. The table below details the changes in other comprehensive income (loss) during 2020, 2021 and 2022.

	Years ended December 31,		
	2020	2021	2022
	(In millions)		
Changes in plan assets and benefit obligations recognized in other comprehensive income (loss):			
Net actuarial gains (losses)	\$ (37.7)	\$ 50.7	\$ 134.1
Amortization of unrecognized:			
Net actuarial losses	19.4	21.6	14.7
Prior service cost	.2	.2	.1
Settlements	—	—	.4
Total	\$ (18.1)	\$ 72.5	\$ 149.3

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

- In Germany, the composition of our plan assets is established to satisfy the requirements of the German insurance commissioner. 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 10 - 20% to equity securities and 80 - 90% to fixed income securities. We expect the long-term rate of return for such investments to approximate the applicable 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 15% to equity securities, 62% 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%, 4%, 6% and 4%, respectively. The majority of Norwegian plan assets are Level 1 inputs because they are traded in active markets; however approximately 17% 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 34% to equity securities, 59% to fixed income securities, and the remainder is allocated to multi-asset strategies. The expected long-term rate of return for such investments is approximately 7%, 5% and 4%, respectively (before plan administrative expenses). Approximately 90% of our U.S. plan assets are invested in funds that are valued at net asset value (NAV) and not subject to classification in the fair value hierarchy.

- We also have plan assets in Belgium and the United Kingdom. The Belgian plan assets are invested in certain individualized fixed income insurance contracts for the benefit of each plan participant as required by the local regulators and are therefore a Level 3 input. The United Kingdom plan assets are invested primarily in insurance contracts and are 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, 2021 and 2022 is shown in the tables below.

	Fair Value Measurements at December 31, 2021				
	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	\$ 282.9	\$ —	\$ —	\$ 282.9	\$ —
Canada:					
Local currency equities	.2	.2	—	—	—
Non local currency equities	21.9	21.9	—	—	—
Local currency fixed income	89.3	89.3	—	—	—
Cash and other	.8	.8	—	—	—
Norway:					
Local currency equities	3.1	3.1	—	—	—
Non local currency equities	5.9	5.9	—	—	—
Local currency fixed income	25.1	15.9	9.2	—	—
Non local currency fixed income	6.7	6.7	—	—	—
Real estate	9.1	—	—	9.1	—
Cash and other	7.0	6.4	—	.6	—
U.S.:					
Equities	18.5	1.2	—	.1	17.2
Fixed income	30.6	—	—	—	30.6
Cash and other	3.2	1.9	—	—	1.3
Other	29.6	1.8	—	27.8	—
Total	\$ 533.9	\$ 155.1	\$ 9.2	\$ 320.5	\$ 49.1

Fair Value Measurements at December 31, 2022					
	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	\$ 234.0	\$ —	\$ —	\$ 234.0	\$ —
Canada:					
Local currency equities	.1	.1	—	—	—
Non local currency equities	11.0	11.0	—	—	—
Local currency fixed income	72.9	72.9	—	—	—
Cash and other	.6	.6	—	—	—
Norway:					
Local currency equities	2.3	2.3	—	—	—
Non local currency equities	4.7	4.7	—	—	—
Local currency fixed income	21.8	7.0	14.8	—	—
Non local currency fixed income	8.4	8.4	—	—	—
Real estate	7.8	—	—	7.8	—
Cash and other	2.7	2.4	—	.3	—
U.S.:					
Equities	12.4	1.0	—	—	11.4
Fixed income	22.9	.2	—	—	22.7
Cash and other	3.8	2.8	—	—	1.0
Other	24.2	1.5	—	22.7	—
Total	\$ 429.6	\$ 114.9	\$ 14.8	\$ 264.8	\$ 35.1

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

	Years ended December 31,	
	2021	2022
	(In millions)	
Fair value at beginning of year	\$ 314.8	\$ 320.5
Gain (loss) on assets held at end of year	15.2	(31.0)
Gain (loss) on assets sold during the year	.4	(3.6)
Assets purchased	16.2	13.8
Assets sold	(14.8)	(15.5)
Transfers in (out)	13.9	(.1)
Currency exchange rate fluctuations	(25.2)	(19.3)
Fair value at end of year	<u>\$ 320.5</u>	<u>\$ 264.8</u>

Note 12 – Disaggregation of sales:

The following table disaggregates the net sales of our Chemicals Segment by place of manufacture (point of origin) and the location of the customer (point of destination), which are the categories that depict how the nature, amount, timing and uncertainty of revenue and cash flows are affected by economic factors.

	Years ended December 31,		
	2020	2021	2022
	(In millions)		
Net sales - point of origin:			
United States	\$ 978.8	\$ 1,052.1	\$ 1,226.6
Germany	836.0	971.7	895.4
Canada	319.5	371.9	389.4
Belgium	249.5	295.7	306.5
Norway	211.8	257.2	273.5
Eliminations	(956.8)	(1,009.2)	(1,161.2)
Total	<u>\$ 1,638.8</u>	<u>\$ 1,939.4</u>	<u>\$ 1,930.2</u>
Net sales - point of destination:			
Europe	\$ 783.2	\$ 945.0	\$ 878.3
North America	569.3	645.7	695.7
Other	286.3	348.7	356.2
Total	<u>\$ 1,638.8</u>	<u>\$ 1,939.4</u>	<u>\$ 1,930.2</u>

The following table disaggregates the net sales of our Component Products and Real Estate Management and Development Segments by major product line, which are the categories that depict how the nature, amount, timing and uncertainty of revenue and cash flows for these segments are affected by economic factors.

	Years ended December 31,		
	2020	2021	2022
	(In millions)		
Component Products:			
Net sales:			
Security products	\$ 87.9	\$ 105.1	\$ 114.5
Marine components	26.6	35.7	52.1
Total	<u>\$ 114.5</u>	<u>\$ 140.8</u>	<u>\$ 166.6</u>
Real Estate Management and Development:			
Net sales:			
Land sales	\$ 87.0	\$ 207.8	\$ 120.9
Water delivery	7.6	6.8	3.6
Utility and other	1.8	1.6	1.2
Total	<u>\$ 96.4</u>	<u>\$ 216.2</u>	<u>\$ 125.7</u>

Note 13 – Other income, net:

	Years ended December 31,		
	2020	2021	2022
	(In millions)		
Interest income and other:			
Interest and dividends	\$ 4.8	\$ 4.0	\$ 10.9
Securities transactions, net	(.1)	—	(.5)
Total	4.7	4.0	10.4
Infrastructure reimbursement	19.7	15.3	16.0
Gain on land sales	4.5	16.0	—
Currency transactions, net	(4.0)	1.6	11.5
Insurance recoveries	1.6	.1	2.8
Other, net	1.9	2.0	3.0
Total	\$ 28.4	\$ 39.0	\$ 43.7

In the third quarter of 2020, BMI recognized a pre-tax gain of \$4.0 million related to proceeds received associated with a prior land sale. In 2021 we sold excess property not used in our operations for net proceeds of approximately \$23.4 million (including \$8.4 million in the second quarter and \$15.0 million in the third quarter) and recognized a pre-tax gain of \$16.0 million (including \$5.6 million in the second quarter and \$10.4 million in the third quarter).

Infrastructure reimbursement – Infrastructure reimbursements related to the OPA are discussed in Note 7. LandWell also has an agreement with the energy utility providing electric power to the Cadence master planned community under which certain costs incurred for the development of power infrastructure may be reimbursed to LandWell. During 2022, LandWell received \$.8 million (all in the second quarter) in reimbursement for past costs incurred.

Insurance recoveries – In the first quarter of 2020, Kronos recognized a gain of \$1.5 million related to an insurance settlement for a property damage claim.

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 Kronos' losses from property damage and its share of LPC's lost production and other costs resulting from the disruption of operations were covered by insurance. Kronos recognized a gain of \$2.7 million related to its business interruption claim in the third quarter of 2022.

Note 14 – Income taxes:

	Years ended December 31,		
	2020	2021	2022
	(In millions)		
Pre-tax income:			
United States	\$ 45.2	\$ 131.4	\$ 81.4
Non-U.S. subsidiaries	55.4	126.4	88.5
Total	<u>\$ 100.6</u>	<u>\$ 257.8</u>	<u>\$ 169.9</u>
Expected tax expense at U.S. federal statutory income tax rate of 21%			
	\$ 21.1	\$ 54.1	\$ 35.7
Non-U.S. tax rates	.5	4.5	2.0
Incremental net tax benefit on earnings and losses of U.S. and non-U.S. tax group companies			
	(8.7)	(2.0)	(1.7)
Valuation allowance	3.8	.9	(3.0)
Global intangible low-tax income, net	2.2	2.8	1.8
Tax rate changes	(.2)	—	—
U.S. state income taxes, net	.9	1.5	1.5
Adjustment to the reserve for uncertain tax positions, net	(3.8)	(2.6)	(2.9)
Nondeductible expenses	1.0	1.1	1.0
Other, net	(.9)	(.2)	(.6)
Income tax expense	<u>\$ 15.9</u>	<u>\$ 60.1</u>	<u>\$ 33.8</u>
Components of income tax expense:			
Currently payable:			
U.S. federal and state	\$ 13.3	\$ 29.7	\$ 16.3
Non-U.S.	14.9	21.5	20.1
Total	<u>28.2</u>	<u>51.2</u>	<u>36.4</u>
Deferred income taxes (benefit):			
U.S. federal and state	(10.3)	(1.7)	(3.9)
Non-U.S.	(2.0)	10.6	1.3
Total	<u>(12.3)</u>	<u>8.9</u>	<u>(2.6)</u>
Income tax expense	<u>\$ 15.9</u>	<u>\$ 60.1</u>	<u>\$ 33.8</u>
Comprehensive provision for income taxes allocable to:			
Income from continuing operations	\$ 15.9	\$ 60.1	\$ 33.8
Discontinued operations	.6	—	—
Other comprehensive income (loss):			
Currency translation	1.6	(.8)	(3.3)
Pension plans	(7.3)	29.7	60.7
Other	(.4)	—	.9
Total	<u>\$ 10.4</u>	<u>\$ 89.0</u>	<u>\$ 92.1</u>

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 on non-U.S. and non-tax group companies includes, as applicable, (i) deferred income taxes (or deferred income tax benefits) associated with the current year earnings of all our Chemicals Segment's non-U.S. subsidiaries, (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 Chemicals Segment's 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, (iii) deferred income taxes associated with our direct investment in Kronos and (iv) current and deferred income taxes associated with distributions and earnings from our investment in LandWell and BMI.

The components of the net deferred income taxes at December 31, 2021 and 2022 are summarized in the following table.

	December 31,			
	2021		2022	
	Assets	Liabilities	Assets	Liabilities
	(In millions)			
Tax effect of temporary differences related to:				
Inventories	\$ —	\$ (2.5)	\$ —	\$ (5.3)
Property and equipment	—	(70.4)	—	(62.8)
Lease assets (liabilities)	5.0	(5.1)	5.3	(5.4)
Accrued OPEB costs	2.8	—	2.0	—
Accrued pension costs	74.1	—	22.0	—
Accrued environmental liabilities	28.5	—	25.9	—
Other deductible differences	9.3	—	12.0	—
Other taxable differences	—	(15.5)	—	(15.8)
Investments in subsidiaries and affiliates	7.3	(52.7)	6.7	(62.3)
Tax on unremitted earnings of non-U.S. subsidiaries	—	(11.2)	—	(11.4)
Tax loss and tax credit carryforwards	89.4	—	82.6	—
Valuation allowance	(18.4)	—	(16.5)	—
Adjusted gross deferred tax assets (liabilities)	198.0	(157.4)	140.0	(163.0)
Netting of items by tax jurisdiction	(111.2)	111.2	(99.5)	99.5
Net noncurrent deferred tax asset (liability)	<u>\$ 86.8</u>	<u>\$ (46.2)</u>	<u>\$ 40.5</u>	<u>\$ (63.5)</u>

Our Chemicals Segment has substantial net operating loss (NOL) carryforwards in Germany (the equivalent of \$414 million for German corporate purposes at December 31, 2022) and in Belgium (the equivalent of \$13 million for Belgian corporate tax purposes at December 31, 2022). At December 31, 2022, we have concluded that no deferred income tax asset valuation allowance is required to be recognized with respect to such carryforwards, principally because (i) such carryforwards have an indefinite carryforward period, (ii) we have utilized a portion of such carryforwards during the most recent three-year period and (iii) we currently expect to utilize the remainder of such carryforwards over the long term. However, prior to the complete utilization of such carryforwards, if we were to generate additional losses in our German or Belgian operations for an extended period of time, or if applicable law were to change such that the carryforward period was no longer indefinite, 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.

Prior to the enactment of the 2017 Tax Act the undistributed earnings of our Chemicals Segment's European subsidiaries were deemed to be permanently reinvested (we had not made a similar determination with respect to the undistributed earnings of our Chemicals Segment's 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 \$74.1 million and elected to pay such tax over an eight year period beginning in 2018. At December 31, 2022, the balance of our unpaid Transition Tax is \$44.5 million, which will be paid in annual installments over the remainder of the eight-year period, which ends in 2025. Of such \$44.5 million, \$33.4 million is recorded as a noncurrent payable to affiliate (income taxes payable to Contran) classified as a noncurrent liability in our Consolidated Balance Sheet, and \$11.1 million is included with our current payable to affiliate (income taxes payable to Contran) classified as a current liability (a portion of our noncurrent income tax payable to affiliate was reclassified to our current payable to affiliate for the portion of our 2022 Transition Tax installment due within the next twelve months). See Note 17.

We recognize deferred income taxes with respect to the excess of the financial reporting carrying amount over the income tax basis of our direct investment in Kronos common stock because the exemption under GAAP to avoid such recognition of deferred income taxes is not available to us. At December 31, 2022, we have recognized a deferred income tax liability with respect to our direct investment in Kronos of \$55.0 million. There is a maximum amount (or cap) of such deferred income taxes we are required to recognize with respect to our direct investment in Kronos. The maximum amount of such deferred income tax liability we would be required to have recognized (the cap) is \$155.4 million. During 2022, we recognized a non-cash deferred income tax expense with respect to our direct investment in Kronos of \$1.2 million for the increase in the deferred income taxes required to be recognized with respect to the excess of the financial reporting carrying amount over the income tax basis of our direct investment in Kronos common stock, to the extent such increase related to our equity in Kronos' net income during such period. We recognized a similar non-cash deferred income tax expense of \$5.0 million in 2021 and a non-cash deferred income tax benefit of \$2.4 million in 2020. A portion of the net change with respect to the excess of the financial reporting carrying amount over the income tax basis of our direct investment in Kronos common stock during such periods related to our equity in Kronos' other comprehensive income (loss) items, and the amounts shown in the table above for income tax expense (benefit) allocated to other comprehensive income (loss) items includes amounts related to our equity in Kronos' other comprehensive income (loss) items.

On March 27, 2020, the "Coronavirus Aid, Relief and Economic Security (CARES) Act" was signed into law in response to the COVID-19 pandemic. The CARES Act, among other things, includes provisions relating to refundable payroll tax credits, deferment of employer side social security payments, modifications to the limitation of business interest for tax years beginning in 2019 and 2020 and technical corrections to tax depreciation methods for qualified improvement property. 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. We determined our interest expense was limited under these provisions and we recorded deferred tax assets for the carryforwards associated with the nondeductible portion of our interest expense. We also concluded we were required to recognize a valuation allowance for such deferred tax asset under the more-likely-than-not recognition criteria. The CARES Act modification to the business interest provisions increased the business interest limitation from 30% of adjusted taxable income to 50% of adjusted taxable income which increased our allowable interest expense deduction for 2019 and 2020. Consequently, in the first quarter of 2020 we recognized a cash tax benefit of \$1.0 million related to the reversal of the valuation allowance recognized in 2019 for the portion of the disallowed interest expense we did not expect to fully utilize at December 31, 2019 and we considered such modifications in our 2020 provision for income taxes. Although these CARES Act provisions expired at the end of 2020, in 2021 we recognized less disallowed interest expense than in recent years and a lower valuation allowance for the portion of the carryforward we believe does not meet the more-likely-than-not measurement criteria primarily due to the increase in our adjusted taxable income. During 2022, we determined we were able to utilize a portion of the business interest expense carryforward and accordingly we recognized an aggregate non-cash income tax benefit of \$2.9 million as a reduction of the valuation allowance.

On August 16, 2022, the Inflation Reduction Act was signed into law. Among other things, this legislation provides for a 15% corporate alternative minimum tax on certain large corporations, imposes a 1% excise tax on qualifying stock buybacks occurring after December 31, 2022, and provides for certain energy-related tax credits. We have evaluated the relevant provisions of the Act and do not expect them to have a material impact on our provision.

Tax authorities are examining certain of our U.S. and non-U.S. tax returns and have or may propose tax deficiencies, including penalties and interest. Because of the inherent uncertainties involved in settlement initiatives and court and tax proceedings, we cannot guarantee that these tax matters, 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.

The following table shows the changes in the amount of our uncertain tax positions (exclusive of the effect of interest and penalties) during 2020, 2021 and 2022:

	Years ended December 31,		
	2020	2021	2022
	(In millions)		
Unrecognized tax benefits:			
Amount at beginning of year	\$ 13.8	\$ 9.6	\$ 6.4
Net increase (decrease):			
Tax positions taken in prior periods	(.3)	—	—
Tax positions taken in current period	.6	.6	.7
Lapse due to applicable statute of limitations	(4.8)	(3.6)	(3.4)
Changes in currency exchange rates	.3	(.2)	(.2)
Amount at end of year	<u>\$ 9.6</u>	<u>\$ 6.4</u>	<u>\$ 3.5</u>

If our uncertain tax positions were recognized, a benefit of \$3.5 million at December 31, 2022, would affect our effective income tax rate. We currently estimate that our unrecognized tax benefits will decrease by approximately \$1.2 million, excluding interest, during the next twelve months related to the expiration of certain statutes of limitations.

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 foreign jurisdictions, principally in Germany, Canada, Belgium and Norway. Our U.S. income tax returns prior to 2019 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: 2017 for Norway; 2017 for Canada; 2018 for Germany; and 2019 for Belgium.

We accrue interest and penalties on our uncertain tax positions as a component of our provision for income taxes. We accrued interest and penalties of \$.8 million during 2020, \$.7 million during 2021 and \$.2 million during 2022, and at December 31, 2021 and 2022 we had \$.9 million and \$.1 million, respectively, accrued for interest and an immaterial amount accrued for penalties for our uncertain tax positions.

Note 15 – Noncontrolling interest in subsidiaries:

	December 31,	
	2021	2022
	(In millions)	
Noncontrolling interest in net assets:		
Kronos Worldwide	\$ 226.6	\$ 239.3
NL Industries	75.7	79.0
CompX International	22.5	20.6
BMI	8.3	6.9
LandWell	(4.2)	2.4
Total	<u>\$ 328.9</u>	<u>\$ 348.2</u>

	Years ended December 31,		
	2020	2021	2022
	(In millions)		
Noncontrolling interest in net income of subsidiaries:			
Kronos Worldwide	\$ 12.1	\$ 22.0	\$ 20.0
NL Industries	2.5	8.7	5.8
CompX International	1.4	2.2	2.6
BMI	7.6	14.7	2.8
LandWell	10.2	22.9	14.7
Total	<u>\$ 33.8</u>	<u>\$ 70.5</u>	<u>\$ 45.9</u>

Note 16 – Valhi stockholders’ equity:

	Shares of common stock		
	Issued	Treasury (In millions)	Outstanding
Balance at December 31, 2020, 2021 and 2022	29.6	(1.1)	28.5

Valhi common stock. We issued a nominal number of shares of Valhi common stock during 2020, 2021 and 2022, associated with annual stock awards to members of our board of directors.

Valhi share repurchases and cancellations. Prior to 2020 our board of directors authorized the repurchase of shares of our common stock in open market transactions, including block purchases, or in privately negotiated transactions, which may include transactions with our affiliates or subsidiaries. The aggregate number of shares authorized for repurchase is 833,333, and we have approximately 334,000 shares available for repurchase at December 31, 2022. We may purchase the 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 completion. We will use cash on hand to acquire the shares. Repurchased shares could be retired and cancelled or may be added to our treasury stock and used for employee benefit plans, future acquisitions or other corporate purposes. We did not make any such purchases under the plan in 2020, 2021 or 2022.

Treasury stock. At December 31, 2021 and 2022, NL and Kronos held approximately 1.2 million and .1 million shares of our common stock, respectively. The treasury stock we reported for financial reporting purposes at December 31, 2021 and 2022 represents our proportional interest in these shares of our common stock held by NL and Kronos, at NL’s and Kronos’ historical cost basis. The remaining portion of these shares of our common stock, which are attributable to the noncontrolling interest of NL and Kronos, are reflected in our consolidated balance sheet at fair value and are classified as part of other noncurrent assets. Under Delaware Corporation Law, 100% (and not the proportionate interest) of a parent company’s shares held by a majority-owned subsidiary of the parent is considered to be treasury stock for voting purposes. As a result, our common shares outstanding for financial reporting purposes differ from those outstanding for legal purposes. Any unrealized gains or losses on the shares of our common stock attributable to the noncontrolling interest of Kronos and NL are recognized in the determination of each of Kronos and NL’s respective net income or loss. Under the principles of consolidation we eliminate any gains or losses associated with our common stock to the extent of our proportional ownership interest in each subsidiary. We recognized a loss of \$1.7 million in 2020, a gain of \$3.3 million in 2021 and a loss of \$1.6 million in 2022 in our Consolidated Statements of Income which represents the unrealized gain (loss) in respect of these shares attributable to the noncontrolling interest of Kronos and NL. See Note 2.

Preferred stock. At December 31, 2019, our outstanding preferred stock consisted of 5,000 shares of our Series A Preferred Stock having a liquidation preference of \$133,466.75 per share, or an aggregate liquidation preference of \$667.3 million. The outstanding shares of Series A Preferred Stock were held by Contran and represented all of the shares of Series A Preferred Stock we were authorized to issue. The preferred stock had a par value of \$.01 per share and paid a non-cumulative cash dividend at an annual rate of 6% of the aggregate liquidation preference only when authorized and declared by our board of directors. The shares of Series A Preferred Stock were non-convertible, and the shares did not carry any redemption or call features (either at our option or the option of the holder). A holder of the Series A shares did not have any voting rights, except in limited circumstances, and was not entitled to a preferential dividend right that is senior to our shares of common stock. We had not declared any dividends on the Series A Preferred Stock since its issuance. Effective August 10, 2020, we, Contran and a wholly owned subsidiary of Contran entered into a contribution agreement pursuant to which, on August 10, 2020, the 6% Series A Preferred Stock was voluntarily contributed to our capital for no consideration and without the issuance of additional securities by us. Our independent directors approved acceptance of such contribution and entering into the contribution agreement. The contribution had no impact on our consolidated financial position, results of operations or liquidity and the contribution did not have any tax consequences to us. On August 10, 2020, following the contribution of the 6% Series A Preferred Stock to us, we filed a Certificate of Elimination with the Secretary of State of Delaware and, as a result, the 5,000 shares that were designated as 6% Series A Preferred Stock have been returned to the status of authorized but unissued shares of the preferred stock, \$.01 par value per share, without designation as to series.

Valhi director stock plan. Prior to 2020, our board of directors adopted a plan that provided for the award of stock to our board of directors, and up to a maximum of 200,000 shares could be awarded. Under the plan, we awarded 50,000 shares in 2020. (The share numbers under the then-existing plan have not been adjusted for the 1-for-12 reverse stock split in 2020.) In March 2021, our board of directors voted to replace the existing director stock plan with a new plan that would provide for the award of stock to non-employee members of our board of directors, and up to a maximum of 100,000 shares could be awarded. The new plan was approved at our May 2021 shareholder meeting, at which time the prior director stock plan terminated. We awarded 4,000 shares and 2,400 shares under this plan in 2021 and 2022, respectively, and at December 31, 2022, 93,600 shares are available for future award under this new plan.

Stock plans of subsidiaries. Kronos, NL and CompX each maintain plans which provide for the award of their common stock to their board of directors. At December 31, 2022, Kronos, NL and CompX had 111,800, 51,150 and 131,050 shares of their respective common stock available for future award under respective plans.

Accumulated other comprehensive income (loss). Accumulated other comprehensive income (loss) attributable to Valhi stockholders comprises changes in equity as presented in the table below.

	Years ended December 31,		
	2020	2021	2022
	(In millions)		
Accumulated other comprehensive income (loss) (net of tax and noncontrolling interest):			
Marketable securities:			
Balance at beginning of year	\$ 1.7	\$ 1.8	\$ 1.7
Other comprehensive income:			
Unrealized gain (loss) arising during the year	.1	(.1)	(.1)
Balance at end of year	<u>\$ 1.8</u>	<u>\$ 1.7</u>	<u>\$ 1.6</u>
Currency translation:			
Balance at beginning of year	\$ (76.8)	\$ (67.4)	\$ (72.2)
Other comprehensive gain (loss) arising during the year	9.4	(4.8)	(19.3)
Balance at end of year	<u>\$ (67.4)</u>	<u>\$ (72.2)</u>	<u>\$ (91.5)</u>
Defined benefit pension plans:			
Balance at beginning of year	\$ (146.6)	\$ (154.1)	\$ (120.9)
Other comprehensive income:			
Amortization of prior service cost and net losses included in net periodic pension cost	9.8	10.7	7.3
Net actuarial gain (loss) arising during the year	(17.3)	22.5	58.4
Plan settlement	—	—	.2
Balance at end of year	<u>\$ (154.1)</u>	<u>\$ (120.9)</u>	<u>\$ (55.0)</u>
OPEB plans:			
Balance at beginning of year	\$ 1.0	\$.3	\$.1
Other comprehensive income:			
Amortization of prior service credit and net losses included in net periodic OPEB cost	(.8)	(.3)	(.5)
Net actuarial gain arising during the year	.1	.1	1.4
Balance at end of year	<u>\$.3</u>	<u>\$.1</u>	<u>\$ 1.0</u>
Total accumulated other comprehensive loss:			
Balance at beginning of year	\$ (220.7)	\$ (219.4)	\$ (191.3)
Other comprehensive income	1.3	28.1	47.4
Balance at end of year	<u>\$ (219.4)</u>	<u>\$ (191.3)</u>	<u>\$ (143.9)</u>

See Note 11 for amounts related to our defined benefit pension plans and Note 10 for amounts related to our OPEB plans.

Note 17 – 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.

From time to time, we may have loans and advances outstanding between us and various related parties, including Contran, 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. While certain of these loans may be of a lesser credit quality than cash equivalent instruments otherwise available to us, we believe we have evaluated the credit risks involved and appropriately reflect those credit risks in the terms of the applicable loans. When we borrow from related parties, we are generally able to pay a lower rate of interest than we would pay if we borrowed from unrelated parties. See Note 9 for more information on the Valhi credit facility with Contran. We paid Contran \$14.2 million, \$10.4 million and \$9.2 million in interest on borrowings and unused commitment fees under credit facilities in 2020, 2021 and 2022, respectively.

Under the terms of various intercorporate services agreements (“ISAs”) we enter into with Contran, employees of Contran provide us certain management, tax planning, financial and administrative services on a fee basis. Such fees are based on 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 all of our subsidiaries, thus allowing certain Contran employees to provide services to multiple companies but only be compensated by Contran. We negotiate fees annually, and agreements renew quarterly. The net ISA fees charged to us by Contran aggregated \$41.3 million in 2020, \$41.0 million in 2021 and \$41.2 million in 2022.

At December 31, 2022, we had an aggregate 16.7 million shares of our Kronos common stock pledged as collateral for certain debt obligations of Contran. We receive a fee from Contran for pledging these Kronos shares, determined by a formula based on the market value of the shares pledged. We received \$1.4 million in 2020, \$1.5 million in 2021 and \$1.2 million in 2022 from Contran for this pledge.

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, our subsidiary, 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 other 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. The aggregate amount paid under the group insurance program by us, our subsidiaries and our joint venture in 2020, 2021 and 2022 was \$23.1 million, \$27.1 million and \$25.2 million, respectively, which amounts principally represent insurance premiums. The aggregate 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 2023.

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 amongst 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 justify the risk associated with the potential for any uninsured loss.

Contran and certain of its subsidiaries 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 each of 2020, 2021 and 2022. Under the terms of a sublease agreement between Contran and Kronos, Kronos leases certain office space from Contran. Kronos paid Contran \$.4 million in each of 2020 and 2021 and \$.5 million in 2022 for such rent and related ancillary services. We expect that these relationships with Contran will continue in 2023.

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

	December 31,	
	2021	2022
	(In millions)	
Current receivables from affiliates:		
Contran trade items	\$.1	\$.2
LPC	15.8	—
Other	2.6	2.7
Total	<u>\$ 18.5</u>	<u>\$ 2.9</u>
Current payables to affiliates:		
LPC	\$ 17.3	\$ 17.1
Contran - income taxes	1.5	5.8
Total	<u>\$ 18.8</u>	<u>\$ 22.9</u>
Noncurrent payable to affiliates:		
Contran - income taxes	<u>\$ 44.5</u>	<u>\$ 33.4</u>
Payables to affiliate included in long-term debt:		
Valhi - Contran credit facility	<u>\$ 172.9</u>	<u>\$ 121.4</u>

Amounts payable to LPC are generally for the purchase of TiO₂, while amounts receivable from LPC are generally from the sale of TiO₂ feedstock. See Note 7. Purchases of TiO₂ from LPC were \$167.8 million in 2020, \$188.6 million in 2021 and \$225.6 million in 2022. Sales of feedstock to LPC were \$84.2 million in 2020, \$85.4 million in 2021 and \$106.9 million in 2022. The noncurrent payable to Contran for income taxes is discussed in Note 14.

Note 18 – Commitments and contingencies:

Lead pigment litigation

NL's former operations included the manufacture of lead pigments for use in paint and lead-based paint. NL, other former manufacturers of lead pigments for use in paint and lead-based paint (together, the "former pigment manufacturers"), and the Lead Industries Association (LIA), which discontinued business operations in 2002, have been named as defendants in various legal proceedings seeking damages for personal injury, property damage and governmental expenditures allegedly caused by the use of lead-based paints. Certain of these actions have been filed by or on behalf of states, counties, cities or their public housing authorities and school districts, and certain others have been asserted as class actions. These lawsuits seek recovery under a variety of theories, including public and private nuisance, negligent product design, negligent failure to warn, strict liability, breach of warranty, conspiracy/concert of action, aiding and abetting,

enterprise liability, market share or risk contribution liability, intentional tort, fraud and misrepresentation, violations of state consumer protection statutes, supplier negligence and similar claims.

The plaintiffs in these actions generally seek to impose on the defendants responsibility for lead paint abatement and health concerns associated with the use of lead-based paints, including damages for personal injury, contribution and/or indemnification for medical expenses, medical monitoring expenses and costs for educational programs. To the extent the plaintiffs seek compensatory or punitive damages in these actions, such damages are generally unspecified. In some cases, the damages are unspecified pursuant to the requirements of applicable state law. A number of cases are inactive or have been dismissed or withdrawn. Most of the remaining cases are in various pre-trial stages. Some are on appeal following dismissal or summary judgment rulings or a trial verdict in favor of either the defendants or the plaintiffs.

NL believes these actions are without merit, and intends to continue to deny all allegations of wrongdoing and liability and to defend against all actions vigorously. We do not believe it is probable we have incurred any liability with respect to pending lead pigment litigation cases to which NL is a party, and with respect to all such lead pigment litigation cases to which NL is a party, we believe liability to NL that may result, if any, in this regard cannot be reasonably estimated, because:

- NL has never settled any of the market share, intentional tort, fraud, nuisance, supplier negligence, breach of warranty, conspiracy, misrepresentation, aiding and abetting, enterprise liability, or statutory cases (other than the Santa Clara case discussed below),
- no final, non-appealable adverse judgments have ever been entered against NL, and
- NL has never ultimately been found liable with respect to any such litigation matters, including over 100 cases over a thirty-year period for which NL was previously a party and for which NL has been dismissed without any finding of liability.

Accordingly, we have not accrued any amounts for any of the pending lead pigment and lead-based paint litigation cases filed by or on behalf of states, counties, cities or their public housing authorities and school districts, or those asserted as class actions. In addition, we have determined that liability to NL which may result, if any, cannot be reasonably estimated at this time because there is no prior history of a loss of this nature on which an estimate could be made and there is no substantive information available upon which an estimate could be based.

In the matter titled *County of Santa Clara v. Atlantic Richfield Company, et al.* (Superior Court of the State of California, County of Santa Clara, Case No. 1-00-CV-788657) on July 24, 2019, an order approving a global settlement agreement entered into among all of the plaintiffs and the three defendants remaining in the case (the Sherwin Williams Company, ConAgra Grocery Products and NL) was entered by the court and the case was dismissed with prejudice. The global settlement agreement provides that an aggregate \$305 million will be paid collectively by the three co-defendants in full satisfaction of all claims resulting in a dismissal of the case with prejudice and the resolution of (i) all pending and future claims by the plaintiffs in the case, and (ii) all potential claims for contribution or indemnity between NL and its co-defendants in respect to the case. In the agreement, NL expressly denies any and all liability and the dismissal of the case with prejudice was entered by the court without a final judgment of liability entered against NL. The settlement agreement fully concludes this matter.

Under the terms of the global settlement agreement, each defendant must pay an aggregate \$101.7 million to the plaintiffs as follows: \$25.0 million within sixty days of the court's approval of the settlement and dismissal of the case, and the remaining \$76.7 million in six annual installments beginning on the first anniversary of the initial payment (\$12.0 million for the first five installments and \$16.7 million for the sixth installment). NL's sixth installment will be made with funds already on deposit at the court, which is included in noncurrent restricted cash on our Consolidated Balance Sheets, that are committed to the settlement, including all accrued interest at the date of payment, with any remaining balance to be paid by NL (and any amounts on deposit in excess of the final payment would be returned to NL). Pursuant to the settlement agreement, NL placed an additional \$9.0 million into an escrow account which is included in noncurrent restricted cash on our Consolidated Balance Sheets.

For financial reporting purposes, using a discount rate of 1.9% per annum, we discounted the aggregate \$101.7 million settlement to the estimated net present value of \$96.3 million. NL made the initial \$25.0 million payment in September 2019 and the first, second and third annual installment payments of \$12.0 million each in September 2020, 2021 and 2022. We recognized an aggregate accretion expense of \$1.3 million, \$1.1 million and \$.9 million in 2020, 2021, and 2022, respectively.

New cases may continue to be filed against us. We do not know if we will incur liability in the future in respect of any of the pending or possible litigation in view of the inherent uncertainties involved in court and jury rulings. In the future, if new information regarding such matters becomes available to us (such as a final, non-appealable adverse verdict against us or otherwise ultimately being found liable with respect to such matters), at that time we would consider such information in evaluating any remaining cases then-pending against us as to whether it might then have become probable we have incurred liability with respect to these matters, and whether such liability, if any, could have become reasonably estimable. The resolution of any of these cases could result in the recognition of a loss contingency accrual that could have a material adverse impact on our net income for the interim or annual period during which such liability is recognized and a material adverse impact on our consolidated financial condition and liquidity.

Environmental matters and litigation

Our operations are governed by various environmental laws and regulations. Certain of our businesses 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. Our businesses 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 plants and to strive to improve environmental performance. From time to time, our businesses may be subject to environmental regulatory enforcement under U.S. and non-U.S. statutes, the resolution of which typically involves the establishment of compliance programs. It is possible that future developments, such as stricter requirements of environmental laws and enforcement policies, could adversely affect our production, handling, use, storage, transportation, sale or disposal of such substances. We believe all of our facilities are in substantial compliance with applicable environmental laws.

Certain properties and facilities used in our former operations (primarily NL's former operations), including divested primary and secondary lead smelters and former mining locations, are the subject of civil litigation, administrative proceedings or investigations arising under federal and state environmental laws and common law. Additionally, in connection with past operating practices, we are currently involved as a defendant, potentially responsible party ("PRP") or both, pursuant to the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act ("CERCLA"), and similar state laws in various governmental and private actions associated with waste disposal sites, mining locations, and facilities that we or our predecessors and NL or its predecessors, subsidiaries or their predecessors currently or previously owned, operated or used, certain of which are on the United States Environmental Protection Agency's ("EPA") Superfund National Priorities List or similar state lists. These proceedings seek cleanup costs, damages for personal injury or property damage and/or damages for injury to natural resources. Certain of these proceedings involve claims for substantial amounts. Although we may be jointly and severally liable for these costs, in most cases we are only one of a number of PRPs who may also be jointly and severally liable, and among whom costs may be shared or allocated. In addition, we are occasionally named as a party in a number of personal injury lawsuits filed in various jurisdictions alleging claims related to environmental conditions alleged to have resulted from our operations.

Obligations associated with environmental remediation and related matters are difficult to assess and estimate for numerous reasons including the:

- complexity and differing interpretations of governmental regulations,
- number of PRPs and their ability or willingness to fund such allocation of costs,
- financial capabilities of the PRPs and the allocation of costs among them,

- solvency of other PRPs,
- multiplicity of possible solutions,
- number of years of investigatory, remedial and monitoring activity required,
- uncertainty over the extent, if any, to which our former operations might have contributed to the conditions allegedly giving rise to such personal injury, property damage, natural resource and related claims, and
- number of years between former operations and notice of claims and lack of information and documents about the former operations.

In addition, the imposition of more stringent standards or requirements under environmental laws or regulations, new developments or changes regarding site cleanup costs or the allocation of costs among PRPs, solvency of other PRPs, the results of future testing and analysis undertaken with respect to certain sites or a determination that we are potentially responsible for the release of hazardous substances at other sites, could cause our expenditures to exceed our current estimates. Actual costs could exceed accrued amounts or the upper end of the range for sites for which estimates have been made, and costs may be incurred for sites where no estimates presently can be made. Further, additional environmental and related matters may arise in the future. If we were to incur any future liability, this could have a material adverse effect on our consolidated financial statements, results of operations and liquidity.

We record liabilities related to environmental remediation and related matters (including costs associated with damages for personal injury or property damage and/or damages for injury to natural resources) when estimated future expenditures are probable and reasonably estimable. We adjust such accruals as further information becomes available to us or as circumstances change. Unless the amounts and timing of such estimated future expenditures are fixed and reasonably determinable, we generally do not discount estimated future expenditures to their present value due to the uncertainty of the timing of the payout. We recognize recoveries of costs from other parties, if any, as assets when their receipt is deemed probable. At December 31, 2021 and 2022, we had not recognized any material receivables for recoveries.

We do not know and cannot estimate the exact time frame over which we will make payments for our accrued environmental and related costs. The timing of payments depends upon a number of factors, including but not limited to the timing of the actual remediation process; which in turn depends on factors outside of our control. At each balance sheet date, we estimate the amount of the accrued environmental and related costs which we expect to pay within the next twelve months, and we classify this estimate as a current liability. We classify the remaining accrued environmental costs as a noncurrent liability.

The table below presents a summary of the activity in our accrued environmental costs during 2020, 2021, and 2022.

	Years ended December 31,		
	2020	2021	2022
	(In millions)		
Balance at the beginning of the year	\$ 99.7	\$ 98.6	\$ 97.6
Additions charged to expense, net	.7	1.6	1.7
Payments, net	(1.9)	(2.5)	(2.0)
Changes in currency exchange rates and other	.1	(.1)	—
Balance at the end of the year	<u>\$ 98.6</u>	<u>\$ 97.6</u>	<u>\$ 97.3</u>
Amounts recognized in the Consolidated Balance Sheet at the end of the year:			
Current liabilities	\$ 3.4	\$ 3.5	\$ 3.8
Noncurrent liabilities	95.2	94.1	93.5
Total	<u>\$ 98.6</u>	<u>\$ 97.6</u>	<u>\$ 97.3</u>

NL. On a quarterly basis, NL evaluates the potential range of its liability for environmental remediation and related costs at sites where it has been named as a PRP or defendant. At December 31, 2022, NL had accrued approximately \$92 million related to approximately 33 sites associated with remediation and related matters it believes are at the present time and/or in their current phase reasonably estimable. The upper end of the range of reasonably possible costs to NL for remediation and related matters for which NL believes it is possible to estimate costs is approximately \$119 million, including the amount currently accrued.

NL believes that it is not reasonably possible to estimate the range of costs for certain sites. At December 31, 2022, there were approximately five sites for which NL is not currently able to reasonably estimate a range of costs. For these sites, generally the investigation is in the early stages, and NL is unable to determine whether or not NL actually had any association with the site, the nature of its responsibility, if any, for the contamination at the site, if any, and the extent of contamination at and cost to remediate the site. The timing and availability of information on these sites is dependent on events outside of NL's control, such as when the party alleging liability provides information to NL. At certain of these previously inactive sites, NL has received general and special notices of liability from the EPA and/or state agencies alleging that NL, sometimes with other PRPs, are liable for past and future costs of remediating environmental contamination allegedly caused by former operations. These notifications may assert that NL, along with any other alleged PRPs, are liable for past and/or future clean-up costs. As further information becomes available to us for any of these sites which would allow us to estimate a range of costs, we would at that time adjust our accruals. Any such adjustment could result in the recognition of an accrual that would have a material effect on our consolidated financial statements, results of operations and liquidity.

Other. We have also accrued approximately \$5 million at December 31, 2022 for other environmental cleanup matters which represents our best estimate of the liability.

Insurance coverage claims

We are involved in certain legal proceedings with a number of our former insurance carriers regarding the nature and extent of the carriers' obligations to us under insurance policies with respect to certain lead pigment and asbestos lawsuits. The issue of whether insurance coverage for defense costs or indemnity or both will be found to exist for our lead pigment and asbestos litigation depends upon a variety of factors and we cannot assure you that such insurance coverage will be available.

We have agreements with certain of our former insurance carriers pursuant to which the carriers reimburse us for a portion of our future lead pigment litigation defense costs, and one such carrier reimburses us for a portion of our future asbestos litigation defense costs. We are not able to determine how much we will ultimately recover from these carriers for defense costs incurred by us because of certain issues that arise regarding which defense costs qualify for reimbursement. While we continue to seek additional insurance recoveries, we do not know if we will be successful in obtaining reimbursement for either defense costs or indemnity. Accordingly, we recognize insurance recoveries in income only when receipt of the recovery is probable and we are able to reasonably estimate the amount of the recovery.

Other litigation

In addition to the litigation described above, we and our affiliates are involved in various other environmental, contractual, product liability, patent (or intellectual property), employment and other claims and disputes incidental to our present and former businesses. In certain cases, we have insurance coverage for these items, although we do not expect additional material insurance coverage for our environmental matters. We currently believe that the disposition of all of these various other claims and disputes (including asbestos-related claims), individually or in the aggregate, should not have a material adverse effect on our consolidated financial position, results of operations or liquidity beyond the accruals already provided.

Other matters

Concentrations of credit risk – Sales of TiO₂ accounted for approximately 93% of our Chemicals Segment's sales in 2020 and 92% in each of 2021 and 2022. The remaining sales result from the mining and sale of ilmenite ore (a raw

material used in the sulfate pigment production process), and the manufacture and sale of iron-based water treatment chemicals and certain titanium chemical products (derived from co-products of the TiO₂ production processes). TiO₂ is generally sold to the paint, plastics and paper industries. Such markets are generally considered “quality-of-life” markets whose demand for TiO₂ is influenced by the relative economic well-being of the various geographic regions. Our Chemicals Segment sells TiO₂ to approximately 4,000 customers, with the top ten customers approximating 34% of our Chemicals Segment’s net sales in 2020, 32% in 2021 and 33% in 2022. One customer accounted for approximately 10% of our Chemicals Segment’s net sales in both 2020 and 2022. Our Chemicals Segment did not have sales to a single customer comprising 10% or more of its net sales in 2021. The table below shows the approximate percentage of our Chemicals Segment’s TiO₂ sales by volume for its significant markets, Europe and North America, for the last three years.

	2020	2021	2022
Europe	46%	46%	45%
North America	36%	37%	39%

Our Component Products Segment’s products are sold primarily in North America to original equipment manufacturers. The ten largest customers related to our Component Product’s Segment accounted for approximately 48% of our Component Products Segment’s sales in 2020, 51% in 2021 and 52% in 2022. One customer of the security products reporting unit accounted for approximately 17% of the Component Products Segment’s total sales in 2020, 16% in 2021 and 14% in 2022. One customer of the marine components reporting unit accounted for 12% of the Component Products Segment’s total sales in 2022.

Our Real Estate Management and Development Segment’s revenues are land sales income and water and electric delivery fees. During 2020, we had sales to one customer that exceeded 10% of our Real Estate Management and Development Segment’s net sales related to land sales. During 2021, we had sales to three customers that each exceeded 10% of our Real Estate Management and Development Segment’s net sales all related to land sales. During 2022, we had sales to two customers that each exceeded 10% of our Real Estate Management and Development Segment’s net sales both related to land sales.

Long-term contracts – Our Chemicals Segment has long-term supply contracts that provide for certain of its TiO₂ feedstock requirements through 2026. The agreements require Kronos to purchase certain minimum quantities of feedstock with minimum purchase commitments aggregating approximately \$1.0 billion over the life of the contracts in years subsequent to December 31, 2022 (including approximately \$600 million committed to be purchased in 2023). In addition, our Chemicals Segment has other long-term supply and service contracts that provide for various raw materials and services. These agreements require Kronos to purchase certain minimum quantities or services with minimum purchase commitments aggregating approximately \$84 million at December 31, 2022 (including \$42 million committed to be purchased in 2023).

Income taxes – Prior to 2020, NL made certain pro-rata distributions to its stockholders in the form of shares of Kronos common stock. All of NL’s distributions of Kronos common stock were taxable to NL and NL recognized a taxable gain equal to the difference between the fair market value of the Kronos shares distributed on the various dates of distribution and NL’s adjusted tax basis in the shares at the dates of distribution. NL transferred shares of Kronos common stock to us in satisfaction of the tax liability related to NL’s gain on the transfer or distribution of these shares of Kronos common stock and the tax liability generated from the use of Kronos shares to settle the tax liability. To date, we have not paid the liability to Contran because Contran has not paid the liability to the applicable tax authority. The income tax liability will become payable to Contran, and by Contran to the applicable tax authority, when the shares of Kronos transferred or distributed by NL to us are sold or otherwise transferred outside the Contran Tax Group or in the event of certain restructuring transactions involving us. We have recognized deferred income taxes for our investment in Kronos common stock.

We are a party to a tax sharing agreement with Contran providing for the allocation of tax liabilities and tax payments as described in Note 1. Under applicable law, we, as well as 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. Contran 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.

Note 19 – Financial instruments:

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

The following table presents the financial instruments that are not carried at fair value but which require fair value disclosure as of December 31, 2021 and 2022:

	December 31, 2021		December 31, 2022	
	Carrying amount	Fair value	Carrying amount	Fair value
	(In millions)			
Cash, cash equivalents and restricted cash equivalents	\$ 792.9	\$ 792.9	\$ 562.0	\$ 562.0
Long-term debt:				
Kronos Senior Notes	448.8	460.2	424.1	374.2
Valhi credit facility with Contran	172.9	172.9	121.4	121.4
LandWell bank note payable	13.5	13.5	12.9	12.9
BWC bank note payable	15.4	15.9	—	—

At December 31, 2022, the estimated market price of Kronos' Senior Notes was €877 per €1,000 principal amount. The fair value of Kronos' Senior Notes was based on quoted market prices; however, these quoted market prices represent Level 2 inputs because the markets in which the Senior Notes trade were not active. Fair values of variable interest rate debt and other fixed-rate debt are deemed to approximate book value. Due to their near-term maturities, the carrying amounts of accounts receivable and accounts payable are considered equivalent to fair value. See Notes 4 and 10.

BWC is no longer consolidated in our Consolidated Financial Statements at December 31, 2022 (see Notes 2 and 9).

UNSECURED REVOLVING
DEMAND PROMISSORY NOTE

\$175,000,000.00

December 31, 2022

Section 1. Promise to Pay. For and in consideration of value received, the undersigned, VALHI, INC., a corporation duly organized under the laws of the state of Delaware (“*Borrower*”), promises to pay, in lawful money of the United States of America, to the order of CONTRAN CORPORATION, a corporation duly organized under the laws of the state of Delaware (“*Contran*”), or the holder hereof (as applicable, Contran or such holder shall be referred to as the “*Noteholder*”), the principal sum of **ONE HUNDRED SEVENTY-FIVE MILLION** and NO/100ths United States Dollars (\$175,000,000.00) or such lesser amount as shall equal the unpaid principal amount of the loan made by the Noteholder to Borrower together with accrued and unpaid interest on the unpaid principal balance from time to time pursuant to the terms of this Unsecured Revolving Demand Promissory Note, as it may be amended from time to time (this “*Note*”). This Note shall be unsecured and will bear interest on the terms set forth in **Section 7** below. Capitalized terms not otherwise defined shall have the meanings given to such terms in **Section 19** of this Note.

Section 2.2. Amendment and Restatement. This Note renews, replaces, amends and restates in its entirety the Unsecured Revolving Demand Promissory Note dated December 31, 2021 in the original principal amount of \$225,000,000.00 payable to the order of the Noteholder and executed by the Borrower (the “*Prior Note*”). As of the close of business on December 31, 2022, the unpaid principal balance of the Prior Note was \$121,400,000.00, the accrued and unpaid interest thereon was nil and the accrued and unpaid commitment fee thereon was nil, which is the unpaid principal, accrued and unpaid interest and accrued and unpaid commitment fee owed under this Note as of the close of business on the date of this Note. This Note contains the entire understanding between the Noteholder and the Borrower with respect to the transactions contemplated hereby and supersedes all other instruments, agreements and understandings between the Noteholder and the Borrower with respect to the subject matter of this Note.

Section 3.2. Place of Payment. All payments will be made at Noteholder’s address at Three Lincoln Centre, 5430 LBJ Freeway, Suite 1700, Dallas, Texas 75240-2620, Attention: Treasurer, or such other place as the Noteholder may from time to time appoint in writing.

Section 4.3. Payments. The unpaid principal balance of this Note and any accrued and unpaid interest thereon shall be due and payable on the Final Payment Date. Prior to the Final Payment Date, any accrued and unpaid interest on an unpaid principal balance shall be paid in arrears quarterly on the last day of each March, June, September and December, commencing March 31, 2023. All payments on this Note shall be applied first to accrued and unpaid interest, next to accrued interest not yet payable and then to principal. If any payment of principal or interest on this Note shall become due on a day that is not a Business Day, such payment shall be made on the next succeeding Business Day and the payment shall be the amount owed on the original payment date.

Section 5.3. Prepayments. This Note may be prepaid in part or in full at any time without penalty.

Section 6.3. Borrowings. Prior to the Final Payment Date, Noteholder expressly authorizes Borrower to borrow, repay and re-borrow principal under this Note in increments of \$100,000 on a daily basis so long as:

- the aggregate outstanding principal balance does not exceed \$175,000,000.00; and
- no Event of Default has occurred and is continuing.

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

Section 7.5. Interest. The unpaid principal balance of this Note shall bear interest at the rate per annum of the Prime Rate plus one percent (1.00%). In the event that an Event of Default occurs and is continuing, the unpaid principal amount shall bear interest from the Event of Default at the rate per annum of the Prime Rate plus four percent (4.00%) until such time as the Event of Default is cured. Accrued interest on the unpaid principal of this Note shall be computed on the basis of a 365- or 366-day year for actual days (including the first, but excluding the last day) elapsed, but in no event shall such computation result in an amount of accrued interest that would exceed accrued interest on the unpaid principal balance during the same period at the Maximum Rate. Notwithstanding anything to the contrary, this Note is expressly limited so that in no contingency or event whatsoever shall the amount paid or agreed to be paid to the Noteholder exceed the Maximum Rate. If, from any circumstances whatsoever, the Noteholder

shall ever receive as interest an amount that would exceed the Maximum Rate, such amount that would be excessive interest shall be applied to the reduction of the unpaid principal balance and not to the payment of interest, and if the principal amount of this Note is paid in full, any remaining excess shall be paid to Borrower, and in such event, the Noteholder shall not be subject to any penalties provided by any laws for contracting for, charging, taking, reserving or receiving interest in excess of the highest lawful rate permissible under applicable law. All sums paid or agreed to be paid to Noteholder for the use, forbearance or detention of the indebtedness of the Borrower to Noteholder shall, to the extent permitted by applicable law, be amortized, prorated, allocated and spread throughout the full term of such indebtedness until payment in full of the principal (including the period of any renewal or extension thereof) so that the interest on account of such indebtedness shall not exceed the Maximum Rate. If at any time the Contract Rate is limited to the Maximum Rate, any subsequent reductions in the Contract Rate shall not reduce the rate of interest on this Note below the Maximum Rate until the total amount of interest accrued equals the amount of interest that would have accrued if the Contract Rate had not been limited by the Maximum Rate. In the event that, upon the Final Payment Date, the total amount of interest paid or accrued on this Note is less than the amount of interest that would have accrued if the Contract Rate had not been limited by the Maximum Rate, then at such time, to the extent permitted by law, in addition to the principal and any other amounts Borrower owes to the Noteholder, the Borrower shall pay to the Noteholder an amount equal to the difference between: (i) the lesser of the amount of interest that would have accrued if the Contract Rate had not been limited by the Maximum Rate or the amount of interest that would have accrued if the Maximum Rate had at all times been in effect; and (ii) the amount of interest actually paid on this Note.

Section 8.5. Fees and Expenses. On the last day of each March, June, September and December, commencing March 31, 2023, and on the Final Payment Date, Borrower shall pay to Noteholder the Unused Commitment Fee for such period, *provided, however*, Borrower will not owe any Unused Commitment Fee for any part of such period (prorated as applicable) that the Noteholder is a net borrower of money from the Borrower. In addition, Borrower and any guarantor jointly and severally agree to pay on the Final Payment Date to Noteholder any other cost or expense reasonably incurred by Noteholder in connection with Noteholder's commitment to Borrower pursuant to the terms of this Note, including without limitation any other cost reasonably incurred by Noteholder pursuant to the terms of any credit facility of Noteholder.

Section 9.6. Remedy. Upon the occurrence and during the continuation of an Event of Default, the Noteholder shall have all of the rights and remedies provided in the applicable Uniform Commercial Code, this Note or any other agreement among Borrower and in favor of the Noteholder, as well as those rights and remedies provided by any other applicable law, rule or regulation. In conjunction with and in addition to the foregoing rights and remedies of the Noteholder, the Noteholder may declare all indebtedness due under this Note, although otherwise unmatured, to be due and payable immediately without notice or demand whatsoever. All rights and remedies of the Noteholder are cumulative and may be exercised singly or concurrently. The failure to exercise any right or remedy will not be a waiver of such right or remedy.

Section 10.7. Right of Offset. The Noteholder shall have the right of offset against amounts that may be due by the Noteholder now or in the future to Borrower against amounts due under this Note.

Section 11.8. Record of Outstanding Indebtedness. The date and amount of each repayment of principal outstanding under this Note or interest thereon shall be recorded by Noteholder in its records. The principal balance outstanding and all accrued or accruing interest owed under this Note as recorded by Noteholder in its records shall be the best evidence of the principal balance outstanding and all accrued or accruing interest owed under this Note; *provided* that the failure of Noteholder to so record or any error in so recording or computing any such amount owed shall not limit or otherwise affect the obligations of the Borrower under this Note to repay the principal balance outstanding and all accrued or accruing interest.

Section 12.9. Waiver. Borrower and each surety, endorser, guarantor, and other party now or subsequently liable for payment of this Note, severally waive demand, presentment for payment, notice of nonpayment, notice of dishonor, protest, notice of protest, notice of the intention to accelerate, notice of acceleration, diligence in collecting or bringing suit against any party liable on this Note, and further agree to any and all extensions, renewals, modifications, partial payments, substitutions of evidence of indebtedness, and the taking or release of any collateral with or without notice before or after demand by the Noteholder for payment under this Note.

Section 13.10. Costs and Attorneys' Fees. In addition to any other amounts payable to Noteholder pursuant to the terms of this Note, in the event the Noteholder incurs costs in collecting on this Note, this Note is placed in the hands of any attorney for collection, suit is filed on this Note or if proceedings are had in bankruptcy, receivership,

reorganization, or other legal or judicial proceedings for the collection of this Note, Borrower and any guarantor jointly and severally agree to pay on demand to the Noteholder all expenses and costs of collection, including, but not limited to, reasonable attorneys' fees incurred in connection with any such collection, suit, or proceeding, in addition to the principal and interest then due.

Section 14.11. *Time of Essence.* Time is of the essence with respect to all of Borrower's obligations and agreements under this Note.

Section 15.12. *Jurisdiction and Venue.* THIS NOTE SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE DOMESTIC LAWS OF THE STATE OF TEXAS, WITHOUT GIVING EFFECT TO ANY CHOICE OF LAW OR CONFLICT OF LAW PROVISION OR RULE (WHETHER OF THE STATE OF TEXAS OR ANY OTHER JURISDICTION) THAT WOULD CAUSE THE APPLICATION OF THE LAWS OF ANY JURISDICTION OTHER THAN THE STATE OF TEXAS. BORROWER CONSENTS TO JURISDICTION IN THE COURTS LOCATED IN DALLAS, TEXAS.

Section 16.13. *Notice.* Any notice or demand required by this Note shall be deemed to have been given and received on the earlier of (i) when the notice or demand is actually received by the recipient or (ii) 72 hours after the notice is deposited in the United States mail, certified or registered, with postage prepaid, and addressed to the recipient. The address for giving notice or demand under this Note (i) to the Noteholder shall be the place of payment specified in Section 3 or such other place as the Noteholder may specify in writing to the Borrower and (ii) to Borrower shall be the address below the Borrower's signature or such other place as the Borrower may specify in writing to the Noteholder.

Section 17.14. *Amendment or Waiver of Provisions of this Note.* No amendment or waiver of any provision of this Note shall in any event be effective unless the same shall be in a writing referring to this Note and signed by the Borrower and the Noteholder. Such amendment or waiver shall be effective only in the specific instance and for the specific purpose for which given. No waiver of any of the provisions of this Note shall be deemed or shall constitute a waiver of any other provisions, whether or not similar, nor shall any waiver constitute a continuing waiver.

Section 18.14. *Successors and Assigns.* All of the covenants, obligations, promises and agreements contained in this Note made by Borrower shall be binding upon its successors and permitted assigns, as applicable. Notwithstanding the foregoing, Borrower shall not assign this Note or its performance under this Note without the prior written consent of the Noteholder. Noteholder at any time may assign this Note without the consent of Borrower.

Section 19 *Definitions.* For purposes of this Note, the following terms shall have the following meanings:

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

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

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

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

(i)(i) the Borrower fails to pay any amount due on this Note and/or any fees or sums due under or in connection with this Note after any such payment otherwise becomes due and payable and three Business Days after demand for such payment;

(ii)(ii) the Borrower otherwise fails to perform or observe any other provision contained in this Note and such breach or failure to perform shall continue for a period of thirty days after notice thereof shall have been given to the Borrower by the Noteholder;

(iii)(iii) a case shall be commenced against Borrower, or Borrower shall file a petition commencing a case, under any provision of the Federal Bankruptcy Code of 1978, as amended, or shall seek relief under any provision of any other bankruptcy, reorganization, arrangement, insolvency, readjustment of debt, dissolution or liquidation law of any jurisdiction, whether now or

hereafter in effect, or shall consent to the filing of any petition against it under such law, or Borrower shall make an assignment for the benefit of its creditors, or shall admit in writing its inability to pay its debts generally as they become due, or shall consent to the appointment of a receiver, trustee or liquidator of Borrower or all or any part of its property; or

(iv)(iv) an event occurs that, with notice or lapse of time, or both, would become any of the foregoing Events of Default.

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

- written demand by the Noteholder for payment of all or part of the unpaid principal, the accrued and unpaid interest thereon and the accrued and unpaid commitment fee thereon, but in any event no earlier than December 31, 2024; or
- acceleration as provided herein.

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

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

(h) “**Unused Commitment Amount**” for any period on after the date of this Note shall mean the average on each day of such period of the difference between (A) \$175,000,000.00 and (B) the amount of the unpaid principal balance of this Note.

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

BORROWER:

VALHI, INC.

By: /s/ Amy A. Samford

Amy A. Samford
Executive Vice President and Chief Financial Officer

Address:

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

As of the date hereof, Contran Corporation, as the Noteholder, hereby agrees that this Note renews, replaces, amends and restates in its entirety the Prior Note (but shall not extinguish the obligations under the Prior Note, nor effect a novation thereof), and that the unpaid principal of \$121,400,000.00, the accrued and unpaid interest thereon of nil and the accrued and unpaid commitment fee thereon of nil that was owed under the Prior Note as of the close of business on December 31, 2022 are the unpaid principal, the accrued and unpaid interest thereon and the accrued and unpaid commitment fee thereon, respectively, owed under this Note as of the close of business on the date of this Note.

CONTRAN CORPORATION

By: /s/ Michael S. Simmons

Michael S. Simmons
President and Chief Executive Officer

SUBSIDIARIES OF THE REGISTRANT

Name of Corporation	Jurisdiction of Incorporation or Organization	% of Voting Securities Held at December 31, 2022 (1)
ASC Holdings, Inc.	Utah	100%
Kronos Worldwide, Inc. (2)	Delaware	50%
NL Industries, Inc. (2), (3), (4)	New Jersey	83%
CompX International Inc. (4)	Delaware	87%
Tremont LLC	Delaware	100%
TRECO LLC	Nevada	100%
Basic Management, Inc.	Nevada	63%
Basic Water Company (5)	Nevada	100%
Basic Water Company SPE LLC (5)	Nevada	100%
Basic Environmental Company LLC	Nevada	100%
Basic Power Company	Nevada	100%
Basic Remediation Company LLC	Nevada	100%
Basic Land Company	Nevada	100%
The LandWell Company LP (6)	Delaware	50%
Henderson Interchange Sign LLC	Nevada	100%
TRE Management Company	Delaware	100%
Tall Pines Insurance Company	Vermont	100%
Medite Corporation	Delaware	100%

- (1) Held by the Registrant or the indicated subsidiary of the Registrant.
 - (2) Subsidiaries of Kronos are incorporated by reference to Exhibit 21.1 of Kronos' Annual Report on Form 10-K for the year ended December 31, 2022 (File No. 333-100047). NL owns an additional 30% of Kronos directly.
 - (3) Subsidiaries of NL are incorporated by reference to Exhibit 21.1 of NL's Annual Report on Form 10-K for the year ended December 31, 2022 (File No. 1-640).
 - (4) Subsidiaries of CompX are incorporated by reference to Exhibit 21.1 of CompX's Annual Report on Form 10-K for the year ended December 31, 2022 (File No. 1-13905).
 - (5) Basic Water Company and its subsidiaries voluntarily filed for Chapter 11 bankruptcy in the United States Bankruptcy Court for the District of Nevada on September 10, 2022.
 - (6) TRECO LLC owns an additional 27% of The LandWell Company LP directly.
-

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 333-256546) of Valhi, Inc., of our report dated March 9, 2023, relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

Dallas, Texas
March 9, 2023

I, Michael S. Simmons, certify that:

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

Date: March 9, 2023

/s/Michael S. Simmons

Michael S. Simmons

Vice Chairman of the Board, President and Chief Executive Officer

I, Amy A. Samford, certify that:

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

Date: March 9, 2023

/s/ Amy A. Samford

Amy A. Samford

Executive Vice President and Chief Financial Officer

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

In connection with the Annual Report of Valhi, Inc. (the "Company") on Form 10-K for the year ended December 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), we, Michael S. Simmons, Vice Chairman of the Board, President and Chief Executive Officer, and Amy A. Samford, Executive Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

/s/Michael S. Simmons

Michael S. Simmons

Vice Chairman of the Board, President and
Chief Executive Officer

March 9, 2023

/s/Amy A. Samford

Amy A. Samford

Executive Vice President and Chief Financial Officer
March 9, 2023

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