VALHI INC /DE/
Form 10-Q
August 08, 2017

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

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

For the quarter ended June 30, 2017

Commission file number 1-5467

VALHI, INC.

(Exact name of Registrant as specified in its charter)

Delaware	87-0110150
(State or other jurisdiction of	(IRS Employer
incorporation or organization)	Identification No.)
5430 LBJ Freeway, Suite 1700, Dallas, Texas	75240-2697
(Address of principal executive offices)	(Zip Code)

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

Indicate by check mark:

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

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

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company (as defined in Rule 12b-2 of the Securities Exchange Act of 1934).   Large accelerated filer   Accelerated filer   Non-accelerated filer   Smaller reporting company

Emerging growth company

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

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Act).   Yes   No

Number of shares of the Registrant's common stock outstanding on August 4, 2017: 339,170,949

VALHI, INC. AND SUBSIDIARIES

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Items 2, 3, 4 and 5 of Part II are omitted because there is no information to report.

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VALHI, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED BALANCE SHEETS

(In millions)

	December 31, 2016	June 30, 2017 (unaudited)
ASSETS		
Current assets:		
Cash and cash equivalents	$ 159.8	$ 220.4
Restricted cash equivalents	12.5	11.8
Marketable securities	4.4	.8
Accounts and other receivables, net	272.2	366.5
Inventories, net	360.6	359.1
Land held for development	10.9	16.7
Other current assets	17.0	13.0
Total current assets	837.4	988.3
Other assets:		
Marketable securities	253.5	257.2
Investment in TiO_2 manufacturing joint venture, Louisiana Pigment Company, L.P. (“LPC”)	78.9	70.5
Goodwill	379.7	379.7
Deferred income taxes	1.2	124.7
Other noncurrent assets	238.0	196.9
Total other assets	951.3	1,029.0
Property and equipment:		
Land	45.4	47.6
Buildings	237.5	250.1
Treatment, storage and disposal facility	159.6	—
Equipment	1,070.6	1,084.2
Mining properties	35.1	32.1
Construction in progress	41.8	52.7
	1,590.0	1,466.7
Less accumulated depreciation	935.5	911.9
Net property and equipment	654.5	554.8
Total assets	$ 2,443.2	$ 2,572.1

VALHI, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED BALANCE SHEETS (CONTINUED)

(In millions)

	December 31, 2016	June 30, 2017 (unaudited)
LIABILITIES AND EQUITY		
Current liabilities:		
Current maturities of long-term debt	$ 7.8	$ 7.6
Accounts payable and accrued liabilities	281.2	301.0
Income taxes	5.1	11.5
Total current liabilities	294.1	320.1
Noncurrent liabilities:		
Long-term debt	957.2	985.0
Deferred income taxes	275.0	243.3
Accrued pension costs	240.2	258.5
Accrued environmental remediation and related costs	107.3	110.1
Accrued postretirement benefits costs	11.1	11.1
Other liabilities	113.9	120.2
Total noncurrent liabilities	1,704.7	1,728.2
Equity:		
Valhi stockholders' equity:		
Preferred stock	667.3	667.3
Common stock	3.6	3.6
Additional paid-in capital	—	—
Retained deficit	(198.5)	(190.3)
Accumulated other comprehensive loss	(221.9)	(204.9)
Treasury stock	(49.6)	(49.6)
Total Valhi stockholders' equity	200.9	226.1
Noncontrolling interest in subsidiaries	243.5	297.7
Total equity	444.4	523.8
Total liabilities and equity	$ 2,443.2	$ 2,572.1

Commitments and contingencies (Notes 13 and 16)

See accompanying Notes to Condensed Consolidated Financial Statements.

VALHI, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

(In millions, except per share data)

	Three months ended June 30,		Six months ended June 30,	
	2016	2017	2016	2017
	(unaudited)			
Revenues and other income:				
Net sales	$398.6	$502.2	$752.1	$929.1
Other income, net	10.7	7.7	22.1	15.3
Total revenues and other income	409.3	509.9	774.2	944.4
Costs and expenses:				
Cost of sales	336.4	358.4	647.9	666.4
Selling, general and administrative	64.6	77.2	127.8	148.3
Contract related intangible asset impairment	—	—	5.1	—
Long-lived asset impairment	—	170.6	—	170.6
Interest	15.8	16.0	31.5	31.6
Total costs and expenses	416.8	622.2	812.3	1,016.9
Loss before income taxes	(7.5)	(112.3)	(38.1)	(72.5)
Income tax expense (benefit)	.2	(167.4)	(8.4)	(149.4)
Net income (loss)	(7.7)	55.1	(29.7)	76.9
Noncontrolling interest in net income (loss) of subsidiaries	.8	46.3	(1.7)	55.4
Net income (loss) attributable to Valhi stockholders	$(8.5)	$8.8	$(28.0)	$21.5
Amounts attributable to Valhi stockholders:				
Basic and diluted net income (loss) per share	$(.02)	$.03	$(.08)	$.06
Cash dividends per share	$.02	$.02	$.04	$.04
Basic and diluted weighted average shares outstanding	342.0	342.0	342.0	342.0

See accompanying Notes to Condensed Consolidated Financial Statements.

VALHI, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

(In millions)

	Three months ended June 30,		Six months ended June 30,	
	2016	2017	2016	2017
	(unaudited)			
Net income (loss)	$(7.7)	$55.1	$(29.7)	$76.9
Other comprehensive income (loss), net of tax:				
Currency translation	(4.1)	12.6	7.8	20.1
Marketable securities	.8	(.5)	.5	(.8)
Interest rate swap	(.7)	(.4)	(3.0)	.1
Defined benefit pension plans	2.6	.8	5.2	3.6
Other postretirement benefit plans	(.3)	(.2)	(.6)	(.4)
Total other comprehensive income (loss), net	(1.7)	12.3	9.9	22.6
Comprehensive income (loss)	(9.4)	67.4	(19.8)	99.5
Comprehensive income attributable to noncontrolling interest	.9	49.2	1.4	61.0
Comprehensive income (loss) attributable to Valhi stockholders	$(10.3)	$18.2	$(21.2)	$38.5

See accompanying Notes to Condensed Consolidated Financial Statements.

VALHI, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(In millions)

	Six months ended June 30,	
	2016	2017
	(unaudited)	
Cash flows from operating activities:		
Net income (loss)	$(29.7)	$76.9
Depreciation and amortization	34.5	33.2
Benefit plan expense greater than cash funding	1.2	4.6
Deferred income taxes	(17.0)	(183.9)
Distributions from $Ti0_2$ manufacturing joint venture, net	6.6	8.4
Contract related intangible asset impairment	5.1	—
Long-lived asset impairment	—	170.6
Other, net	(.4)	1.5
Change in assets and liabilities:		
Accounts and other receivables, net	(53.0)	(77.8)
Inventories, net	58.8	22.6
Land held for development, net	(.6)	3.1
Accounts payable and accrued liabilities	(11.9)	8.8
Accounts with affiliates	(.5)	.3
Income taxes	(5.4)	5.8
Other, net	3.6	14.6
Net cash provided by (used in) operating activities	(8.7)	88.7
Cash flows from investing activities:		
Capital expenditures	(26.6)	(30.5)
Capitalized permit costs	(1.1)	(2.2)
Purchases of marketable securities	(4.4)	(5.6)
Disposals of marketable securities	3.3	5.5
Other, net	(.1)	—
Net cash used in investing activities	(28.9)	(32.8)
Cash flows from financing activities:		
Indebtedness:		
Borrowings	149.2	175.7
Principal payments	(101.5)	(148.9)
Deferred financing costs paid	—	(.2)
Valhi cash dividends paid	(13.6)	(13.6)
Distributions to noncontrolling interest in subsidiaries	(7.0)	(7.0)
Net cash provided by financing activities	27.1	6.0
Cash, cash equivalents and restricted cash and cash equivalents - net change from:		
Operating, investing and financing activities	(10.5)	61.9
Effect of exchange rate on cash	.3	8.6
Balance at beginning of period	229.1	196.5

Balance at end of period	$218.9	$267.0
Supplemental disclosures:		
Cash paid for:		
Interest, net of capitalized interest	$29.9	$30.0
Income taxes, net	8.5	26.3
Noncash investing activities:		
Change in accruals for capital expenditures	4.5	4.0
Noncash financing activities:		
Indebtedness borrowings paid directly to lender to settle refinanced indebtedness	—	9.3
Indebtedness principal payments paid directly by lender	—	(8.4)
Indebtedness borrowings paid directly to lender for debt issuance costs	—	(.9)

See accompanying Notes to Condensed Consolidated Financial Statements.

VALHI, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENT OF EQUITY

Six months ended June 30, 2017

(In millions)

(unaudited)

	Valhi Stockholders' Equity							
	Preferred stock	Common stock	Additional paid-in capital	Retained deficit	Accumulated other comprehensive loss	Treasury stock	Non-controlling interest	Total equity
Balance at December 31, 2016	$667.3	$ 3.6	$ —	$(198.5)	$ (221.9)	$(49.6)	$ 243.5	$444.4
Net income	—	—	—	21.5	—	—	55.4	76.9
Other comprehensive income, net	—	—	—	—	17.0	—	5.6	22.6
Cash dividends	—	—	(.2)	(13.3)	—	—	(7.0)	(20.5)
Other, net	—	—	.2	—	—	—	.2	.4
Balance at June 30, 2017	$667.3	$ 3.6	$ —	$(190.3)	$ (204.9)	$(49.6)	$ 297.7	$523.8

See accompanying Notes to Condensed Consolidated Financial Statements.

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VALHI, INC. AND SUBSIDIARIES

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

June 30, 2017

(unaudited)

Note 1—Organization and basis of presentation:

Organization— We are majority owned by a wholly-owned subsidiary of Contran Corporation ("Contran"), which owns approximately 93% of our outstanding common stock at June 30, 2017. All of Contran's outstanding voting stock is held by a family trust established for the benefit of Lisa K. Simmons and Serena Simmons Connelly and their children, for which Ms. Simmons and Ms. Connelly are co-trustees, or is held directly by Ms. Simmons and Ms. Connelly or entities related to them. Consequently, Ms. Simmons and Ms. Connelly may be deemed to control Contran and us.

Basis of Presentation—Consolidated in this Quarterly Report are the results of our majority-owned and wholly-owned subsidiaries, including NL Industries, Inc., Kronos Worldwide, Inc., CompX International Inc., Waste Control Specialists LLC ("WCS"), Tremont LLC, Basic Management, Inc. ("BMI") and The LandWell Company ("LandWell"). Kronos (NYSE: KRO), NL (NYSE: NL), and CompX (NYSE MKT: CIX) each file periodic reports with the Securities and Exchange Commission ("SEC").

The unaudited Condensed Consolidated Financial Statements contained in this Quarterly Report have been prepared on the same basis as the audited Consolidated Financial Statements included in our Annual Report on Form 10-K for the year ended December 31, 2016 that we filed with the SEC on March 13, 2017 (the "2016 Annual Report"). In our opinion, we have made all necessary adjustments (which include only normal recurring adjustments, other than the long-lived asset impairment charge recognized in the second quarter of 2017 as discussed in Note 3, and the reversal of the deferred income tax asset valuation allowance recognized in the second quarter of 2017, as discussed in Note 13) in order to state fairly, in all material respects, our consolidated financial position, results of operations and cash flows as of the dates and for the periods presented. We have condensed the Consolidated Balance Sheet at December 31, 2016 contained in this Quarterly Report as compared to our audited Consolidated Financial Statements at that date, and we have omitted certain information and footnote disclosures (including those related to the Consolidated Balance Sheet at December 31, 2016) normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP"). Our results of operations for the interim periods ended June 30, 2017 may not be indicative of our operating results for the full year. The Condensed Consolidated Financial Statements contained in this Quarterly Report should be read in conjunction with our 2016 Consolidated Financial Statements contained in our 2016 Annual Report.

Unless otherwise indicated, references in this report to "we," "us" or "our" refer to Valhi, Inc and its subsidiaries (NYSE: VHI), taken as a whole.

Note 2—Business segment information:

Business segment	Entity	% controlled at June 30, 2017	
Chemicals	Kronos	80	%
Component products	CompX	87	%
Waste management	WCS	100	%
Real estate management and development	BMI and LandWell	63% - 77	%

Our control of Kronos includes 50% we hold directly and 30% 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.

	Three months ended June 30,		Six months ended June 30,	
	2016	2017	2016	2017
	(unaudited) (In millions)			
Net sales:				
Chemicals	$356.0	$441.4	$674.5	$811.2
Component products	27.1	30.1	54.2	60.0
Waste management	11.1	20.5	16.3	42.0
Real estate management and development	4.4	10.2	7.1	15.9
Total net sales	$398.6	$502.2	$752.1	$929.1
Cost of sales:				
Chemicals	$301.0	$312.1	$579.5	$578.9
Component products	18.6	20.5	37.5	40.8
Waste management	13.6	17.9	25.3	34.6
Real estate management and development	3.2	7.9	5.6	12.1
Total cost of sales	$336.4	$358.4	$647.9	$666.4
Gross margin:				
Chemicals	$55.0	$129.3	$95.0	$232.3
Component products	8.5	9.6	16.7	19.2
Waste management	(2.5)	2.6	(9.0)	7.4
Real estate management and development	1.2	2.3	1.5	3.8
Total gross margin	$62.2	$143.8	$104.2	$262.7
Operating income (loss):				
Chemicals	$12.7	$73.0	$15.7	$128.0
Component products	3.7	4.6	7.1	9.1
Waste management	(7.1)	(171.6)	(17.9)	(171.0)
Real estate management and development	.5	1.2	(5.4)	1.8
Total operating income (loss)	9.8	(92.8)	(.5)	(32.1)
General corporate items:				
Securities earnings	6.9	7.2	13.7	14.2
Insurance recoveries	.2	—	.3	.1
Termination fee	—	4.0	—	4.0
General expenses, net	(8.6)	(14.7)	(20.1)	(27.1)
Interest expense	(15.8)	(16.0)	(31.5)	(31.6)
Loss before income taxes	$(7.5)	$(112.3)	$(38.1)	$(72.5)

Segment results we report may differ from amounts separately reported by our various subsidiaries due to purchase accounting adjustments and related amortization or differences in the way we define operating income. Intersegment sales are not material. Our Real Estate Management and Development Segment's operating loss in the first six months of 2016 includes a $5.1 million contract related intangible asset impairment loss which is included in the determination of its operating income, see Note 7. Our Chemicals Segment's operating income in the second quarter and first six months of 2016 includes $1.4 million and $3.4 million, respectively, in business interruption insurance proceeds which is included in the determination of its operating income, see Note 12. Our Waste Management Segment's results in the second quarter and first six months of 2017 includes a $170.6 million long-lived asset impairment which is included in the determination of its operating income, see Note 3.

Note 3—Long-lived asset impairment — Waste Control Specialists LLC:

As previously reported, in November 2015 we entered into an agreement with Rockwell Holdco, Inc. ("Rockwell"), for the sale of WCS to Rockwell. The agreement, as amended, was for $270 million in cash plus the assumption of all of WCS' third-party indebtedness incurred prior to the date of the agreement. Additionally, Rockwell and its affiliates would have assumed all financial assurance obligations related to the WCS business. Rockwell is the parent company of EnergySolutions, Inc. Completion of the sale was subject to certain customary closing conditions, including the receipt of U.S. anti-trust approval. The U.S. Department of Justice ("DOJ") did not give the parties anti-trust clearance, and on November 16, 2016, the DOJ filed an anti-trust action in the U.S. federal district court for the District of Delaware styled United States of America vs. Energy Solutions, Inc., et al (Case No. 1:16-cv-01056-UNA), seeking an injunction to enjoin completion of the sale of WCS. Trial was held in late April and early May 2017. On June 21, 2017, the court issued an order enjoining the sale of WCS. While we disagreed with the court's decision, the parties determined that they would not appeal the decision to the Third Circuit Court of Appeals, and on June 22, 2017, we provided written notice to Rockwell terminating the purchase agreement for the sale of WCS to Rockwell effective June 22, 2017.

As part of the terms of the fourth amendment to the purchase agreement, in the event of termination of the purchase agreement for any reason (including termination of the purchase agreement if completion of the sale of WCS is enjoined on anti-trust grounds), we would be entitled to receive a termination fee from Rockwell. Such termination fee (net of applicable expenses) aggregated $4 million, was received in June 2017 and is recognized as other non-operating income in the second quarter of 2017; see Note 12.

The Court's decision and resulting termination of the purchase agreement with Rockwell constitute triggering events under ASC 360-10-35-21, requiring WCS' long-lived assets to be tested for recoverability. Given the challenges facing WCS' disposal operations we have concluded that the long-lived assets associated with WCS' operations are impaired at June 30, 2017. Accordingly, we have recognized an aggregate $170.6 million impairment charge as of June 30, 2017, to reduce the carrying value of WCS' long-lived assets recognized for financial reporting purposes to their estimated fair value. Such $170.6 million impairment charge relates to the following long-lived assets of WCS: net property and equipment - $127.5 million; waste disposal site operating permits, net - $42.0 million; and other assets - $1.1 million. With respect to the operating permits, we concluded such long-lived assets were fully impaired, as these permits are specific to WCS' land and facility in Andrews County and have no salvage value as there is no alternative use for permits. Similarly, with respect to the net property and equipment, we concluded such long-lived assets were fully impaired except to the extent certain items of property and equipment had an alternate use outside of WCS' operations; for those items of property and equipment, they were written down to estimated salvage value, primarily using dealer or auction-site quotes (Level 3 inputs) as the basis for salvage value. The salvage value for such items of property and equipment aggregated $5.7 million at June 30, 2017.

Note 4—Accounts and other receivables, net:

	December 31, 2016	June 30, 2017
	(In millions)	
Trade accounts receivable:		
Kronos	$224.8	$314.7
CompX	10.4	12.2
WCS	14.0	15.2
BMI and LandWell	1.3	1.3

VAT and other receivables	18.6	19.1
Refundable income taxes	1.0	1.3
Receivable from affiliates:		
Contran – trade items	.4	.6
Other – trade items	2.8	3.3
Allowance for doubtful accounts	(1.1)	(1.2)
Total	$272.2	$366.5

Note 5—Inventories, net:

	December 31, 2016	June 30, 2017
	(In millions)	
Raw materials:		
Chemicals	$68.7	$80.6
Component products	2.7	2.9
Total raw materials	71.4	83.5
Work in process:		
Chemicals	22.3	18.9
Component products	9.0	9.8
Total in-process products	31.3	28.7
Finished products:		
Chemicals	196.4	181.0
Component products	3.2	2.6
Total finished products	199.6	183.6
Supplies (primarily chemicals)	58.3	63.3
Total	$360.6	$359.1

Note 6—Marketable securities:

	Market value	Cost basis	Unrealized losses, net
	(In millions)		
December 31, 2016:			
Current assets	$4.4	$4.4	$ —
Noncurrent assets:			
The Amalgamated Sugar Company LLC	$250.0	$250.0	$ —
Other	3.5	3.7	(.2)
Total	$253.5	$253.7	$ (.2)
June 30, 2017:			
Current assets	$.8	$.8	$ —
Noncurrent assets:			
The Amalgamated Sugar Company LLC	$250.0	$250.0	$ —
Other	7.2	7.4	(.2)
Total	$257.2	$257.4	$ (.2)

All of our marketable securities are accounted for as available-for-sale, which are carried at fair value, with any unrealized gains or losses recognized through accumulated other comprehensive income. Our marketable securities are carried at fair value using quoted market prices, primarily Level 1 inputs as defined by ASC Topic 820, Fair Value Measurements and Disclosures, except for our investment in The Amalgamated Sugar Company LLC ("Amalgamated"). Our investment in Amalgamated is measured using significant unobservable inputs, which are Level 3 inputs. Please refer to Note 6 in our 2016 Annual Report for a complete description of the valuation methodology for our investment in Amalgamated. There have been no changes to the carrying value of this investment during the periods presented. See Note 17.

Note 7—Other noncurrent assets:

	December 31, 2016	June 30, 2017
	(In millions)	
Other noncurrent assets:		
Land held for development	$138.1	$131.1
Waste disposal site operating permits, net	42.9	—
Restricted cash	24.2	34.8
IBNR receivables	7.1	7.2
Capital lease deposit	6.2	6.2
Pension asset	1.6	2.1
Other	17.9	15.5
Total	$238.0	$196.9

See Note 3 for a discussion of waste disposal site operating permits.

Upon acquiring a controlling interest in our Real Estate Management and Development Segment in December 2013, we recognized an indefinite-lived customer relationship intangible asset of $5.1 million for long-term contracts related to water delivery services to the City of Henderson, Nevada and various other users through a water system owned by BMI. Aggregate revenues associated with water delivered under the City of Henderson contract have historically represented approximately 70% of the Segment's aggregate water delivery revenues. These contracts generally span many years and feature automatic renewing provisions. The initial City of Henderson water delivery contract extended for a period of 25 years, and contained an automatic renewal provision. In January 2016, the water delivery contract with the City of Henderson was amended. As part of such amendment, required minimum volumes were reduced, pricing was lowered, the automatic renewal provision of the contract was eliminated, and the contract term now runs through June 2040. The amendment to the City of Henderson water delivery contract represents an event or change in circumstance which triggered the need to perform a quantitative impairment analysis with respect to the intangible asset in the first quarter of 2016, in accordance with the guidance in ASC 350-30-35. Accordingly, as a result of a quantitative impairment analysis performed in the first quarter of 2016 we concluded that the $5.1 million contract related intangible asset primarily related to the City of Henderson water delivery contract has been fully impaired as a result of the amended contract (with its reduced minimum volumes and lower pricing), and we recognized an aggregate $5.1 million contract related intangible asset impairment loss in the first quarter of 2016.

Note 8—Long-term debt:

	December 31, 2016	June 30, 2017
	(In millions)	
Valhi:		
Snake River Sugar Company	$250.0	$250.0
Contran credit facility	278.9	282.7
Total Valhi debt	528.9	532.7
Subsidiary debt:		
Kronos:		
Term loan	335.9	334.9
North American revolving credit facility	—	16.3
WCS:		
Financing capital lease	64.0	63.1
Tremont:		
Promissory note payable	14.5	14.5
BMI:		
Bank note payable – Meadows Bank	8.4	—
Bank loan – Western Alliance Bank	—	18.7
LandWell:		
Note payable to the City of Henderson	2.9	2.7
Other	10.4	9.7
Total subsidiary debt	436.1	459.9
Total debt	965.0	992.6
Less current maturities	7.8	7.6
Total long-term debt	$957.2	$985.0

Valhi – Contran credit facility – During the first six months of 2017, we borrowed a net $3.8 million under our Contran credit facility. The average interest rate on the existing balance as of and for the six months ended June 30, 2017 was 5.25% and 4.88%, respectively. At June 30, 2017, the equivalent of $42.3 million was available for borrowing under this facility.

Kronos – Term loan – During the first six months of 2017, Kronos made its required quarterly principal payment of $1.8 million. The average interest rate on the term loan borrowings as of and for the six months ended June 30, 2017 was 4.3% and 4.1%, respectively. The carrying value of the term loan at June 30, 2017 is stated net of unamortized original issue discount of $.7 million and debt issuance costs of $3.0 million. See Note 17 for a discussion of the interest rate swap we entered into in 2015 pursuant to our interest rate risk strategy.

North American revolving credit facility – In January 2017, Kronos extended the maturity date of its North American revolving credit facility to the earlier of (i) January 30, 2022 or (ii) 90 days prior to the maturity date of our existing term loan indebtedness (or 90 days prior to the maturity date of any indebtedness incurred in a permitted refinancing of such existing term loan indebtedness). Based on the February 2020 maturity date of our existing term loan, the maturity date of the North American revolving credit facility is currently November 2019.

During the first six months of 2017, Kronos borrowed a net $16.3 million under its North American revolving credit facility. The average interest rate on outstanding borrowings as of and for the six months ended June 30, 2017 was

5.0% and 4.8%, respectively. At June 30, 2017, approximately $91.4 million was available for additional borrowing under this revolving credit facility.

European revolving credit facility – Kronos' European revolving credit facility requires the maintenance of certain financial ratios, and one of such requirements is based on the ratio of net debt to last twelve months earnings before income tax, interest, depreciation and amortization expense (EBITDA) of the borrowers. Based upon the borrowers' last twelve months EBITDA as of June 30, 2017 and the net debt to EBITDA financial test, the full €120.0 million of the credit facility ($137.1 million) is available for borrowing availability at June 30, 2017. We expect to extend the maturity date of this facility on or prior to its maturity date in September 2017.

Other – In February 2017, a wholly-owned subsidiary of BMI entered into a $20.5 million loan agreement with Western Alliance Bank. The proceeds were used to refinance the $8.5 million outstanding bank note payable to Meadows Bank and to finance improvements to BMI's water delivery system. The agreement requires semi-annual payments of principal and interest on June 1 and December 1 aggregating $1.9 million annually beginning on June 1, 2017 through the maturity date in June 2032 (except during 2017 which calls for prorated aggregate principal and interest payments of $1.6 million). The agreement bears interest at 5.34% and is collateralized by certain real property, including the water delivery system, and revenue streams under the City of Henderson water contract. Debt issuance costs were approximately $1.0 million, and the carrying value of the banknote payable at June 30, 2017 is stated net of such unamortized debt issuance costs.

Restrictions and other – Certain of the credit facilities with unrelated, third-party lenders described above require the respective borrowers to maintain minimum levels of equity, require the maintenance of certain financial ratios, limit dividends and additional indebtedness and contain other provisions and restrictive covenants customary in lending transactions of this type. We are in compliance with all of our debt covenants at June 30, 2017.

Note 9—Accounts payable and accrued liabilities:

	December 31, 2016	June 30, 2017
	(In millions)	
Accounts payable:		
Kronos	$84.9	$95.8
CompX	2.6	3.5
WCS	1.6	2.1
BMI and LandWell	2.2	4.4
NL	2.4	1.1
Other	.7	.3
Payable to affiliates:		
Contran – trade items	31.4	33.6
Contran – income taxes	5.5	6.4
LPC – trade items	14.7	14.7
Employee benefits	29.2	27.8
Deferred income	32.0	25.8
Accrued sales discounts and rebates	22.6	21.4
Environmental remediation and related costs	15.3	14.8
Reserve for uncertain tax positions	3.3	3.3
Accrued workforce reduction costs	1.2	.2
Interest rate swap	2.8	2.0
Other	28.8	43.8
Total	$281.2	$301.0

See Note 17 for a discussion of the interest rate swap contract.

Note 10—Other noncurrent liabilities:

	December 31, 2016	June 30, 2017
	(In millions)	
Reserve for uncertain tax positions	$35.7	$37.6
Asset retirement obligations	30.7	32.0
Deferred income	12.6	11.5
Employee benefits	7.6	8.2
Insurance claims and expenses	9.5	10.0
Deferred payment obligation	9.0	9.2
Other	8.8	11.7
Total	$113.9	$120.2

Note 11—Employee benefit plans:

Defined benefit plans – The components of our net periodic defined benefit pension cost are presented in the table below.

	Three months ended June 30,		Six months ended June 30,	
	2016	2017	2016	2017
	(In millions)			
Service cost	$2.5	$2.8	$ 5.0	$ 5.5
Interest cost	4.5	3.9	8.9	7.7
Expected return on plan assets	(4.7)	(3.2)	(9.2)	(6.4)
Amortization of unrecognized prior service cost	.2	.1	.4	.2
Recognized actuarial losses	3.4	3.7	6.6	7.3
Total	$5.9	$7.3	$ 11.7	$ 14.3

Other postretirement benefits – The components of our net periodic other postretirement benefit cost are presented in the table below.

	Three months ended June 30,		Six months ended June 30,	
	2016	2017	2016	2017
	(In millions)			
Service cost	$.1	$.1	$ .1	$ .1
Interest cost	—	.1	.2	.2
Amortization of prior service credit	(.4)	(.3)	(.9)	(.5)
Recognized actuarial gains	—	—	(.1)	(.1)
Total	$(.3)	$(.1)	$ (.7)	$ (.3)

Contributions – We expect to contribute the equivalent of $16.0 million and $1.1 million, respectively, to all of our defined benefit pension plans and other postretirement benefit plans during 2017.

Note 12—Other income, net:

Six
months ended
June 30,

	2016	2017
	(In millions)	
Securities earnings:		
Dividends and interest	$ 13.6	$ 14.2
Securities transactions, net	.1	—
Total	13.7	14.2
Currency transactions, net	4.2	(3.7)
Insurance recoveries	.3	.1
Business interruption insurance proceeds	3.4	—
Termination fee	—	4.0
Other, net	.5	.7
Total	$ 22.1	$ 15.3

The termination fee is discussed in Note 3.

Insurance recoveries reflect, in part, amounts NL received from certain of its former insurance carriers and relate to the recovery of prior lead pigment and asbestos litigation defense costs incurred by NL. See Note 16.

We recognized $3.4 million (including $1.4 million in the second quarter of 2016) in income related to cash Kronos received in the first six months of 2016 from settlement of a business interruption insurance claim arising in 2014. No additional material amounts are expected to be received with respect to such insurance claim.

Note 13—Income taxes:

	Three months ended June 30,		Six months ended June 30,	
	2016	2017	2016	2017
	(In millions)			
Expected tax benefit, at U.S. federal statutory income tax rate of 35%	$(2.6)	$(39.3)	$(13.3)	$(25.4)
Incremental net tax on earnings and losses of non-U.S., U.S. and non-tax group companies	.3	37.1	2.7	48.3
Non-U.S. tax rates	(.6)	(2.3)	(.4)	(4.7)
Valuation allowance	2.9	(157.6)	2.9	(162.6)
Adjustment to the reserve for uncertain tax positions, net	.4	.6	.6	1.1
Nondeductible expenses	.5	.3	.6	.8
Domestic production activities deduction	(.5)	(1.5)	(.8)	(2.1)
U.S. state income taxes	(.1)	(4.7)	(.5)	(4.7)
Other, net	(.1)	—	(.2)	(.1)
Income tax expense (benefit)	$.2	$(167.4)	$(8.4)	$(149.4)
Comprehensive provision for income taxes (benefit) allocable to:				
Income tax expense (benefit)	$.2	$(167.4)	$(8.4)	$(149.4)
Other comprehensive income (loss):				
Marketable securities	.4	(.3)	.2	(.5)
Currency translation	(1.0)	16.4	1.8	18.1
Interest rate swap	(.6)	(.3)	(2.7)	.1
Pension plans	.9	2.2	1.7	3.1
OPEB plans	(.2)	(.1)	(.4)	(.2)
Total	$(.3)	$(149.5)	$(7.8)	$(128.8)

The amount shown in the above 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 of 35%. The amount shown on such table for incremental net tax on earnings and losses on non-U.S. and non-tax group companies includes, as applicable, (i) current income taxes (including withholding taxes, if applicable), if any, associated with any current-year earnings of our Chemicals Segment's non-U.S. subsidiaries to the extent such current-year earnings were distributed to us in the current year, (ii) deferred income taxes (or deferred income tax benefit) associated with the current-year change in the aggregate amount of undistributed earnings of our Chemicals Segment's Canadian subsidiary, which earnings are not subject to a permanent reinvestment plan, in an amount representing the current-year change in the aggregate current income tax that would be generated (including withholding taxes, if applicable) when such aggregate undistributed earnings are distributed to us, (iii) 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 Kronos' 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, (iv) deferred income taxes associated with our direct investment in Kronos (beginning in the second quarter of 2015) and (v) current and deferred income taxes associated with distributions and earnings from our investment in LandWell and BMI.

Kronos has substantial net operating loss (NOL) carryforwards in Germany (the equivalent of $638 million for German corporate purposes and $71 million for German trade tax purposes at December 31, 2016) and in Belgium (the equivalent of $93 million for Belgian corporate tax purposes at December 31, 2016), all of which have an indefinite carryforward period. As a result, we have net deferred income tax assets with respect to these two jurisdictions, primarily related to these NOL carryforwards. The German corporate tax is similar to the U.S. federal income tax, and the German trade tax is similar to the U.S. state income tax. Prior to June 30, 2015, and using all available evidence, we had concluded no deferred income tax asset valuation allowance was required to be recognized with respect to these net deferred income tax assets under the more-likely-than-not recognition criteria, primarily because (i) the carryforwards have an indefinite carryforward period, (ii) we utilized a portion of such carryforwards during the most recent three-year period, and (iii) we expected to utilize the remainder of the carryforwards over the long term. We had also previously indicated that facts and circumstances could change, which might in the future result in the recognition of a valuation allowance against some or all of such deferred income tax assets. However, as of June 30, 2015, and given our operating results during the second quarter of 2015 and our expectations at that time for our operating results for the remainder of 2015, we did not have sufficient positive evidence to overcome the significant negative evidence of having cumulative losses in the most recent twelve consecutive quarters in both our German and Belgian jurisdictions at June 30, 2015 (even considering that the carryforward period of our German and Belgian NOL carryforwards is indefinite, one piece of positive evidence). Accordingly, at June 30, 2015, we concluded that we were required to recognize a non-cash deferred income tax asset valuation allowance under the more-likely-than-not recognition criteria with respect to our German and Belgian net deferred income tax assets at such date. We recognized an additional non-cash deferred income tax asset valuation allowance during the second half of 2015 due to losses recognized by our German and Belgian operations during such period. During 2016, we recognized an aggregate $2.2 million non-cash tax benefit as the result of a net decrease in such deferred income tax valuation allowance, as the impact of utilizing a portion of our German NOLs during such period more than offset the impact of additional losses recognized by our Belgian operations during such period. Such valuation allowance aggregated approximately $173 million at December 31, 2016 ($153 million with respect to Germany and $20 million with respect to Belgium). During the first six months of 2017, we recognized an aggregate non-cash income tax benefit of $12.7 million as a result of a net decrease in such deferred income tax asset valuation allowance, due to utilizing a portion of both the German and Belgian NOLs during such period, including $7.7 million in the second quarter of 2017. At June 30, 2017, we concluded we now have sufficient positive evidence under the more-likely-than-not recognition criteria to support reversal of the entire valuation allowance related to our German and Belgian operations. As discussed below, a large portion of the remaining valuation allowance is reversed as of June 30, 2017, but a portion of the remaining valuation allowance will be reversed during the second half of 2017. Such sufficient positive evidence at June 30, 2017 includes, among other things, the existence of cumulative profits in the most recent twelve consecutive quarters (Germany) or profitability in recent quarters during which such profitability was trending upward throughout such period (Belgium), the ability to demonstrate future profitability in Germany and Belgium for a sustainable period, and the indefinite carryforward period for the German and Belgian NOLs. Accordingly, our income tax benefit in the second quarter of 2017 includes an aggregate non-cash income tax benefit of $149.9 million related to such reversal at June 30, 2017 ($141.9 million related to Germany, and $8.0 million related to Belgium). Such second quarter 2017 income tax benefit associated with reversal of the German and Belgian valuation allowance excludes the non-cash income tax benefit of $7.7 million, also recognized in the second quarter, as discussed above. In addition to the above amounts, our deferred income tax asset valuation allowance increased by $9.5 million during the first six months of 2017 as a result of changes in currency exchange rates, which was recognized as part of other comprehensive income (loss).

In accordance with the ASC 740-270 guidance regarding accounting for income taxes at interim dates, the amount of the valuation allowance reversed at June 30, 2017 ($149.9 million) relates to our change in judgment regarding the realizability of the related deferred income tax asset as it relates to future years (i.e. 2018 and after). A change in judgment regarding the realizability of deferred tax assets as it relates to the current year is considered in determining the estimated annual effective tax rate for the year. Accordingly, of the aggregate $173 million deferred income tax asset valuation allowance recognized at December 31, 2016, approximately $163 million has been reversed through June 30, 2017, and the remaining $20 million (which relates to the expected level of profitability of our German and Belgian operations in calendar 2017) will be reversed during the third and fourth quarters of 2017 (such aggregate reversal amount includes the $9.5 million increase to our deferred income tax asset valuation allowance as a result of changes in currency exchange rates recognized as part of other comprehensive income (loss).

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 matters 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. As a result of ongoing audits in certain jurisdictions, in 2008 Kronos filed Advance Pricing Agreement Requests with the tax authorities in the U.S., Canada and Germany. These requests have been under review with the respective tax authorities since 2008 and prior to 2016, it was uncertain whether an agreement would be reached between the tax authorities and whether we would agree to execute and finalize such agreements. During 2016, Contran, as the ultimate parent of our U.S. Consolidated income tax group, executed and finalized an Advance Pricing Agreement with the U.S. Internal Revenue Service and our Canadian subsidiary executed and finalized an Advance Pricing Agreement with the Competent Authority for Canada (collectively, the "U.S.-Canada APA") effective for tax years 2005 - 2015. Pursuant to the terms of the U.S.-Canada APA, the U.S. and Canadian tax authorities agreed to certain prior year changes to taxable income of Kronos' U.S. and Canadian subsidiaries. As a result of such agreed-upon changes, Kronos' Canadian subsidiary incurred a cash income tax payment of approximately CAD $3 million (USD $2.3 million) related to the U.S.-Canada APA, but such payment was fully offset by previously provided accruals. We currently expect the Advance Pricing Agreement between Canada and Germany (collectively, the "Canada-Germany APA") to be executed and finalized within the next twelve months. We believe we have adequate accruals to cover any cash income tax payment which might result from the finalization of the Canada-Germany APA, and accordingly we do not expect the execution of such APA to have a material adverse effect on our consolidated financial position, results of operations or liquidity.

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. 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, and we previously reached such maximum amount in the fourth quarter of 2010. Since that time and through March 31, 2015, we were not required to recognize any additional deferred income taxes with respect to our direct investment in Kronos because the deferred income taxes associated with the excess of the financial reporting carrying amount over the income tax basis of our direct investment in Kronos common stock continued to be above such cap. However, at June 30, 2015, the deferred income taxes associated with the excess of the financial reporting carrying amount over the income tax basis of our direct investment in Kronos common stock was, for the first time since the fourth quarter of 2010, below such cap, in large part due to the net loss reported by Kronos in the second quarter of 2015. During the second, third and fourth quarters of 2015, we recognized an aggregate $29.3 million non-cash income tax benefit for the reduction 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 reduction related to our equity in Kronos' net loss in 2015. We recognized a non-cash income tax expense of $6.5 million in 2016 (including $3.4 million in the first six months of 2016) 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 reduction related to our equity in Kronos' net income (loss) in such periods. Our provision for income taxes in the first six months of 2017 includes a non-cash income tax expense of $39.5 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 reduction related to our equity in Kronos' net income in such period. Such amount is included in the above table of our income tax rate reconciliation for incremental net tax on earnings and losses on non-U.S. and non-tax group companies (in addition to the other items included in such line item in the rate reconciliation, as indicated above). A portion of such increase (decrease) 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 2015, 2016 and 2017 related to our equity in Kronos' other comprehensive income (loss) items, and the amounts shown in the above table for income tax expense (benefit) allocated to other comprehensive income (loss) includes amounts related to our equity in Kronos' other comprehensive income (loss) items.

We believe we have adequate accruals for additional taxes and related interest expense which could ultimately result from tax examinations. We believe the ultimate disposition of tax examinations should not have a material adverse effect on our consolidated financial position, results of operations or liquidity. We currently estimate that our unrecognized tax benefits will decrease by approximately $15.0 million during the next twelve months primarily due to certain adjustments to our prior year returns and the expiration of certain statutes of limitations.

Note 14—Noncontrolling interest in subsidiaries:

	December 31, 2016	June 30, 2017
	(In millions)	
Noncontrolling interest in net assets:		
Kronos Worldwide	$134.5	$178.8
NL Industries	44.3	53.0
CompX International	16.4	17.0
BMI	24.6	24.8
LandWell	23.7	24.1

Total	$243.5	$297.7

	Six months ended June 30,	
	2016	2017
	(In millions)	
Noncontrolling interest in net income (loss) of subsidiaries:		
Kronos Worldwide	$(.5)	$45.6
NL Industries	(.2)	8.4
CompX International	.6	.9
BMI	(1.3)	.2
LandWell	(.3)	.3
Total	$(1.7)	$55.4

Note 15—Accumulated other comprehensive income (loss):

Changes in accumulated other comprehensive income (loss) attributable to Valhi stockholders for the three and six months ended June 30, 2016 and 2017 are presented in the table below.

	Three months ended June 30,		Six months ended June 30,	
	2016	2017	2016	2017
	(In millions)			
Accumulated other comprehensive income (loss), net of tax and noncontrolling interest:				
Marketable securities:				
Balance at beginning of period	$ 1.6	$ 1.7	$ 1.6	$ 1.7
Other comprehensive income– unrealized gains arising during the period	.1	—	.1	—
Balance at end of period	$ 1.7	$ 1.7	$ 1.7	$ 1.7
Interest rate swap:				
Balance at beginning of period	$ (3.0)	$ (.8)	$ (1.3)	$ (1.2)
Other comprehensive income (loss):				
Unrealized losses arising during the year	(.8)	(.5)	(2.8)	(.5)
Less reclassification adjustment for amounts included in interest expense	.3	.2	.6	.6
Balance at end of period	$ (3.5)	$ (1.1)	$ (3.5)	$ (1.1)
Currency translation adjustment:				
Balance at beginning of period	$ (69.4)	$ (83.1)	$ (78.1)	$ (88.5)
Other comprehensive income (loss)	(3.0)	9.3	5.7	14.7
Balance at end of period	$ (72.4)	$ (73.8)	$ (72.4)	$ (73.8)
Defined benefit pension plans:				
Balance at beginning of period	$ (121.1)	$ (135.0)	$ (123.0)	$ (137.0)
Other comprehensive income— amortization of prior service cost and net losses included in net periodic pension cost	1.8	.6	3.7	2.6
Balance at end of period	$ (119.3)	$ (134.4)	$ (119.3)	$ (134.4)
OPEB plans:				
Balance at beginning of period	$ 3.5	$ 2.9	$ 3.8	$ 3.1
Other comprehensive loss – amortization of prior service credit	(.2)	(.2)	(.5)	(.4)
Balance at end of period	$ 3.3	$ 2.7	$ 3.3	$ 2.7
Total accumulated other comprehensive income (loss):				
Balance at beginning of period	$ (188.4)	$ (214.3)	$ (197.0)	$ (221.9)
Other comprehensive income (loss)	(1.8)	9.4	6.8	17.0
Balance at end of period	$ (190.2)	$ (204.9)	$ (190.2)	$ (204.9)

See Note 11 for amounts related to our defined benefit pension plans and OPEB plans and Note 17 for a discussion of our interest rate swap contract.

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Note 16—Commitments and contingencies:

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 that these actions are without merit, and NL intends to continue to deny all allegations of wrongdoing and liability and to defend against all actions vigorously. NL does not believe it is probable that it has incurred any liability with respect to all of the lead pigment litigation cases to which NL is a party, and liability to us 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,
- no final, non-appealable adverse verdicts 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 twenty-year period for which NL was previously a party and for which NL has been dismissed without any finding of liability.

Accordingly, neither we nor NL have 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 us which may result, if any, cannot be reasonably estimated 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 one of these lead pigment cases, in April 2000 NL was served with a complaint in 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) brought by a number of California government entities against the former pigment manufacturers, the LIA and certain paint manufacturers. The County of Santa Clara sought to recover compensatory damages for funds the plaintiffs have expended or would in the future expend for medical treatment, educational expenses, abatement or other costs due to exposure to, or potential exposure to, lead paint, disgorgement of profit, and punitive damages. In July 2003, the trial judge granted defendants' motion to dismiss all remaining claims. Plaintiffs appealed and the intermediate appellate court reinstated public nuisance, negligence, strict liability, and fraud claims in March 2006. A fourth amended complaint was filed in March 2011 on behalf of The People of California by the County Attorneys of Alameda, Ventura, Solano, San Mateo, Los Angeles and Santa Clara, and the City Attorneys of San Francisco, San Diego and Oakland. That complaint alleged that the presence of lead paint created a public nuisance in each of the prosecuting jurisdictions and sought its abatement. In July and August 2013, the case was tried. In January 2014, the Judge issued a judgment finding NL, The Sherwin Williams Company and ConAgra Grocery Products Company jointly and severally liable for the abatement of lead paint in pre-1980 homes, and ordered the defendants to pay an aggregate $1.15 billion to the people of the State of California to fund such abatement. In February 2014, NL filed a motion for a new trial, and in March 2014 the court denied the motion. Subsequently in March 2014, we filed a notice of appeal with the Sixth District Court of Appeal for the State of California and the appeal is proceeding with the appellate court. The California Sixth District Court of Appeal has scheduled on August 24, 2017 the oral argument in the appeal of the lower court decision. NL believes that this judgment is inconsistent with California law and is unsupported by the evidence, and we will defend vigorously against all claims.

The Santa Clara case is unusual in that this is the second time that an adverse verdict in the lead pigment litigation has been entered against NL (the first adverse verdict against NL was ultimately overturned on appeal). We have concluded that the likelihood of a loss in this case has not reached a standard of “probable” as contemplated by ASC 450, given (i) the substantive, substantial and meritorious grounds on which the adverse verdict in the Santa Clara case will be appealed, (ii) the uniqueness of the Santa Clara verdict (i.e. no final, non-appealable verdicts have ever been rendered against NL, or any of the other former lead pigment manufacturers, based on the public nuisance theory of liability or otherwise), and (iii) the rejection of the public nuisance theory of liability as it relates to lead pigment matters in many other jurisdictions (no jurisdiction in which a plaintiff has asserted a public nuisance theory of liability has ever successfully been upheld). In addition, liability that may result, if any, cannot be reasonably estimated, as NL continues to have no basis on which an estimate of liability could be made, as discussed above. However, as with any legal proceeding, there is no assurance that any appeal would be successful, and it is reasonably possible, based on the outcome of the appeals process, that NL may in the future incur some liability resulting in the recognition of a loss contingency accrual that could have a material adverse impact on our results of operations, financial position and liquidity.

New cases may continue to be filed against NL. We cannot assure you that we will not 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. We have implemented and continue to implement various policies and programs in an effort to minimize these risks. Our policy is to maintain compliance with applicable environmental laws and regulations at all of our plants and to strive to improve environmental performance. From time to time, we may be subject to environmental regulatory enforcement under U.S. and non-U.S. statutes, the resolution of which typically involves the establishment 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 that all of our facilities are in substantial compliance with applicable environmental laws.

Certain properties and facilities used in 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, our 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. We cannot assure you that actual costs will not exceed accrued amounts or the upper end of the range for sites for which estimates have been made, and we cannot assure you that costs will not 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, 2016 and June 30, 2017, receivables for recoveries were not significant.

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 our 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 the first six months of 2017 are presented below.

	Amount (In millions)
Balance at the beginning of the year	$ 122.6
Additions charged to expense, net	3.2
Payments, net	(1.0)
Currency and other	.1
Balance at the end of period	$ 124.9

Amounts recognized in our Condensed Consolidated Balance Sheet at the end of the period:	
Current liabilities	$ 14.8

Noncurrent liabilities	110.1
Total	$ 124.9

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 June 30, 2017, NL had accrued approximately $119 million related to approximately 41 sites associated with remediation and related matters that 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 we believe it is possible to estimate costs is approximately $161 million, including the amount currently accrued.

NL believes that it is not reasonably possible to estimate the range of costs for certain sites. At June 30, 2017, there were approximately 5 sites for which NL is not currently able to 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 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 our control, such as when the party alleging liability provides information to us. 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.

WCS – Effective December 2015, WCS entered an Agreed Order with the TCEQ with regard to the disposition of certain U.S. Department of Energy ("DOE") waste currently stored at the WCS facility. WCS entered into the Agreed Order as the licensee of the storage facility, and DOE entered into a similar order with the TCEQ as the owner of the waste. WCS asserts that the alleged violations set forth in the orders are due to the acts and omissions of DOE and its contractor. WCS expects to work with TCEQ and DOE to develop a compliance plan regarding the stored waste. While the cost of the compliance plan is not currently estimable, the amount of such compliance costs could be material. On October 21, 2015 the U.S. Nuclear Regulatory Commission ("NRC") Office of Investigations commenced an investigation of WCS's handling of the DOE waste described above. WCS cooperated fully, and the matter was concluded with no formal demands or claims by the NRC. WCS believes the DOE or its contractor is required to reimburse WCS for its cost to comply with the Agreed Order and the NRC investigation under the terms of the storage contract and pursuant to law, and as such we believe the cost of compliance with the Agreed Order and the NRC investigation should not have a material effect on our consolidated financial condition, results of operations or liquidity. DOE has generally paid for the costs to comply. On April 28, 2016 WCS filed with the DOE an administrative claim under the Federal Tort Claims Act related to this matter.

Other – We have also accrued approximately $5.9 million at June 30, 2017 for other environmental cleanup matters.

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.

For additional discussion of certain litigation involving NL and certain of its former insurance carriers, please refer to our 2016 Annual Report.

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 101 of these types of cases pending, involving a total of approximately 586 plaintiffs. In addition, the claims of approximately 8,687 plaintiffs have been administratively dismissed or placed on the inactive docket in Ohio 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, we have 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 we have been dismissed, and
- our prior experience in the defense of these matters,

We believe that the range of reasonably possible outcomes of these matters will be consistent with our 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. We have sought and will continue to vigorously seek, dismissal and/or a finding of no liability from each claim. In addition, from time to time, we have received notices regarding asbestos or silica claims purporting to be brought against former subsidiaries, including notices provided to insurers with which we have entered into settlements extinguishing certain insurance policies. These insurers may seek indemnification from us.

Kronos— In March 2013, Kronos was served with the complaint, Los Gatos Mercantile, Inc. d/b/a Los Gatos Ace Hardware, et al v. E.I. Du Pont de Nemours and Company, et al. (United States District Court, for the Northern District of California, Case No. 3:13-cv-01180-SI). The defendants include Kronos, E.I. Du Pont de Nemours & Company, Huntsman International LLC and Millennium Inorganic Chemicals, Inc. As amended by plaintiffs' third amended complaint (Harrison, Jan, et al v. E.I. Du Pont de Nemours and Company, et al), plaintiffs seek to represent a class consisting of indirect purchasers of titanium dioxide in the states of Arizona, Arkansas, California, the District of Columbia, Florida, Iowa, Kansas, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Mexico, New York, North Carolina, Oregon and Tennessee that indirectly purchased titanium dioxide from one or more of the defendants on or after March 1, 2002. The complaint alleges that the defendants conspired and combined to fix, raise, maintain, and stabilize the price at which titanium dioxide was sold in the United States and engaged in other anticompetitive conduct. The case is now proceeding in the trial court. We believe the action is without merit, will deny all allegations of wrongdoing and liability and intend to defend against the action vigorously. Based on our quarterly status evaluation of this case, we have determined that it is not reasonably possible that a loss that is material has been incurred in this case.

In September 2016, Kronos was served with the complaint, Home Depot U.S.A., Inc. v. E.I. Dupont Nemours and Company, et al. (United States District Court, for the Northern District of California, Case No. 3:16-cv-04865). The defendants include Kronos, E.I. Du Pont de Nemours & Company, Huntsman International LLC and Millennium Inorganic Chemicals, Inc. The plaintiff alleges that it indirectly purchased titanium dioxide from one or more of the defendants on or after March 1, 2002. The complaint alleges that the defendants conspired and combined to fix, raise, maintain, and stabilize the price at which titanium dioxide was sold in the United States and engaged in other anticompetitive conduct. The case is now proceeding in the trial court. We believe the action is without merit, will deny all allegations of wrongdoing and liability and intend to defend against the action vigorously. Based on our quarterly status evaluation of this case, we have determined that it is not reasonably possible that a loss has been incurred in this case.

For a description of the anti-trust action filed by the United States Department of Justice with respect to the sales of WCS, see Note 3.

Other—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 any additional material insurance coverage for our environmental claims.

We currently believe that the disposition of all of these various other claims and disputes, 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.

Note 17—Fair value measurements and financial instruments:

The following table summarizes the valuation of our marketable securities, financial instruments and other items recorded on a fair value basis as of:

	Fair Value Measurements			
	Total	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
	(In millions)			
Asset (liability)				
December 31, 2016:				
Marketable securities:				
Current	$4.4	$ —	$ 4.4	$ —
Noncurrent	253.5	.6	2.9	250.0
Interest rate swap	(3.1)	—	(3.1)	—
June 30, 2017:				
Marketable securities:				
Current	$.8	$ —	$ .8	$ —
Noncurrent	257.2	2.5	4.7	250.0
Interest rate swap	(2.8)	—	(2.8)	—

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

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

At December 31, 2016 and June 30, 2017, Kronos had no currency forward contracts outstanding. We did not use hedge accounting for any of our contracts to the extent we held such contracts in 2016.

Interest rate swap contract - As part of our interest rate risk management strategy, in August 2015 Kronos entered into a pay-fixed/receive-variable interest rate swap contract with Wells Fargo Bank, N.A. to minimize its exposure to volatility in LIBOR as it relates to Kronos' forecasted outstanding variable-rate indebtedness. Under this interest rate swap, Kronos will pay a fixed rate of 2.016% per annum, payable quarterly, and receive a variable rate of three-month LIBOR (subject to a 1.00% floor), also payable quarterly, in each case based on the notional amount of the swap then outstanding. The effective date of the swap contract was September 30, 2015. The notional amount of the swap started at $344.75 million and declines by $875,000 each quarter beginning December 31, 2015, with a final maturity of the swap contract in February 2020. The notional amount of the swap as of June 30, 2017 was $338.6 million. This swap contract has been designated as a cash flow hedge and qualified as an effective hedge at inception under ASC Topic 815. The effective portion of changes in fair value on this interest rate swap is recorded as a component of other comprehensive income (loss), net of deferred income taxes and noncontrolling interest. Commencing in the fourth quarter of 2015, as interest expense accrues on LIBOR-based variable rate debt, we classify the amount we pay under the pay-fixed leg of the swap and the amount we receive under the receive-variable leg of the swap as part of interest expense, with the net effect that the amount of interest expense we recognize on our LIBOR-based variable rate debt each quarter, as it relates to the notional amount of the swap outstanding each quarter, will be based on a fixed rate of 2.016% per annum in lieu of the level of LIBOR prevailing during the quarter. The amount of hedge ineffectiveness, if any, related to the swap will be recorded in earnings (also as part of interest expense). Since the inception of the swap through June 30, 2017, there have been no gains or losses recognized in earnings representing hedge ineffectiveness with respect to the interest rate swap.

During the first six months of June 30, 2017, the pretax amount recognized in other comprehensive income (loss) related to the interest rate swap contract was a $1.4 million gain. During the same period, $1.6 million was reclassified from accumulated other comprehensive income (loss) into earnings (interest expense). During the next twelve months the amount of the June 30, 2017 accumulated other comprehensive income (loss) balance that is expected to be reclassified to interest expense is $2.4 million pre-tax.

The fair value of the interest rate swap contract at June 30, 2017 was a $2.8 million liability including $2.0 million recognized as part of accounts payable and accrued liabilities and $.8 million recognized as part of other noncurrent liabilities in our Condensed Consolidated Balance Sheet. See Notes 9 and 10. The fair value of the interest rate swap was estimated by a third party using inputs that are observable or that can be corroborated by observable market data such as interest rate yield curves, and therefore, is classified within Level 2 of the valuation hierarchy.

The following table presents the financial instruments that are not carried at fair value but which require fair value disclosure:

	December 31, 2016		June 30, 2017	
	Carrying amount	Fair value	Carrying amount	Fair value
	(In millions)			
Cash, cash equivalents and restricted cash equivalents	$191.0	$191.0	$267.0	$267.0
Deferred payment obligation	9.0	9.0	9.2	9.2
Long-term debt (excluding capitalized leases):				
Kronos term loan	335.9	334.6	334.9	340.3
Snake River Sugar Company fixed rate loans	250.0	250.0	250.0	250.0
WCS fixed rate debt	64.0	64.0	63.1	63.1
Valhi credit facility with Contran	278.9	278.9	282.7	282.7
Kronos North American credit facility	—	—	16.3	16.3
Tremont promissory note payable	14.5	14.5	14.5	14.5
BMI bank note payable	8.4	8.5	—	—
BMI loan agreement	—	—	18.7	19.7
LandWell note payable to the City of Henderson	2.9	2.9	2.7	2.7

At December 31, 2016 and June 30, 2017, the estimated market price of Kronos' term loan was $983 per $1,000 principal amount and $1,005 per $1,000 principal amount, respectively. The fair value of Kronos' term loan was based on quoted market prices; however, these quoted market prices represent Level 2 inputs because the markets in which the term loan trades were not active. The fair value of our fixed-rate nonrecourse loans from Snake River Sugar Company is based upon the $250 million redemption price of our investment in Amalgamated, which collateralizes the nonrecourse loans (this is a Level 3 input). The fair value of variable interest rate debt and other fixed-rate debt, which represents Level 2 inputs, is deemed to approximate carrying values. See Note 8. 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 9.

Note 18—Recent accounting pronouncements not yet adopted:

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2014-09, Revenue from Contracts with Customers (Topic 606). This standard replaces existing revenue recognition guidance, which in many cases was tailored for specific industries, with a uniform accounting standard applicable to all industries and transactions. The new standard, as amended, is currently effective for us beginning with the first quarter of 2018. Entities may elect to adopt ASU No. 2014-09 retrospectively for all periods for all contracts and transactions which occurred during the period (with a few exceptions for practical expediency) or retrospectively with a cumulative effect recognized as of the date of adoption. ASU No. 2014-09 is a fundamental rewriting of existing GAAP with respect to revenue recognition, and we are still evaluating the effect the Standard will have on our

Condensed Consolidated Financial Statements. We currently expect to adopt the standard in the first quarter of 2018 using the modified retrospective approach to adoption. Generally sales within our Chemicals and Component Products Segments involve single performance obligations to ship goods pursuant to customer purchase orders without further underlying contracts, and as such we expect adoption of this standard will have a minimal effect on revenues from these segments. Revenues from our Waste Management and Real Estate Management and Development Segments are generally under long-term contract and we are in the process of evaluating the impact of adoption on the revenues of these two segments. We are in the process of evaluating the additional disclosure requirements across all segments.

In January 2016, the FASB issued ASU 2016-01, Financial Instruments-Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities, which addresses certain aspects related to the recognition, measurement, presentation and disclosure of financial instruments. The ASU requires equity investments (except for those accounted for under the equity method of accounting or those that result in the consolidation of the investee) to generally be measured at fair value with changes in fair value recognized in net income. The amendment also requires a number of other changes, including among others: simplifying the impairment assessment for equity instruments without readily determinable fair values; eliminating the requirement for public business entities to disclose methods and assumptions used to determine fair value for financial instruments measured at amortized cost; requiring an exit price notion when measuring the fair value of financial instruments for disclosure purposes; and requiring separate presentation of financial assets and liabilities by measurement category and form of asset. The changes indicated above will be effective for us beginning in the first quarter of 2018, with prospective application required, and early adoption is not permitted. The most significant aspect of adopting this ASU will be the requirement to recognize changes in fair value of our available-for-sale marketable equity securities in net income (currently changes in fair value of such securities are recognized in other comprehensive income).

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842), which is a comprehensive rewriting of the lease accounting guidance which aims to increase comparability and transparency with regard to lease transactions. The primary change will be the recognition of lease assets for the right-of–use of the underlying asset and lease liabilities for the obligation to make payments by lessees on the balance sheet for leases currently classified as operating leases. The ASU also requires increased qualitative disclosure about leases in addition to quantitative disclosures currently required. Companies are required to use a modified retrospective approach to adoption with a practical expedient which will allow companies to continue to account for existing leases under the prior guidance unless a lease is modified, other than the requirement to recognize the right-of-use asset and lease liability for all operating leases. The changes indicated above will be effective for us beginning in the first quarter of 2019, with early adoption permitted. We are currently in the process of assessing all of our current leases across all of our segments. We have not yet evaluated the effect this ASU will have on our Condensed Consolidated Financial Statements, but given the material amount of our future minimum payments under non-cancellable operating leases at December 31, 2016 discussed in Note 18 to our 2016 Annual Report, we expect to recognize a material right-of-use lease asset and lease liability upon adoption of the ASU.

In January 2017, the FASB issued ASU 2017-04, Intangibles— Goodwill and Other (Topic 350) Simplifying the Test for Goodwill Impairment, which aims to simplify the subsequent measurement of goodwill by eliminating Step 2 from the goodwill impairment test. Previously, Step 2 measured a goodwill impairment loss by comparing the implied fair value of a reporting unit's goodwill with the carrying amount of that goodwill. Instead, under the new ASU, an entity should perform its annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount, and a goodwill impairment charge would be recognized for the amount by which the carrying amount exceeds the reporting unit's fair value. In no circumstances would the loss recognized exceed the total amount of goodwill allocated to that reporting unit. The changes indicated above will be effective for us beginning in 2020 (our annual impairment tests are completed in the third quarter), with prospective application required, and early adoption is permitted. We do not believe the application of ASU 2017-04 will have a material effect on our Condensed Consolidated Financial Statements and we plan to early adopt this ASU beginning with our current year goodwill impairment tests.

In March 2017, the FASB issued ASU 2017-07, Compensation— Retirement Benefits (Topic 715) Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost, which requires that the service cost component of net periodic defined benefit pension and OPEB cost be reported in the same line item as other compensation costs for applicable employees incurred during the period. Other components of such net benefit cost are required to be presented in the income statement separately from the service cost component, and below income from operations (if such a subtotal is presented). These other net benefit cost components must be disclosed either on the face of the financial statements or in the notes to the financial statements. In addition only the service cost component is eligible for capitalization in assets where applicable (inventory or internally constructed fixed assets for example). The amendments in ASU 2017-06 are effective for us beginning with in the first quarter of 2018, early adoption as of the beginning of an annual period is permitted, retrospective presentation is required for the income statement presentation of the service cost component and other components of net benefit cost, and prospective application is required for the capitalization in assets of the service cost component of net benefit cost. We expect to adopt this ASU in the first quarter of 2018. We currently include a substantial portion of our net periodic defined benefit pension cost as part of compensation expense which is capitalized into inventory, and we do not present a subtotal for income from operations. A substantial portion of our net periodic OPEB cost is not capitalized into assets, and the service cost component of our net periodic OPEB cost is not material. Accordingly, adoption of this standard will change the amount of our aggregate compensation cost capitalized in inventory, mostly as it relates to our defined benefit pension plans. As disclosed in Note 11 to our 2016 Annual Report, the service cost component represented approximately $9.9 million of our total net periodic defined benefit pension costs of $22.9 million in 2016.

ITEM 2. 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 our majority-owned subsidiaries, including NL Industries, Inc., Kronos Worldwide, Inc., CompX International Inc., Waste Control Specialists LLC ("WCS"), Tremont LLC, Basic Management, Inc. ("BMI") and The LandWell Company ("LandWell"). Kronos (NYSE: KRO), NL (NYSE: NL), and CompX (NYSE MKT: CIX) each file periodic reports with the Securities and Exchange Commission ("SEC").

We have four 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 ("TiO_2"). TiO_2 is used to impart whiteness, brightness, opacity and durability to a wide variety of products, including paints, plastics, paper, fibers and ceramics. Additionally, TiO_2 is a critical component of everyday applications, such as coatings, plastics and paper, as well as many specialty products such as inks, foods and cosmetics.
- 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 recreational transportation, postal, office and institutional furniture, cabinetry, tool storage, healthcare and a variety of other industries. CompX is also a leading manufacturer of stainless steel exhaust systems, gauges, throttle controls and trim tabs for the recreational marine and other non-marine industries.
- Waste Management— WCS is our subsidiary which operates a West Texas facility for the processing, treatment, storage and disposal of a broad range of low-level radioactive, hazardous, toxic and other wastes. WCS obtained a byproduct disposal license in 2008 and began disposal operations at this facility in 2009. WCS received a low-level radioactive waste ("LLRW") disposal license in 2009. The Compact LLRW disposal facility commenced operations in 2012, and the Federal LLRW site commenced operations in 2013. In the second quarter of 2017 we recognized an impairment charge with respect to WCS' long-lived assets. See Note 3 to our Condensed Consolidated Financial Statements.
- Real Estate Management and Development— We operate in real estate management and development through our majority control of BMI and LandWell. BMI provides utility services to certain industrial and municipal customers and owns real property in Henderson, Nevada. LandWell is engaged in efforts to develop certain land holdings for commercial, industrial and residential purposes in Henderson, Nevada.

General

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended. Statements in this Quarterly 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 Quarterly Report and those described from time to time in our other filings with the SEC include, but are not limited to, the following:

- Future supply and demand for our products;
- The extent of the dependence of certain of our businesses on certain market sectors;
- The cyclicality of certain of our businesses (such as Kronos' TiO_2 operations);
- Customer and producer inventory levels;
- Unexpected or earlier-than-expected industry capacity expansion (such as the TiO_2 industry);
- Changes in raw material and other operating costs (such as ore, zinc, brass, aluminum, steel and energy costs) and our ability to pass those costs on to our customers or offset them with reductions in other operating costs;
- Changes in the availability of raw materials (such as ore);

- General global economic and political conditions (such as changes in the level of gross domestic product in various regions of the world and the impact of such changes on demand for, among other things, TiO_2 and component products);
- Competitive products and prices and substitute products, including increased competition from low-cost manufacturing sources (such as China);
- Possible disruption of our business or increases in the cost of doing business resulting from terrorist activities or global conflicts;
- Customer and competitor strategies;
- Potential difficulties in integrating future acquisitions;
- Potential difficulties in upgrading or implementing new accounting and manufacturing software systems (such as the Chemicals Segment's new enterprise resource planning system);
- Potential consolidation of our competitors;
- Potential consolidation of our customers;
- The impact of pricing and production decisions;
- Competitive technology positions;
- The introduction of trade barriers;
- The ability of our subsidiaries to pay us dividends;
- The impact of current or future government regulations (including employee healthcare benefit related regulations);
- 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) or possible disruptions to our business resulting from potential instability resulting from uncertainties associated with the euro or other currencies;
- Operating interruptions (including, but not limited to, labor disputes, leaks, natural disasters, fires, explosions, unscheduled or unplanned downtime, transportation interruptions and cyber attacks);
- 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;
- Our ability to maintain sufficient liquidity;
- The ultimate outcome of income tax audits, tax settlement initiatives or other tax matters;
- Our ultimate ability to utilize income tax attributes, the benefits of which may or may not presently 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 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);
- The ultimate resolution of pending litigation (such as NL's lead pigment litigation, environmental and other litigation and Kronos' class action litigation);
- 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;
- Our ability to successfully defend against any possible future challenge to WCS' operating licenses and permits;
- Unexpected delays in the operational start-up of shipping containers procured by WCS;
- Our ability to increase disposal volumes and obtain new business at WCS;
- Our ability to generate positive operating results or cash flows at WCS;

- The impact of our inability to complete the previously reported sale of WCS;
- Changes in real estate values and construction costs in Henderson, Nevada;
- Water levels in Lake Mead; 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.

In an effort to provide investors with additional information regarding our results of operations as determined by accounting principles generally accepted in the United States of America ("GAAP"), we have disclosed certain non-GAAP information, which we believe provides useful information to investors:

- We disclose operating loss before the long-lived asset impairment charge related to our Waste Management Segment, which we use to assess the performance of the Waste Management Segment's operations. We believe disclosure of operating loss before the impact of the long-lived asset impairment charge provides useful information to investors because it allows investors to analyze the performance of the Waste Management Segment's operations in the same way that we assess performance.

Operations Overview

Quarter Ended June 30, 2017 Compared to the Quarter Ended June 30, 2016—

Net income attributable to Valhi stockholders was $8.8 million, or $.03 per diluted share, in the second quarter of 2017 compared to net loss attributable to Valhi stockholders of $8.5 million, or $.02 per diluted share, in the second quarter of 2016. As more fully discussed below, our net income attributable to Valhi stockholders increased from 2016 to 2017 primarily due to the net effects of:

- a $170.6 million impairment of the long-lived assets of our Waste Management Segment in 2017;
- higher operating income from our Chemicals Segment in 2017;
- a non-cash deferred income tax benefit of $157.6 million in 2017 as a result of a decrease in our deferred income tax asset valuation allowance related to our Chemicals Segment's German and Belgian operations; and
- a $4 million termination fee in 2017 related to the termination of the agreement to sell our Waste Management Segment; and
- higher general and administrative expenses in 2017 related to expenses associated with the now terminated agreement to sell our Waste Management Segment.

Our diluted income per share in 2017 includes:

- a charge of $.31 per diluted share related to the impairment of the long-lived assets of our Waste Management Segment;
- a non-cash deferred income tax benefit of $.27 per diluted share as a result of a decrease in our deferred income tax asset valuation allowance related to our Chemicals Segment's German and Belgian operations;
- a benefit of $.01 per diluted share for the termination fee related to the termination of the agreement to sell our Waste Management Segment.

Six Months Ended June 30, 2017 Compared to the Six Months Ended June 30, 2016 —

Net income attributable to Valhi stockholders was $21.5 million, or $.06 per diluted share, in the first six months of 2017 compared to a net loss attributable to Valhi stockholders of $28.0 million, or $.08 per diluted share, in the first six months of 2016. As more fully discussed below, our net income attributable to Valhi stockholders increased from 2016 to 2017 primarily due to the net effects of:

- a $170.6 million impairment of the long-lived assets of our Waste Management Segment in 2017;

- a non-cash deferred income tax benefit of $162.6 million in 2017 as a result of a decrease in our deferred income tax asset valuation allowance related to our Chemicals Segment's German and Belgian operations;
- higher operating income from our Chemicals Segment in 2017 compared to 2016;
- a $4 million termination fee in 2017 related to the termination of the agreement to sell our Waste Management Segment;
- higher general and administrative expenses in 2017 related to the now terminated agreement to sell our Waste Management Segment; and
- higher operating income at our Component Products Segment in 2017 compared to 2016.

Our net diluted income per share in 2017 includes:

- a charge of $.31 per diluted share related to the impairment of the long-lived assets of our Waste Management Segment;
- a non-cash deferred income tax benefit of $.28 per diluted share as a result of a decrease in our deferred income tax asset valuation allowance related to our Chemicals Segment's German and Belgian operations;
- a benefit of $.01 per diluted share for the termination fee related to the termination of the agreement to sell our Waste Management Segment.

Our diluted income per share in 2016 includes a charge of $.01 per diluted share related to the contract related intangible asset impairment.

Current Forecast for 2017 –

We currently expect to report higher net income attributable to Valhi stockholders for 2017 as compared to 2016 primarily due to the net effects of:

- higher operating income from our Chemicals Segment in 2017 as compared to an operating loss in 2016, principally as a result of expected higher average selling prices in 2017 as compared to 2016 and to a lesser extent from the favorable effects of anticipated higher production volumes in 2017;
- the non-cash deferred income tax benefit in 2017 as a result of a decrease in our deferred income tax asset valuation allowance related to our Chemicals Segment's German and Belgian operations;
- the impairment of the long-lived assets of our Waste Management Segment in 2017; and
- higher general and administrative expenses in 2017 related to the now terminated agreement to sell our Waste Management Segment.

Segment Operating Results—2016 Compared to 2017 –

Chemicals –

We consider TiO_2 to be a "quality of life" product, with demand affected by gross domestic product, or GDP, and overall economic conditions in our markets located in various regions of the world. Over the long-term, we expect demand for TiO_2 will grow by 2% to 3% per year, consistent with our expectations for the long-term growth in GDP. However, even if we and our competitors maintain consistent shares of the worldwide market, demand for TiO_2 in any interim or annual period may not change in the same proportion as the change in GDP, in part due to relative changes in the TiO_2 inventory levels of our customers. We believe that our customers' inventory levels are influenced in part by their expectations for future changes in market TiO_2 selling prices as well as their expectations for future availability of product. Although certain of our TiO_2 grades are considered specialty pigments, the majority of our grades and substantially all of our production are considered commodity pigment products, with price and availability being the most significant competitive factors along with quality and customer service.

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

- our TiO_2 sales and production volumes,
- TiO_2 selling prices,

- manufacturing costs, particularly raw materials such as third-party feedstock ore, 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).

Our Chemicals Segment's key performance indicators are our TiO_2 average selling prices, our level of TiO_2 sales and production volumes, and the cost of our third-party feedstock ore. TiO_2 selling prices generally follow industry trends and prices will increase or decrease generally as a result of competitive market pressures.

	Three months ended June 30, 2016	2017	% Change	Six months ended June 30, 2016	2017	% Change
	(Dollars in millions)					
Net sales	$356.0	$441.4	24 %	$674.5	$811.2	20 %
Cost of sales	301.0	312.1	4	579.5	578.9	—
Gross margin	$55.0	$129.3	135	$95.0	$232.3	145
Operating income (loss)	$12.7	$73.0	477	$15.7	$128.0	716
Percent of net sales:						
Cost of sales	85 %		71 %	86 %	71 %	
Gross margin	15		29	14	29	
Operating income (loss)	4		17	2	16	
$Ti0_2$ operating statistics:						
Sales volumes*	149	157	6 %	287	300	5 %
Production volumes*	131	141	8	262	286	9
Percent change in net sales:						
$Ti0_2$ product pricing			20 %			19 %
$Ti0_2$ sales volumes			6			5
$Ti0_2$ product mix			—			(2)
Changes in currency exchange rates			(2)			(2)
Total			24 %			20 %

*Thousands of metric tons

Current Industry Conditions – Due to the successful implementation of previously-announced price increases, average selling prices began to rise in the second quarter of 2016 and have continued to rise through the first half of 2017. Our average TiO_2 selling prices in the second quarter of 2017 were 20% higher as compared to the second quarter of 2016, and our average selling prices at the end of the second quarter of 2017 were 8% higher than at the end of the first quarter of 2017, and were 12% higher than at the end of 2016, with higher prices in all major markets. Kronos experienced higher sales volumes in the North American and export markets in the first half of 2017 as compared to the same period of 2016, partially offset by lower volumes in the Latin American market.

Kronos operated its production facilities at overall average capacity utilization rates of 100% in the first six months of 2017 compared to approximately 96% in the first six months of 2016. The table below lists our comparative quarterly capacity utilization rates.

	Production Capacity Utilization Rates 2016	2017
First quarter	97%	100%
Second quarter	95%	100%

Throughout 2016, we experienced moderation in the cost of TiO_2 feedstock ore procured from third parties. Our cost of sales per metric ton of TiO_2 sold declined throughout 2016 and into the first six months of 2017 primarily due to the moderation in the cost of TiO_2 feedstock ore in 2016. Consequently, our cost of sales per metric ton of TiO_2 sold in the first six months of 2017 was lower than our cost of sales per metric ton of TiO_2 sold in the first six months of 2016 (excluding the effect of changes in currency exchange rates).

Net sales – Our Chemicals Segment's net sales in the second quarter of 2017 increased 24%, or $85.3 million, compared to the second quarter of 2016 primarily due to the favorable effects of a 20% increase in average TiO_2 selling prices (which increased net sales by approximately $71 million) and a 6% increase in sales volumes (which increased net sales by approximately $21 million). TiO_2 selling prices will increase or decrease generally as a result of competitive market pressures, changes in the relative level of supply and demand as well as changes in raw material and other manufacturing costs.

Our Chemicals Segment's sales volumes increased 6% in the second quarter of 2017 as compared to the second quarter of 2016 primarily due to higher sales in the North American and European markets, partially offset by lower sales in the Latin American market. Our sales volumes in the second quarter of 2017 set a new overall record for a second quarter. In addition to the impact of changes in average TiO_2 selling prices and sales volumes, we estimate that changes in currency exchange rates (primarily the euro) decreased our net sales by approximately $8 million as compared to the second quarter of 2016.

Our Chemicals Segment's net sales in the first six months of 2017 increased 20%, or $136.7 million, compared to the first six months of 2016 primarily due to the favorable effects of a 19% increase in average TiO_2 selling prices (which increased net sales by approximately $128 million) and a 5% increase in sales volumes (which increased net sales by approximately $34 million). TiO_2 selling prices will increase or decrease generally as a result of competitive market pressures, changes in the relative level of supply and demand as well as changes in raw material and other manufacturing costs.

Our Chemicals Segment's sales volumes increased 5% in the first six months of 2017 as compared to the first six months of 2016 primarily due to higher sales in the North American and export markets, partially offset by lower sales in the Latin American market. Our sales volumes in the first half of 2017 set a new overall record for a first-six-month period. In addition to the impact of changes in average TiO_2 selling prices and sales volumes, we estimate that changes in currency exchange rates decreased our net sales by approximately $15 million as compared to the first six months of 2016.

Cost of Sales – Our Chemicals Segment's cost of sales increased 4% in the second quarter of 2017 compared to the second quarter of 2016 due to the net impact of a 6% increase in sales volumes, efficiencies related to an 8% increase in TiO_2 production volumes, lower raw materials and production costs of approximately $1 million and currency fluctuations (primarily the euro). Our Chemicals Segment's cost of sales as a percentage of net sales decreased to 71% in the second quarter of 2017 compared to 85% in the same period of 2016 primarily due to the favorable impact of higher average selling prices, and to a lesser extent lower raw materials and other production costs and efficiencies related to higher production volumes.

Our Chemicals Segment's cost of sales was flat in the first six months of 2017 compared to the same period in 2016 primarily due to the net impact of a 5% increase in sales volumes, efficiencies related to a 9% increase in TiO_2 production volumes, lower raw materials and other production costs of approximately $14 million and currency fluctuations (primarily the euro). Our Chemicals Segment's cost of sales as a percentage of net sales decreased to 71% in the first six months of 2017 compared to 86% in the same period of 2016 due to the favorable impact of higher average selling prices, lower raw materials and other production costs and efficiencies related to higher production volumes.

Gross Margin and Operating Income – Our Chemicals Segment's operating income increased by 477% compared to the second quarter of 2016. Our Chemicals Segment's operating income as a percentage of net sales increased to 17% in the second quarter of 2017 from 4% in the same period of 2016. This increase was driven by the increase in gross margin percentage, which increased to 29% for the second quarter of 2017 compared to 15% for the second quarter of 2016. As discussed and quantified above, our Chemicals Segment's gross margin percentage increased primarily due to the effects of higher average selling prices, higher sales and production volumes and lower raw materials and other production costs. We estimate that changes in currency exchange rates decreased income from operations by approximately $5 million in the second quarter of 2017 as compared to the same period in 2016, as discussed below. In addition operating income in the second quarter of 2016 includes an insurance settlement gain of $1.4 million related to a 2014 business interruption claim.

Our Chemicals Segment's operating income increased by 716% in the first six months of 2017 compared to the first six months of 2016. Our Chemicals Segment's operating income as a percentage of net sales increased to 16% in the first six months of 2017 from 2% in the same period of 2016. This increase was driven by the increase in gross margin, which increased to 29% for the first six months of 2017 compared to 14% for the first six months of 2016. As discussed and quantified above, our gross margin increased primarily due to the effects of higher average selling prices, higher sales and production volumes and lower raw materials and other production costs. We estimate that changes in currency exchange rates decreased income from operations by approximately $13 million in the first six months of 2017 as compared to the same period in 2016. In addition operating income in the second quarter of 2016 includes an insurance settlement gain of $3.4 million related to a 2014 business interruption claim.

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 $1.1 million and $1.0 in the first six months of 2016 and 2017, respectively, 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 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 in U.S. dollars, while labor and other production and administrative costs are incurred primarily in local currencies. Consequently, the translated U.S. dollar value of our non-U.S. sales and operating results are subject to currency exchange rate fluctuations which may favorably or unfavorably impact reported earnings and may affect the comparability of period-to-period operating results. In addition to the impact of the translation of sales and expenses over time, our non-U.S. operations also generate currency transaction gains and losses which primarily relate to (i) the difference between the currency exchange rates in effect when non-local currency sales or operating costs (primarily U.S. dollar denominated) are initially accrued and when such amounts are settled with the non-local currency, (ii) changes in currency exchange rates during time periods when our non-U.S. operations are holding non-local currency (primarily U.S. dollars), and (iii) relative changes in the aggregate fair value of currency forward contracts held from time to time. As discussed in Note 17 to our Condensed Consolidated Financial Statements, we periodically use currency forward contracts to manage a portion of our currency exchange risk, and relative changes in the aggregate fair value of any currency forward contracts we hold from time to time serves in part to mitigate the currency transaction gains or losses we would otherwise recognize from the first two items described above.

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

Impact of changes in currency exchange rates

three months ended June 30, 2017 vs June 30, 2016

	Transaction gains/losses recognized			Translation gain/loss – impact of rate changes	Total currency impact
	2016	2017	Change		2017 vs 2016
	(In millions)				
Impact on:					
Net sales	$-	$ -	$ -	$ (8)	$ (8)
Income from operations	2	(4)	(6)	1	(5)

The $8 million reduction in net sales (translation loss) was caused primarily by a strengthening of the U.S. dollar relative to the euro, as our euro-denominated sales were translated into fewer U.S. dollars in 2017 as compared to 2016. The strengthening of the U.S. dollar relative to the Canadian dollar and the Norwegian krone in 2017 did not have a significant effect on the reported amount of our net sales, as a substantial portion of the sales generated by our Canadian and Norwegian operations are denominated in the U.S. dollar.

The $5 million decrease in income from operations was comprised of the following:

- Approximately $6 million from net currency transaction losses 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, which causes increases or decreases, as applicable, in U.S. dollar-denominated receivables and payables and U.S. dollar currency held by our non-U.S. operations, and
- Approximately $1 million from net currency translation gains primarily caused by a strengthening of the U.S. dollar relative to the Canadian dollar, as its local currency-denominated operating costs were translated into fewer U.S. dollars in 2017 as compared to 2016, and such translation, as it related to the U.S. dollar relative to the euro, had a

negative effect on income from operations in 2017 as compared to 2016, as the negative impact of the stronger U.S. dollar on euro-denominated sales more than offset the favorable effect of euro-denominated operating costs being translated into fewer U.S. dollars in 2017 compared to 2016.

Impact of changes in currency exchange rates

six months ended June 30, 2017 vs June 30 2016

	Transaction gains/losses recognized			Translation gain/loss – impact of rate changes	Total currency impact 2017 vs 2016
	2016	2017	Change		
	(In millions)				
Impact on:					
Net sales	$-	$ -	$ -	$ (15)	$ (15)
Income from operations	4	(4)	(8)	(5)	(13)

The $15 million reduction in net sales (translation loss) was caused primarily by a strengthening of the U.S. dollar relative to the euro, as our euro-denominated sales were translated into fewer U.S. dollars in 2017 as compared to 2016. The strengthening of the U.S. dollar relative to the Canadian dollar and the Norwegian krone in 2017 did not have a significant effect on the reported amount of our net sales, as a substantial portion of the sales generated by our Canadian and Norwegian operations are denominated in the U.S. dollar.

The $13 million net decrease in income from operations comprised the following:

- Approximately $8 million from net currency transaction losses caused primarily 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, which causes increases or decreases, as applicable, in U.S. dollar-denominated receivables and payables and U.S. dollar currency held by our non-U.S. operations, and

- Approximately $5 million of net currency translation losses caused primarily by a strengthening of the U.S. dollar relative to the euro, as such translation had a negative effect on income from operations in 2017 as compared to 2016, as the negative impact of the stronger U.S. dollar on euro-denominated sales more than offset the favorable effect of euro-denominated operating costs being translated into fewer U.S. dollars in 2017 as compared to 2016, along with the effects of a slight strengthening of the U.S. dollar relative to the Canadian dollar and the Norwegian krone in 2017 as compared to 2016.

Outlook – During the first half of 2017 our Chemicals Segment operated its production facilities at 100% of practical capacity. We expect our Chemicals Segment's production volumes to be slightly higher in 2017 as compared to 2016, as our production rates in 2017 will be positively impacted by the implementation of certain productivity-enhancing improvement projects at certain facilities. Assuming global economic conditions do not deteriorate, we expect our 2017 sales volumes to be comparable to 2016 sales volumes. We will continue to monitor current and anticipated near-term customer demand levels and align our production and inventories accordingly. We believe it is reasonably likely we will set a new record for production volumes in 2017 (our Chemicals Segment's prior record was 550,000 metric tons in 2011).

We experienced moderation in the cost of TiO_2 feedstock ore procured from third parties in 2016. However, the cost of third-party feedstock ore we procured in the first half of 2017 was comparable to slightly higher as compared to the first half of 2016, and such higher cost feedstock ore is expected to be reflected in our results of operations beginning in the third quarter of 2017. We expect our cost of sales per metric ton of TiO_2 sold for the full year of 2017 will be slightly higher than our per-metric ton cost in 2016.

We started 2017 with average TiO_2 selling prices 11% higher than the beginning of 2016, and average selling prices increased by an additional 12% in the first six months of 2017. Industry data indicates that overall TiO_2 inventory held by producers declined significantly during 2016. In addition, we believe most customers hold very low inventories of TiO_2 with many operating on a just-in-time basis. With the strong sales volumes experienced in the first half of 2017, we continue to see evidence of strengthening demand for our TiO_2 products in certain of our primary markets. We and our major competitors have announced price increases, which we began implementing in the second quarter of 2016, as contracts have allowed. The extent to which we will be able to achieve any additional price increases in the near term will depend on market conditions.

Overall, we expect our Chemicals Segment's operating income in 2017 will be higher as compared to 2016, principally as a result of expected higher average selling prices in 2017 as compared to 2016 and to a lesser extent from the favorable effects of anticipated higher production volumes in 2017. In addition, and as discussed above, we recognized a non-cash tax benefit of $162.6 million in the first six months of 2017 (including $157.6 million in the second quarter of 2017) related to our deferred income tax asset valuation allowance associated with our Chemicals Segment's German and Belgian operations, and we expect the remaining valuation allowance of $20 million will be reversed during the third and fourth quarters of 2017.

Due to the constraints of high capital costs and extended lead time associated with adding significant new TiO_2 production capacity, especially for premium grades of TiO_2 products produced from the chloride process, we believe increased and sustained profit margins will be necessary to financially justify major expansions of TiO_2 production capacity required to meet expected future growth in demand. As a result of relative customer inventory levels during the recent past and the resulting adverse effect on global TiO_2 pricing, some industry projects to increase TiO_2 production capacity have been cancelled or deferred indefinitely, and announcements have been made regarding the closure of certain facilities. Given the lead time required for production capacity expansions, a shortage of TiO_2 could occur if economic conditions improve and global demand levels for TiO_2 increase sufficiently.

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

Component Products –

Our Component Products Segment's product offerings consist of a significantly 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.

	Three months ended June 30,			Six months ended June 30,		
	2016	2017	% Change	2016	2017	% Change
Net sales	$27.1	$30.1	11 %	$54.2	$60.0	11 %
Cost of sales	18.6	20.5	10	37.5	40.8	9
Gross margin	$8.5	$9.6	12	$16.7	$19.2	15
Operating income	$3.7	$4.6	24	$7.1	$9.1	29
Percent of net sales:						
Cost of sales	69 %	68 %		69 %	68 %	
Gross margin	31	32		31	32	
Operating income	14	15		13	15	

Net Sales – Our Component Products Segment's net sales increased $2.9 million in the second quarter of 2017 and $5.8 million in the first six months of 2017 compared to the respective periods of 2016, primarily due to approximately $3.2 million and $6.3 million for the second quarter and six month periods, respectively, in higher sales volumes to existing government security customers, partially offset by decreases of approximately $0.9 million and $1.7 million for the second quarter and six month periods, respectively, in sales to a customer serving the recreational transportation market.   Relative changes in selling prices did not have a material impact on net sales comparisons.

Cost of Sales, Gross Margin and Operating Income – Our Component Products Segment's cost of goods sold and resulting gross profit as a percentage of sales in the second quarter of 2017 was comparable to the same period in 2016. Cost of goods sold as a percentage of sales for the first six months of 2017 was approximately 1% less than 2016. As a result, gross profit increased over the same period. The higher gross profit percentage for the most recent six month period is primarily due to manufacturing efficiencies facilitated by the higher production volumes of security products. Gross margin dollars increased for both the quarter and year-to-date periods due to higher sales of security products.   As a percentage of net sales, operating income for the second quarter and first six months of 2017 increased compared to the same periods of 2016 and was primarily impacted by the factors impacting cost of goods sold and gross margin discussed above.

Outlook – Component Product sales for the first half of 2017 reflect continued strong demand for our products, particularly high-security applications for our existing government customers, partially offset by lower security product sales to the transportation market, where a significant customer of the segment continues to experience weakened sales volumes. While we expect government security sales to moderate in the second half of 2017 and anticipate continued softness in transportation sales, full year sales of security products for 2017 should meet or exceed 2016 levels. Similarly, we expect 2017 sales of marine products to meet or exceed 2016, as our growing marine components reporting unit continues to benefit from innovation and diversification in our product offerings to the recreational boat market. As in prior periods, we will continue to monitor general economic conditions and sales order rates and respond to fluctuations in customer demand through continuous evaluation of staffing levels and consistent execution of our lean manufacturing and cost improvement initiatives. Additionally, we continue to seek opportunities to gain market share in markets we currently serve, to expand into new markets and to develop new product features in order to mitigate the impact of changes in demand as well as broaden our sales base.

Waste Management –

As previously reported, in November 2015 we entered into an agreement with Rockwell Holdco, Inc. ("Rockwell"), for the sale of WCS to Rockwell. The agreement, as amended, was for $270 million in cash plus the assumption of all of WCS' third-party indebtedness incurred prior to the date of the agreement. Additionally, Rockwell and its affiliates would have assumed all financial assurance obligations related to the WCS business. Rockwell is the parent company of EnergySolutions, Inc. Completion of the sale was subject to certain customary closing conditions, including the receipt of U.S. anti-trust approval. The U.S. Department of Justice ("DOJ") did not give the parties antitrust clearance, and on November 16, 2016, the DOJ filed an anti-trust action in the U.S. federal district court for the District of Delaware styled United States of America vs. Energy Solutions, Inc., et al (Case No. 1:16-cv-01056-

UNA), seeking an injunction to enjoin completion of the sale of WCS. Trial was held in late April and early May 2017. On June 21, 2017, the court issued an order enjoining the sale of WCS. While we disagreed with the court's decision, the parties determined that they would not appeal the decision to the Third Circuit Court of Appeals, and on June 22, 2017, we provided written notice to Rockwell terminating the purchase agreement for the sale of WCS to Rockwell effective June 22, 2017.

Our Waste Management Segment had limited operations in its early years of existence, as it sought regulatory approval for several licenses it needed for full scale operations. WCS began byproduct disposal operations in 2009, Compact low-level radioactive waste (LLRW) disposal operations in 2012, and Federal LLRW disposal operations in mid-2013. We were awarded a national disposal contract for our Federal LLRW disposal facility in April 2013. The contract is for a period of five years and up to $300 million; however, tasks awarded under the contract to date have been for smaller dollar-value waste streams. We have received waste for disposal since mid-2013 for the Federal LLRW disposal facility, but it may be difficult for us to generate positive operating results until we begin routinely receiving larger Federal LLRW streams for disposal. In addition we are dependent on large commercial projects in order to receive sufficient disposal volumes to operate the Compact LLRW disposal facility at full capacity. Large projects, both federal and commercial, are infrequent and are subject to a competitive bidding process and delays in the expected time line for waste disposal to be completed. While we are the only commercial facility licensed to take Class A, B and C LLRW and Mixed LLRW (LLRW mixed with hazardous waste), other facilities can accept Class A waste including facilities that in some circumstances mix waste in such a way that some Class B and Class C waste may meet the Class A disposal requirements at these facilities. In addition, certain large commercial generators choose to store waste onsite rather than dispose of such waste and there are generally no legal or regulatory obligations requiring disposal of such wastes.

Given the historical results of operations associated with our Waste Management Segment, as previously disclosed in our filings with the Commission, termination of the purchase agreement with Rockwell constitutes a triggering event under ASC 360-10-35-21, requiring the Waste Management Segment's long-lived assets to be tested for recoverability under the ASC 360-10 framework. Given the Waste Management Segment's historical operating results, and the challenges facing WCS' disposal operations as noted above, upon the termination of the purchase agreement with Rockwell, we have concluded that the long-lived assets associated with WCS' operations are impaired at June 30, 2017. Accordingly, we have recognized an aggregate $170.6 million impairment charge during the quarter ended June 30, 2017, to reduce the carrying value of WCS' long-lived assets recognized for financial reporting purposes to their estimated fair value. See Note 3 to our Condensed Consolidated Financial Statements.

	Three months ended June 30,		Six months ended June 30,	
	2016	2017	2016	2017
	(In millions)			
Net sales	$11.1	$20.5	$16.3	$42.0
Cost of sales	13.6	17.9	25.3	34.6
Gross margin	$(2.5)	$2.6	$(9.0)	$7.4
Operating loss before long-lived asset impairment	$(7.1)	$(1.0)	$(17.9)	$(.4)
Long-lived asset impairment	—	(170.6)	—	(170.6)
Operating loss	$(7.1)	$(171.6)	$(17.9)	$(171.0)

General— We have operated our Waste Management Segment’s waste management facility on a relatively limited basis while we navigated the regulatory licensing and permitting requirements for the disposal of byproduct waste material and a broad range of LLRW and mixed LLRW. In 2008, the TCEQ issued us a license for the disposal of byproduct material. Byproduct material includes uranium or thorium mill tailings as well as equipment, pipe and other materials used to handle and process the mill tailings. We began byproduct disposal operations at our site in Andrews County, Texas in 2009. Also in 2009, the TCEQ issued a near-surface LLRW disposal license to us. Construction of the Compact and Federal LLRW sites began in January 2011. The Compact LLRW site was fully certified, operational and received its first waste for disposal in 2012. The Federal LLRW site was fully certified and operational in 2012 and received its first waste for disposal in mid-2013.

Net Sales and Operating Loss— The Waste Management Segment’s net sales increased $9.4 million and $25.7 million in the second quarter and first six months of 2017, respectively compared to the same periods of 2016. The increase in net sales was led by an increase in disposal volumes. In both the second quarter and first six months of 2017 there was an increase in the lower margin low activity waste disposal related to two projects (both of which are expected to continue for another six to nine months). In the first quarter of 2017 we completed a back-log disposal campaign for a waste consolidator that contributed $4.0 million to revenue for the first six months of 2017 (which is not expected to recur). Also contributing to the increase in sales in 2017 was an increase in transportation related revenue as we seek to increase our logistical capabilities to better manage customer disposal shipments; however, increases in transportation revenue also add to our cost of sales as we generally pass through actual logistics costs plus a service fee to our customers. As a result, increases in transportation revenue of $4.8 million and $9.9 million in the second quarter and first six months of 2017, respectively, compared to the same periods in 2016 are offset by increases in cost of sales over the same periods. Higher disposal volumes in the second quarter and first six months of 2017 resulted in higher coverage of fixed costs as compared to the same periods of 2016. As a result, our Waste Management Segment's operating loss before the long-lived asset impairment improved in both periods to a loss of $1.0 million in the second quarter of 2017 compared to $7.1 million in the same period of 2016 and to a loss of $.4 million in the first six months of 2017 compared to a loss of $17.9 million in the same period of 2016.

Outlook— With both of the Compact LLRW disposal facility and the Federal LLRW disposal facility certified and operational, we provide "one-stop shopping" for treatment, storage and disposal of hazardous, toxic, LLRW and radioactive byproduct material. WCS has the broadest range of capabilities of any commercial enterprise in the U.S. for the storage, treatment and permanent disposal of these materials, which may give WCS a competitive advantage in the industry. We are also exploring opportunities to obtain certain types of new business (including disposal and storage of certain other types of waste) that, if obtained, could increase our Waste Management Segment's sales and decrease our Waste Management Segment's operating loss. Our ability to increase our Waste Management Segment's sales volumes through these waste streams, particularly as it relates to the Compact and Federal LLRW disposal facilities, together with improved operating efficiencies through cost reductions and increased capacity utilization, are important factors in improving our Waste Management operating results and cash flows but cannot be assured. With the receipt of our license amendments and our dedicated shipping containers in service, we believe we are positioned to take full advantage of our disposal facilities going forward for any federal or commercial waste which we would be successful in obtaining. We have increased our logistical handling capabilities in order to more fully serve our customers and better facilitate their disposal shipments going forward. Given the challenges facing our disposal operations, as noted above, we do not know if WCS will be able to achieve sufficient recurring disposal volumes to generate positive operating results or cash flows.

We have in the past considered and evaluated various strategic alternatives with respect to our Waste Management Segment. We are actively pursuing other third parties in an attempt to dispose of the Waste Management Segment's business. Notwithstanding the long-lived asset impairment charge we were required to recognize for financial reporting purposes at June 30, 2017, we believe it is possible a third party would find our Waste Management Segment's business (including the existing disposal facilities and associated licenses and permits) to be an attractive acquisition opportunity for such third party, particularly to the extent such third party had existing operations, or current or future business plans, that were related to, or complementary with, the existing or possible future operations, licenses and permits of our Waste Management Segment. However, there can be no assurance that any such third party would be identified, or if identified ultimately enter into a definitive agreement for the acquisition of the Waste Management Segment, or if such an agreement is entered into what the terms and conditions of such agreement would contain, or if any such agreement is reached any such third party would close on such acquisition. If we are not successful in identifying such third party and entering into and closing such a transaction, we would continue to consider and evaluate other alternatives with respect to our Waste Management Segment, including alternatives aimed at minimizing or ultimately discontinuing any continued financial support of the Waste Management Segment.

Real Estate Management and Development –

	Three months ended June 30,		Six months ended June 30,	
	2016	2017	2016	2017
	(In millions)			
Net sales	$ 4.4	$ 10.2	$ 7.1	$ 15.9
Cost of sales	3.2	7.9	5.6	12.1
Gross margin	$ 1.2	$ 2.3	$ 1.5	$ 3.8
Operating income (loss)	$ .5	$ 1.2	$ (5.4)	$ 1.8

General — Our Real Estate Management and Development Segment consists of BMI and LandWell. BMI, which among other things provides utility services to an industrial park located in Henderson, Nevada, and is responsible for the delivery of water to the city of Henderson and various other users through a water distribution system owned by BMI. 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.

In December 2013 and through the second quarter of 2017, LandWell has closed or entered into escrow on approximately 410 acres of the residential/planned community and approximately 50 acres zoned for commercial and light industrial use at contracted prices that support the estimated fair value assigned to the land held for development that was acquired with consideration of development costs expected to be incurred after the acquisition date. See Note 3 to our Consolidated Financial Statements. 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 976. 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. Because land held for development was initially recognized at estimated fair value at the acquisition date as required by ASC Topic 805, we do not expect to recognize significant operating income on land sales for the land currently under contract. We expect the development work to continue for 10 to 15 years on the rest of the land held for development, especially the remainder of the residential/planned community.

Net Sales and Operating Income (Loss) — A substantial portion of the net sales from our Real Estate Management and Development segment in the second quarter of 2016 and 2017 consisted of revenues from land sales. We recognized $8.3 million and $11.9 million in revenues on land sales during the second quarter and first six months of 2017, respectively, compared to $2.2 million and $3.2 million in the same periods of 2016. The contracts on these sales (both within the planned community and otherwise) include approximately 400 acres of the residential planned community and certain other acreage which closed in December 2013 and through the six months of 2017. Cost of sales related to land sales revenues was $6.6 million and $9.3 million in the second quarter and first six months of 2017, respectively, compared to $1.8 million and $2.9 million in the same periods of 2016. We have several residential builders actively building new homes in our community from land sale contracts which have closed over the past several quarters. As noted above, our income recognition under the percentage-of-completion method is largely driven on actual development costs incurred each period towards the entire project phase. We currently expect the level of our infrastructure development activity during 2017 to be more heavily weighted towards the first nine months of 2017 as compared to the fourth quarter of 2017, and relatively more weighted towards the second and third quarters of 2017 as compared to the first quarter. Consequently, we currently expect the level of our land sale revenue recognized with respect to parcels previously sold and closed to be more weighted towards the first nine months of 2017 as compared to the fourth quarter of 2017, and relatively more evenly weighted in the third quarter of 2017 as compared to the second quarter. Also, additional parcels within the residential planned community are currently expected to be sold and closed during 2017, but most of such additional parcels are currently not expected to close until the fourth quarter of 2017 (and revenue on such additional parcels would not begin to be recognized under the percentage-of-completion method until the sale of each parcel has closed).

The remainder of net sales and cost of sales related to this segment primarily relates to water delivery fees and expenses. We deliver water to several customers under long-term contracts. In this regard in January 2016 we amended our water delivery contract with the City of Henderson, Nevada. As a result we recognized a contract related intangible asset impairment of $5.1 million in the first quarter of 2016 ($2.1 million, or $.01 per diluted share, net of income tax benefit and noncontrolling interest), see Note 7 to our Condensed Consolidated Financial Statements.

Outlook — We are actively pursuing opportunities to maximize cash proceeds from the sale of our land held for development. In the near term, we are focused on developing and selling land we manage, primarily to residential builders, for the approximately 2,100 acres zoned for residential/planned community in Henderson, Nevada. We expect the development work for the residential/planned community to continue over the next several years, including those parcels currently under contract for which the development work is expected to be completed in 2018. We do not expect to recognize significant amounts of operating income related to these sales for the parcels currently under contract because our basis in the land value is the December 2013 acquisition date fair value; however, we do expect to generate cash proceeds from these sales in excess of our acquisition costs, which proceeds are expected to be used, in part, to fund ongoing development work for the remainder of these properties.

General Corporate Items, Interest Expense, Income Taxes and Noncontrolling Interest—2017 Compared to 2016

Interest and Dividend Income – A significant portion of our interest and dividend income in both 2017 and 2016 relates to the distributions we received from The Amalgamated Sugar Company LLC. We recognized dividend income from the LLC of $6.3 million and $12.7 million in each of the second quarter and first six months of 2017 and 2016, respectively.

Insurance Recoveries – Insurance recoveries relate to agreements NL has 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.

The agreements with certain of NL's insurance carriers also include reimbursement for a portion of our future 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. Accordingly, these insurance recoveries are recognized when the receipt is probable and the amount is determinable. See Note 16 to our Condensed Consolidated Financial Statements.

Termination fee – We received a $4.0 million termination fee in the second quarter of 2017 related to the termination of the agreement to sell our Waste Management Segment, see Note 3 to our Condensed Consolidated Financial Statements.

Corporate Expenses and Other Items, Net – Corporate expenses were 75% higher in the second quarter of 2017 and 35% higher in the first six months of 2017 compared to the same periods of 2016, primarily due to transaction costs related to the now terminated agreement to sell our Waste Management Segment.   Included in corporate expenses are:

- litigation and related costs at NL of $1.3 million in the second quarter of 2017 compared to $.8 million in second quarter of 2016 and $1.8 million in the first six months of 2017 compared to $1.6 million in the first six months of 2016; and
- environmental remediation and related costs of $.1 million in the second quarter of 2017 compared to $.2 million in second quarter of 2016 and $3.2 million in the first six months of 2017 compared to $3.1 million in the first six months of 2016.

The level of our litigation and related costs 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 16 to our Condensed Consolidated Financial Statements.   If our current expectations regarding the number of cases in which we expect to be involved during 2017, or the nature of such cases, were to change, our corporate expenses could be higher than we currently estimate.

Obligations associated with environmental remediation and related matters are difficult to assess and estimate, and it is possible that actual costs will exceed accrued amounts or that costs will be incurred in the future for sites in which we cannot currently estimate our liability. If these events were to occur in the remainder of 2017, our corporate expenses would be higher than we currently estimate. In addition, we adjust our accruals for environmental remediation and related matters as further information becomes available to us or as circumstances change. Further information or changed circumstances could result in an increase or reduction in our accrued costs. See Note 16 to our Condensed Consolidated Financial Statements.

Overall, we currently expect that our net general corporate expenses in 2017 will be higher than in 2016, as the transaction costs associated with the now terminated agreement to sell our Waste Management Segment will more than offset lower expected environmental remediation and related costs in 2017.

Interest Expense – Interest expense increased slightly to $16.0 million in the second quarter of 2017 from $15.8 million in the second quarter of 2016 and to $31.6 million in the first six months of 2017 from $31.5 million in the same period of 2016 primarily due to higher average debt balances outstanding and higher average interest rates during 2017 compared to the same periods of 2016. We currently expect our interest expense for all of 2017 will be somewhat higher as compared to 2016, due to higher overall average debt levels and higher average interest rates on outstanding borrowings.

Income Tax Expense (Benefit) – Our tax rate varies as the contribution of income from our business units change. We had an income tax benefit of $167.4 million in the second quarter of 2017 compared to income tax expense of $.2 million in the second quarter of 2016 and an income tax benefit of $149.4 million in the first six months of 2017 compared $8.4 million in the first six months of 2016. The difference is primarily due to the effect of the reversal of our deferred income tax asset valuation allowance associated with our German and Belgian operations in 2017, as discussed below.   For interim financial reporting purposes, we apply an effective tax rate methodology in determining our provision for income taxes. Generally, we expect the effective tax rate associated with our non-US earnings to be lower than our U.S. statutory rate of 35%.

Our Chemicals Segment has substantial net operating loss (NOL) carryforwards in Germany (the equivalent of $638 million for German corporate purposes and $71 million for German trade tax purposes at December 31, 2016) and in Belgium (the equivalent of $93 million for Belgian corporate tax purposes at December 31, 2016), all of which have an indefinite carryforward period. As a result, we have net deferred income tax assets with respect to these two jurisdictions, primarily related to these NOL carryforwards. The German corporate tax is similar to the U.S. federal income tax, and the German trade tax is similar to the U.S. state income tax. Prior to June 30, 2015, and using all available evidence, we had concluded no deferred income tax asset valuation allowance was required to be recognized with respect to these net deferred income tax assets under the more-likely-than-not recognition criteria, primarily because (i) the carryforwards have an indefinite carryforward period, (ii) we utilized a portion of such carryforwards during the most recent three-year period, and (iii) we expected to utilize the remainder of the carryforwards over the long term. We had also previously indicated that facts and circumstances could change, which might in the future result in the recognition of a valuation allowance against some or all of such deferred income tax assets. However, as of June 30, 2015, and given our operating results during the second quarter of 2015 and our expectations at that time for our operating results for the remainder of 2015, which had been driven in large part by the trend in our average TiO_2 selling prices over such periods as well as the $21.1 million pre-tax charge recognized in the second quarter of 2015 in connection with the implementation of certain workforce reductions, we did not have sufficient positive evidence to overcome the significant negative evidence of having cumulative losses in the most recent twelve consecutive quarters in both our German and Belgian jurisdictions at June 30, 2015 (even considering that the carryforward period of our German and Belgian NOL carryforwards is indefinite, one piece of positive evidence). Accordingly, at June 30, 2015, we concluded that we were required to recognize a non-cash deferred income tax asset valuation allowance under the more-likely-than-not recognition criteria with respect to our German and Belgian net deferred income tax assets at such date. We recognized an additional non-cash deferred income tax asset valuation allowance during the second half of 2015 due to losses recognized by our German and Belgian operations during such period. During 2016, we recognized an aggregate \$2.2 million non-cash tax benefit as the result of a net decrease in such deferred income tax valuation allowance, as the impact of utilizing a portion of our German NOLs during such period more than offset the impact of additional losses recognized by our Belgian operations during such period. Such valuation allowance aggregated approximately \$173 million at December 31, 2016 (\$153 million with respect to Germany and \$20 million with respect to Belgium). During the first six months of 2017, we recognized an aggregate non-cash income tax benefit of \$12.7 million as a result of a net decrease in such deferred income tax asset valuation allowance, due to utilizing a portion of both the German and Belgian NOLs during such period, including \$7.7 million in the second quarter of 2017. We continue to believe we will ultimately realize the full benefit of these German and Belgian NOL carryforwards, in part because of their indefinite carryforward period. As previously disclosed, our ability to reverse all or a portion of either the German or Belgian valuation allowance is dependent on the presence of sufficient positive evidence, such as the existence of cumulative profits in the most recent twelve consecutive quarters or profitability in recent quarters during which such profitability was trending upward throughout such period, and the ability to demonstrate future profitability for a sustainable period. As noted below, we determined such conditions were satisfied at June 30, 2017.

Although our Belgian operations were profitable in the first quarter of 2017 and we utilized a portion of the Belgian NOLs during such period, our Belgian operations continued to have cumulative losses in the most recent twelve quarters at March 31, 2017. Although the results of our German operations had improved during 2016 and the first quarter of 2017, indicating a change in the negative trend in earnings that existed at December 31, 2015, and we utilized a portion of our German NOLs during 2016 and the first quarter of 2017, and we had cumulative income with respect to our German operations for the most recent twelve consecutive quarters at March 31, 2017, the sustainability of such positive trend in earnings had not yet been demonstrated at such date. As previously disclosed, while neither our business as a whole nor any of our principal product groups is seasonal to any significant extent, TiO_2 sales are generally higher in the second and third quarters of the year, due in part to the increase in paint production in the spring to meet demand during the spring and summer painting seasons. While we have some insight into the overall demand expected to be generated by a particular year’s paint season and TiO_2 pricing at the end of the first quarter (the start of the paint season), we have much greater insight and certainty regarding overall demand and TiO_2 pricing for a particular year’s paint season by the end of the second quarter of the year, in part because some factors, such as weather, can have an impact on both overall demand and pricing each year. Accordingly, at March 31, 2017 we did not have sufficient positive evidence to support a sustainable profit trend and consequently, we did not have sufficient positive evidence under the more-likely-than-not recognition criteria to support reversal of the entire valuation allowance related to our German or Belgian operations at such date. During the second quarter of 2017, our German and Belgian operations continued to be profitable, and both reported levels of profitability higher as compared to the first quarter of 2017. As discussed above, our consolidated results of operations in general, and our German and Belgian operations in particular, were favorably impacted during the quarter by, among other things, continued higher average TiO_2 selling prices and higher sales volumes. Our German operations had cumulative income for the most recent twelve consecutive quarters at June 30, 2017. While our Belgian operations had cumulative losses in the most recent twelve consecutive quarters at June 30, 2017, such operations generated income in both the first and second quarters of 2017, with higher income in the second quarter as compared to the first quarter, the amount of cumulative losses of our Belgian operations for the most recent twelve consecutive quarters was lower as of June 30, 2017 as compared to both March 31, 2017 and December 31, 2016 and we expect to have cumulative profits in the third and fourth quarters. Our production facilities have been operating at near practical capacity utilization rates in the first six months of 2017. In addition, consistent with our expectation regarding our consolidated results of operations for the remainder of 2017 (as discussed below under the “Outlook” subsection), we currently believe it is likely our German and Belgian operations will continue to report improved operating results in 2017 as compared to 2016. Accordingly, at June 30, 2017 we concluded we now have sufficient positive evidence under the more-likely-than-not recognition criteria to support reversal of the entire valuation allowance related to our German and Belgian operations. As discussed below, a large portion of the remaining valuation allowance is reversed as of June 30, 2017, but a portion of the remaining valuation allowance will be reversed during the second half of 2017. Such sufficient positive evidence includes, among other things, the existence of cumulative profits in the most recent twelve consecutive quarters (Germany) or profitability in recent quarters during which such profitability was trending upward throughout such period (Belgium), the ability to demonstrate future profitability in Germany and Belgium for a sustainable period (as supported by, among other things, recent trends in profitability, driven in large part by increases in TiO_2 selling prices, and continued strong demand indicating that such profitability trends will continue in the future), and the indefinite carryforward period for the German and Belgian NOLs. Accordingly, our income tax benefit in the second quarter of 2017 includes an aggregate non-cash income tax benefit of $149.9 million related to such reversal at June 30, 2017 ($141.9 million related to Germany, and $8.0 million related to Belgium). Such second quarter 2017 income tax benefit associated with reversal of the German and Belgian valuation allowance excludes the non-cash income tax benefit of $7.7 million also recognized in the second quarter, as discussed above. In addition to the above amounts, our deferred income tax asset valuation allowance increased by $9.5 million during the first six months of 2017 as a result of changes in currency exchange rates, which was recognized as part of other comprehensive income (loss).

In accordance with the ASC 740-270 guidance regarding accounting for income taxes at interim dates, the amount of the valuation allowance reversed at June 30, 2017 ($149.9 million) relates to our change in judgment regarding the realizability of the related deferred income tax asset as it relates to future years (i.e. 2018 and after). A change in judgment regarding the realizability of deferred tax assets as it relates to the current year is considered in determining the estimated annual effective tax rate for the year. Accordingly, of the aggregate $173 million deferred income tax asset valuation allowance recognized at December 31, 2016, approximately $163 million has been reversed through June 30, 2017, and the remaining $20 million (which relates to the expected level of profitability of our German and Belgian operations in calendar 2017) will be reversed during the third and fourth quarters of 2017 (such aggregate reversal amount includes the $9.5 million increase to our deferred income tax asset valuation allowance as a result of changes in currency exchange rates recognized as part of other comprehensive income (loss)).

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. 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, and we previously reached such maximum amount in the fourth quarter of 2010. Since that time and through March 31, 2015, we were not required to recognize any additional deferred income taxes with respect to our direct investment in Kronos because the deferred income taxes associated with the excess of the financial reporting carrying amount over the income tax basis of our direct investment in Kronos common stock continued to be above such cap. However, at June 30, 2015, the deferred income taxes associated with the excess of the financial reporting carrying amount over the income tax basis of our direct investment in Kronos common stock was, for the first time since the fourth quarter of 2010, below such cap, in large part due to the net loss reported by Kronos in the second quarter of 2015. During the second, third and fourth quarters of 2015, we recognized an aggregate $29.3 million non-cash income tax benefit for the reduction 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 reduction related to our equity in Kronos' net loss in 2015. We recognized a non-cash income tax expense of $6.5 million in 2016 (including $3.4 million in the first six months of 2016) 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 reduction related to our equity in Kronos' net income (loss) in such periods. Our provision for income taxes in the first six months of 2017 includes a non-cash income tax expense of $39.5 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 reduction related to our equity in Kronos' net income in such period. Such amount is included in the table of our income tax rate reconciliation for incremental net tax on earnings and losses on non-U.S. and non-tax group companies in Note 13 to our Consolidated Financial Statements (in addition to the other items included in such line item in the rate reconciliation, as indicated in Note 13). A portion of such increase (decrease) 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 2015, 2016 and 2017 related to our equity in Kronos' other comprehensive income (loss) items, and the amounts shown in the table in Note 13 for income tax expense (benefit) allocated to other comprehensive income (loss) includes amounts related to our equity in Kronos' other comprehensive income (loss) items. At June 30, 2017, we are now $13.7 million below the cap, and expect to recognize additional non-cash income tax expense related to this item during the second half of 2017 but we expect to reach the cap during this period.

See Note 13 to our Condensed Consolidated Financial Statements for more information about our 2017 income tax items and a tabular reconciliation of our statutory tax expense to our actual tax expense.

Noncontrolling Interest in Net Income (Loss) of Subsidiaries – Noncontrolling interest in net income was $46.3 million in the second quarter of 2017 and $55.4 million in the first six months of 2017, respectively, compared to noncontrolling interest in net loss of $1.7 million and noncontrolling interest in net income of $.8 million in the second quarter and first six months of 2016, respectively. The change is primarily due to earnings at Kronos due to improved operations and the non-cash deferred income tax benefit recognized in the second quarter of 2017 as noted above.

LIQUIDITY AND CAPITAL RESOURCES

Consolidated Cash Flows

Operating Activities—

Trends in cash flows from operating activities (excluding the impact of significant asset dispositions and relative changes in assets and liabilities) are generally similar to trends in our operating income. 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 period to period can be impacted by changes in currency exchange rates, since a portion of our cash, cash equivalents and restricted cash is held by our non-U.S. subsidiaries.

We generally report a net use of cash from operating activities in the first six months of each year due to seasonal changes in the level of our working capital. Cash provided by operating activities was $88.7 million in the first six months of 2017 compared to cash used in operating activities of $8.7 million in the first six months of 2016. This $97.4 million increase in the amount of net cash provided was primarily due to the net effects of the following:

- excluding the non-cash long-lived asset impairment charge of $170.6 million in the first six months of 2017 related to our Waste Management Segment, and the non-cash contract-related intangible asset impairment charge of $5.1 million in the first six months of 2016 related to our Real Estate Management and Development Segment, a $133.9 million improvement in operating income in 2017 compared to the first six months of 2016, primarily due to higher earnings in our Chemicals Segment;
- a $27.4 million increase in the amount of net cash used in relative changes in receivables, inventories, payables and accrued liabilities in 2017;
- higher cash paid for taxes of $17.8 million due to our improved earnings and
- higher net distributions from our TiO_2 manufacturing joint venture in 2017 of $1.8 million, primarily due to the timing of the joint venture's working capital needs.

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

- Kronos' average days sales outstanding ("DSO") increased slightly from December 31, 2016 to June 30, 2017, primarily as a result of relative changes in the timing of collections.
- Kronos' average days sales in inventory ("DSI") decreased from December 31, 2016 to June 30, 2017 principally due to higher sales volumes in the second quarter of 2017 compared to the fourth quarter of 2016 while production volumes were comparable.
- CompX's average DSO increased slightly from December 31, 2016 to June 30, 2017. Generally, we expect CompX's average days sales outstanding to increase from December to June as the result of a seasonal increase in sales during the second quarter as compared to the fourth quarter. Overall, our June 30, 2017 days sales outstanding compared to December 31, 2016 is in line with our expectations.
- CompX's average DSI decreased from December 31, 2016 to June 30, 2017 primarily as a result of the seasonal increase in sales during the second quarter 2017 as compared to the fourth quarter of 2016.

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

	December 31, 2015	June 30, 2016	December 31, 2016	June 30, 2017
Kronos:				
Days sales outstanding	66 days	66 days	65 days	68 days
Days sales in inventory	80 days	55 days	71 days	52 days
CompX:				
Days sales outstanding	31 days	42 days	36 days	37 days
Days sales in inventory	76 days	69 days	79 days	68 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.

	Six months ended June 30,	
	2016	2017
	(In millions)	
Cash provided by (used in) operating activities:		
Valhi exclusive of its subsidiaries	$7.5	$(2.2)
Kronos	16.6	101.5
NL exclusive of its subsidiaries	6.1	6.4
CompX	1.9	4.3
BMI	1.2	1.3
LandWell	(3.7)	(.9)
WCS	(7.9)	8.8
Tremont exclusive of its subsidiaries	(1.5)	(1.2)
Eliminations	(28.9)	(29.3)
Total	$(8.7)	$88.7

Investing Activities –

We spent $30.5 million in capital expenditures during the first six months of 2017 including:

- $26.6 million in our Chemicals Segment;
- $1.6 million in our Component Products Segment;
- $.3 million in our Waste Management Segment; and
- $2.0 million in our Real Estate Management and Development Segment.

Our Waste Management Segment also had $2.2 million in expenditures for capitalized permit costs in the first six months of 2017. In addition, during the first six months of 2017 we had net purchases of $.1 million of marketable securities.

Financing Activities—

During the six months ended June 30, 2017, we:

- borrowed a net $3.8 million on Valhi’s credit facility with Contran;
- borrowed a net $16.3 million under Kronos’ North American revolving credit facility ($160.8 million of gross borrowings and $144.5 million of gross repayments);
- borrowed $20.5 million under BMI’s new bank loan ($19.5 million carrying amount, net of debt issuance costs) and used the proceeds to repay BMI’s $8.5 million outstanding bank credit facility; and
- paid quarterly dividends to Valhi stockholders aggregating $.04 per share ($13.6 million).

The declaration and payment of future dividends, and the amount thereof, is discretionary and is dependent upon these and other factors deemed relevant by our Board of Directors. The amount and timing of past dividends is not necessarily indicative of the amount or timing of any future dividends which might be paid. There are currently no contractual restrictions on the amount of dividends which we may pay. Distributions to noncontrolling interest in subsidiaries in the first six months of 2017 are comprised of CompX dividends paid to shareholders other than NL and Kronos dividends paid to shareholders other than us and NL.

Outstanding Debt Obligations

At June 30, 2017, our consolidated indebtedness was comprised of:

- Valhi's $250 million loan from Snake River Sugar Company due in 2027;
- Valhi's $282.7 million outstanding on its $325 million credit facility with Contran which is due no earlier than December 31, 2018;

- $338.6 million aggregate borrowing under Kronos' term loan ($334.9 million carrying amount, net of unamortized original issue discount and debt issuance costs) due through February 2020;
- WCS' financing capital lease with Andrews County, Texas ($63.1 million carrying amount) which has an effective interest rate of 7.0% and is due in monthly installments through August 2035;
- $16.3 million outstanding on Kronos' North American revolving credit facility;
- Tremont's promissory note payable ($14.5 million outstanding) due in December 2023;
- $19.7 million on BMI's bank loan ($18.7 million carrying amount, net of debt issuance costs), due through June 2032;
- $2.7 million on LandWell's note payable to the City of Henderson due in October 2020; and
- approximately $9.7 million of other indebtedness, primarily capital lease obligations.

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' North American and European revolvers contain a number of covenants and restrictions which, among other things, restrict its ability to incur additional debt, incur liens, pay dividends or merge or consolidate with, or sell or transfer substantially all of its assets to, another entity, and contains other provisions and restrictive covenants customary in lending transactions of this type. Kronos' European revolving credit facility also requires the maintenance of certain financial ratios, and one of such requirements is based on the ratio of net debt to the last twelve months EBITDA of the borrowers. The terms of all of our debt instruments (including revolving lines of credit for which we have no outstanding borrowings at June 30, 2017) are discussed in Note 8 to our Consolidated Financial Statements included in our 2016 Annual Report. We are in compliance with all of our debt covenants at June 30, 2017. We believe that we will be able to continue to comply with the financial covenants contained in our credit facilities through their maturity.

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 generally 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 Condensed 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.

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 obligations (defined as the twelve-month period ending June 30, 2017) and our long-term obligations (defined as the five-year period ending March 31, 2022, our time period for long-term budgeting). 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 June 30, 2017, we had credit available under existing facilities of approximately $270.8 million, which was comprised of:

- $91.4 million under Kronos’ North American revolving credit facility;
- $137.1[(1)] million under Kronos’ European revolving credit facility; and
- $42.3[(2)] million under Valhi’s revolving credit facility with Contran.

(1) Based on Kronos’ EBITDA over the last twelve months ending June 30, 2017, the full €120.0 million amount of the credit facility ($137.1 million) is available for borrowing at June 30, 2017.

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

We could borrow all of the amounts noted above without violating any covenants of the credit facilities.

At June 30, 2017, we had an aggregate of $275.1 million of restricted and unrestricted cash, cash equivalents and marketable securities, including $115.1 million held by our non-U.S. subsidiaries. A detail by entity is presented in the table below.

	Total	Amount held outside U.S.
	(In millions)	
Kronos	$115.4	$ 115.1
CompX	22.5	—
NL exclusive of its subsidiaries	72.0	—
WCS	24.8	—
LandWell	14.0	—
BMI	17.2	—
Tremont exclusive of its subsidiaries	8.9	—
Valhi exclusive of its subsidiaries	.3	—
Total restricted and unrestricted cash, cash equivalents and marketable securities	$275.1	$ 115.1

Capital Expenditures and Other –

We currently expect our aggregate capital expenditures for 2017 will be approximately $84 million as follows:

- $65 million by our Chemicals Segment, including approximately $14 million in the area of environmental compliance, protection and improvement;
- $3 million by our Component Products Segment;
- $5 million by our Waste Management Segment; and
- $11 million by our Real Estate Management and Development Segment.

The WCS amount includes approximately $2 million in capitalized operating permit costs (already incurred), see Note 3 to the Condensed Consolidated Financial Statements. In addition LandWell expects to spend approximately $22 million on land development costs during 2017 (which are included in the determination of cash provided by operating activities).

Capital spending for 2017 is expected to be funded primarily through cash generated from operations and borrowing under existing credit facilities. Planned capital expenditures in 2017 at Kronos and CompX will primarily be to maintain and improve the cost-effectiveness of our facilities. A significant portion (approximately $13 million) of Kronos' planned capital expenditures in 2017 relates to the implementation of a new accounting and manufacturing system. 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 Common Stock –

We, Kronos and CompX have programs to repurchase common stock from time to time as market conditions permit. These stock repurchase programs do not include specific price targets or timetables and may be suspended at any time. Depending on market conditions, these programs may be terminated prior to completion. Cash on hand will be used to acquire the shares and repurchased shares will be added to treasury shares and cancelled.

At June 30, 2017 Valhi had approximately 4.0 million shares of our common stock available to repurchase under the authorizations made by our board of directors.

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. At June 30, 2017 approximately 1.95 million shares are available for repurchase.

CompX's board of directors authorized the repurchase 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. At June 30, 2017 approximately 678,000 shares were available for purchase under these authorizations.

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. If Kronos pays its regular dividend of $.15 per share in each quarter of 2017, based on the 58.0 million shares we held of Kronos common stock at June 30, 2017, we would receive aggregate annual regular dividends from Kronos of $34.8 million. We did not receive any dividends from NL during 2016 and we do not know if we will receive any cash dividends from NL during 2017. We did not receive any distributions from WCS during 2016, and we do not expect to receive any distributions from WCS during 2017. BMI and LandWell do 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 $12.4 million in 2016. We do not know if we will receive additional distributions from BMI and LandWell during 2017. 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.

Certain of 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. 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 might be required to sell at what we believe would be less than what we believe is the long-term value of such assets.

WCS' primary source of liquidity currently consists of intercompany borrowings from one of our wholly-owned subsidiaries under the terms of a revolving credit facility. We eliminate these intercompany borrowings in our Consolidated Financial Statements. WCS has borrowed substantial amounts from us over the years. Prior to 2015, we contributed these amounts to WCS' capital. WCS had net repayments of $1.3 million during the first six months of 2017 to our subsidiary and at June 30, 2017 the balance was $40.4 million. WCS could borrow an additional $44.6 million under its current intercompany facility with such subsidiary at June 30, 2017. It is probable WCS will borrow additional amounts from our subsidiary during 2017 under the terms of the revolving credit facility.

On November 14, 2016 we entered into a $50 million revolving credit facility with a subsidiary of NL collateralized with approximately 35.2 million shares of the common stock of Kronos Worldwide, Inc. held by NL's subsidiary. Outstanding borrowings under the credit facility bear interest at the prime rate plus 1.875% per annum, payable quarterly, with all amounts due on December 31, 2023. 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 consolidated 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. During 2016 NL's subsidiary borrowed $.5 million under this facility and had no borrowings or repayments during the first six months of 2017. NL could borrow an additional $49.5 million under this credit facility at June 30, 2017.

We have an unsecured revolving demand promissory note with Kronos which as amended in August 2016, provides for borrowings from Kronos of up to $60 million. We also eliminate any such intercompany borrowings in our Condensed Consolidated Financial Statements. We had no borrowings from Kronos during 2016 and the first six months of 2017 under this facility, which as amended is due on demand, but in any event no earlier than December 31, 2018. Kronos' obligation to loan us money under this note is at Kronos' discretion.

On August 3, 2016 we entered into an unsecured revolving demand promissory note with CompX which, as amended, provides for borrowings from CompX of up to $40 million. We eliminate these intercompany borrowings in our Condensed Consolidated Financial Statements. Such facility, as amended, is due on demand, but in any event no earlier than December 31, 2018. During the first six months of 2017 we have had gross borrowings of $39.3 million and gross repayments of $27.2 million, and at June 30, 2017 an aggregate of $39.5 million was outstanding under the facility. We could borrow an additional $.5 million under our current intercompany facility with CompX at June 30, 2017. CompX's obligation to loan us money under this note is at CompX's discretion.

Investment in The Amalgamated Sugar Company LLC –

The terms of The Amalgamated Sugar Company LLC Company Agreement provide for an annual "base level" of cash dividend distributions (sometimes referred to as distributable cash) by the LLC of $26.7 million, from which we are entitled to a 95% preferential share. Distributions from the LLC are dependent, in part, upon the operations of the LLC. We record dividend distributions from the LLC as income when they are declared by the LLC, which is generally the same month in which we receive the distributions, although distributions may in certain cases be paid on the first business day of the following month. To the extent the LLC's distributable cash is below this base level in any given year, we are entitled to an additional 95% preferential share of any future annual LLC distributable cash in excess of the base level until such shortfall is recovered. Based on the LLC's current projections for 2017, we expect distributions received from the LLC in 2017 will exceed our debt service requirements under our $250 million loans from Snake River Sugar Company by approximately $1.8 million.

We may, at our option, require the LLC to redeem our interest in the LLC and the LLC has the right to redeem our interest in the LLC beginning in 2027. The redemption price is generally $250 million plus the amount of certain undistributed income allocable to us, if any. In the event we require the LLC to redeem our interest in the LLC, Snake River has the right to accelerate the maturity of and call our $250 million aggregate loans from Snake River. Redemption of our interest in the LLC would result in us reporting income related to the disposition of our LLC interest for income tax purposes, although we would not be expected to report a gain in earnings for financial reporting purposes at the time our LLC interest is redeemed. However, because of Snake River's ability to call our $250 million loans from Snake River upon redemption of our interest in the LLC, the net cash proceeds (after repayment of the debt) generated by the redemption of our interest in the LLC could be less than the income taxes that we would be required to pay as a result of the disposition.

Off-balance Sheet Financing

We do not have any off-balance sheet financing agreements other than the operating leases discussed in our 2016 Annual Report.

Commitments and Contingencies

There have been no material changes in our contractual obligations since we filed our 2016 Annual Report and we refer you to that report for a complete description of these commitments.

We are subject to certain commitments and contingencies, as more fully described in Notes 14 and 18 to our 2016 Annual Report, or in Notes 13 and 16 to our Condensed Consolidated Financial Statements and in Part II, Item 1 of this Quarterly Report, including:

- certain income tax examinations which are underway in various U.S. and non-U.S. jurisdictions;
- certain environmental remediation matters involving NL, Tremont, BMI, LandWell and Valhi;
- 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 such legal proceedings 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.

Recent Accounting Pronouncements

See Note 18 to our Condensed Consolidated Financial Statements.

Critical Accounting Policies

There have been no changes in the first six months of 2017 with respect to our critical accounting policies presented in Management's Discussion and Analysis of Financial Condition and Results of Operation in our 2016 Annual Report.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to market risk, including currency exchange rates, interest rates and security prices, and raw material prices. There have been no material changes in these market risks since we filed our 2016 Annual Report, and refer you to Part I, Item 7A.—"Quantitative and Qualitative Disclosure About Market Risk" in our 2016 Annual Report. See also Note 17 to our Condensed Consolidated Financial Statements.

We have substantial operations located outside the United States for which the functional currency is not the U.S. dollar. As a result, our assets and liabilities, results of operations and cash flows will fluctuate based upon changes in currency exchange rates.

We periodically use currency forward contracts to manage a nominal portion of currency exchange rate market risk associated with trade receivables, or similar exchange rate risk associated with future sales, denominated in a currency other than the holder's functional currency. These contracts generally relate to our Chemicals Segment's operations. We have not entered into these contracts for trading or speculative purposes in the past, nor do we currently anticipate entering into such contracts for trading or speculative purposes in the future. Some of the currency forward contracts we enter into meet the criteria for hedge accounting under GAAP and are designated as cash flow hedges. For these currency forward contracts, gains and losses representing the effective portion of our hedges are deferred as a component of accumulated other comprehensive income, and are subsequently recognized in earnings at the time the hedged item affects earnings. For the currency forward contracts we enter into which do not meet the criteria for hedge accounting, we mark-to-market the estimated fair value of such contracts at each balance sheet date, with any resulting gain or loss recognized in income currently as part of net currency transactions.

ITEM 4. 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 Robert D. Graham, our Vice Chairman of the Board, President and Chief Executive Officer, and Gregory M. Swalwell, our Executive Vice President, Chief Financial Officer and Chief Accounting Officer, have evaluated the design and effectiveness of our disclosure controls and procedures as of June 30, 2017. 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.

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 investment that are recorded in the consolidated financial statements, including controls over the selection of accounting methods for our investments, the recognition of equity method earnings and losses and the determination, valuation and recording of our investment account balances.

Changes in internal control over financial reporting

In January 2017, our Chemicals Segment implemented a new enterprise resource planning system covering certain finance processes (principally general ledger, accounts receivable and accounts payable). We believe we have maintained appropriate internal control over financial reporting during such implementation period. There has been no other change to our internal control over financial reporting during the quarter ended June 30, 2017 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting. Implementation of the remaining portion of such enterprise resource planning system covering sales, procurement, manufacturing and plant maintenance is not expected to occur until January 2018 at the earliest.

Part II. OTHER INFORMATION

Item 1. Legal Proceedings.

Please refer to Note 16 to our Condensed Consolidated Financial Statements, and Note 18 to our Consolidated Financial Statements included in our 2016 Annual Report for a description of certain legal proceedings.

United States v. NL Industries, Inc. (United States District Court, Western District of New York, Case No. 17-cv-124). In July 2017, the District Court entered the Consent Decree and NL paid the settlement amount to the United States.

In August 2017, we were served in Refined Metals Corporation v. NL Industries, Inc., (United States District Court for the Southern District of Indiana, Case 1:17-cv-2565). This is a CERCLA and state law contribution action brought by the current owner of a former secondary lead smelting facility located in Beech Grove, Indiana. We intend to deny liability and will defend vigorously against all claims.

Item 1A. Risk Factors.

For a discussion of the risk factors related to our businesses, please refer to Part I, Item 1A, “Risk Factors,” in our 2016 Annual report. There have been no material changes to such risk factors during the first six months of 2017.

Item 6. Exhibits.

Item No.	Exhibit Index
31.1	Certification
31.2	Certification
32.1	Certification
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema
101.CAL	XBRL Taxonomy Extension Calculation Linkbase
101.DEF	XBRL Taxonomy Extension Definition Linkbase
101.LAB	XBRL Taxonomy Extension Label Linkbase
101.PRE	XBRL Taxonomy Extension Presentation Linkbase

SIGNATURES

Pursuant to the requirements 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)
Date	August 8, 2017	/s/ Gregory M. Swalwell Gregory M. Swalwell (Executive Vice President, Chief Financial Officer and Chief Accounting Officer)
Date	August 8, 2017	/s/ Amy Allbach Samford Amy Allbach Samford (Vice President and Controller)