Koppers Holdings Inc.
Form 10-Q
August 03, 2017

UNITED STATES

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 quarterly period ended June 30, 2017

Commission file number 1-32737

KOPPERS HOLDINGS INC.

(Exact name of registrant as specified in its charter)

| Pennsylvania | 20-1878963 |
|---|---|
| (State of incorporation) | (IRS Employer Identification No.) |

436 Seventh Avenue

Pittsburgh, Pennsylvania 15219

(Address of principal executive offices)

(412) 227-2001

(Registrant’s telephone number, including area code)

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T 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, a smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer”, “accelerated filer” and “smaller reporting company,” and “emerging growth company” in Rule 12b-2 of the Exchange Act. (Check one):

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 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 Exchange Act). Yes No

Common Stock, par value $0.01 per share, outstanding at July 31, 2017 amounted to 20,745,461 shares.

PART I—FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

KOPPERS HOLDINGS INC.

CONDENSED CONSOLIDATED STATEMENT OF OPERATIONS AND COMPREHENSIVE INCOME

| | Three Months Ended June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| (Dollars in millions, except per share amounts) | 2017 (Unaudited) | 2016 (Unaudited) | 2017 (Unaudited) | 2016 (Unaudited) |
| Net sales | $378.0 | $ 385.1 | $724.6 | $ 731.9 |
| Cost of sales (excluding items below) | 294.7 | 303.8 | 570.0 | 592.3 |
| Depreciation and amortization | 11.7 | 13.1 | 22.9 | 28.2 |
| Impairment and restructuring charges | 2.1 | 6.0 | 3.6 | 11.1 |
| Selling, general and administrative expenses | 31.9 | 30.2 | 62.9 | 60.5 |
| Operating profit | 37.6 | 32.0 | 65.2 | 39.8 |
| Other income | 0.7 | 0.4 | 2.7 | 2.0 |
| Interest expense | 10.8 | 14.3 | 21.4 | 26.6 |
| Loss on extinguishment of debt | 0.0 | 0.0 | 13.3 | 0.0 |
| Income before income taxes | 27.5 | 18.1 | 33.2 | 15.2 |
| Income tax provision | 6.6 | 6.8 | 7.6 | 6.3 |
| Income from continuing operations | 20.9 | 11.3 | 25.6 | 8.9 |
| (Loss) income from discontinued operations, net of tax benefit (expense) of $0.6, $0.0, $0.6 and $(0.4) | (1.1) | 0.0 | (1.2) | 0.6 |
| Net income | 19.8 | 11.3 | 24.4 | 9.5 |
| Net income (loss) attributable to noncontrolling interests | 0.1 | (0.8) | 0.3 | (1.3) |
| Net income attributable to Koppers | $19.7 | $ 12.1 | $24.1 | $ 10.8 |
| Earnings (loss) per common share attributable to Koppers common shareholders: | | | | |
| Basic - | | | | |
| Continuing operations | $1.00 | $ 0.58 | $1.22 | $ 0.49 |
| Discontinued operations | (0.06) | 0.00 | (0.06) | 0.03 |
| Earnings per basic common share | $0.94 | $ 0.58 | $1.16 | $ 0.52 |
| Diluted - | | | | |
| Continuing operations | $0.95 | $ 0.57 | $1.15 | $ 0.49 |
| Discontinued operations | (0.05) | 0.00 | (0.06) | 0.03 |
| Earnings per diluted common share | $0.90 | $ 0.57 | $1.09 | $ 0.52 |
| Comprehensive income | $24.7 | $ 9.9 | $36.9 | $ 17.3 |
| Comprehensive income (loss) attributable to noncontrolling interests | 0.2 | (1.0) | 0.4 | (1.5) |
| Comprehensive income attributable to Koppers | $24.5 | $ 10.9 | $36.5 | $ 18.8 |
| Weighted average shares outstanding (in thousands): | | | | |

| | | | | |
|---|---|---|---|---|
| Basic | 20,782 | 20,640 | 20,752 | 20,611 |
| Diluted | 21,883 | 20,944 | 21,898 | 20,798 |

The accompanying notes are an integral part of these condensed consolidated financial statements.

KOPPERS HOLDINGS INC.

CONDENSED CONSOLIDATED BALANCE SHEET

| (Dollars in millions, except per share amounts) | June 30, 2017 (Unaudited) | December 31, 2016 |
|---|---|---|
| Assets | | |
| Cash and cash equivalents | $ 40.0 | $ 20.8 |
| Accounts receivable, net of allowance of $3.0 and $3.8 | 180.1 | 136.8 |
| Income tax receivable | 4.5 | 3.8 |
| Inventories, net | 229.7 | 228.7 |
| Loan to related party | 0.0 | 8.9 |
| Other current assets | 46.7 | 39.1 |
| Total current assets | 501.0 | 438.1 |
| Property, plant and equipment, net | 303.4 | 280.8 |
| Goodwill | 187.9 | 186.4 |
| Intangible assets, net | 136.2 | 141.9 |
| Deferred tax assets | 26.7 | 27.1 |
| Other assets | 13.2 | 13.2 |
| Total assets | $ 1,168.4 | $ 1,087.5 |
| Liabilities | | |
| Accounts payable | $ 148.4 | $ 144.2 |
| Accrued liabilities | 116.4 | 106.3 |
| Current maturities of long-term debt | 12.5 | 42.6 |
| Total current liabilities | 277.3 | 293.1 |
| Long-term debt | 680.4 | 619.8 |
| Accrued postretirement benefits | 50.4 | 51.6 |
| Deferred tax liabilities | 6.7 | 6.3 |
| Other long-term liabilities | 80.1 | 82.1 |
| Total liabilities | 1,094.9 | 1,052.9 |
| Commitments and contingent liabilities (Note 18) | | |
| Equity | | |
| Senior Convertible Preferred Stock, $0.01 par value per share; 10,000,000 shares authorized; no shares issued | 0.0 | 0.0 |
| Common Stock, $0.01 par value per share; 80,000,000 shares authorized; 22,350,838 and 22,140,680 shares issued | 0.2 | 0.2 |
| Additional paid-in capital | 183.7 | 176.5 |
| Accumulated deficit | (0.8) | (24.7) |
| Accumulated other comprehensive loss | (56.1) | (68.6) |
| Treasury stock, at cost, 1,605,377 and 1,475,792 shares | (58.1) | (53.0) |
| Total Koppers shareholders' equity | 68.9 | 30.4 |
| Noncontrolling interests | 4.6 | 4.2 |
| Total equity | 73.5 | 34.6 |

| | | |
|---|---|---|
| Total liabilities and equity | $ 1,168.4 | $ 1,087.5 |

The accompanying notes are an integral part of these condensed consolidated financial statements.

KOPPERS HOLDINGS INC.

CONDENSED CONSOLIDATED STATEMENT OF CASH FLOWS

| (Dollars in millions) | Six Months Ended June 30, 2017 (Unaudited) | 2016 (Unaudited) |
|---|---|---|
| Cash provided by (used in) operating activities: | | |
| Net income | $24.4 | $ 9.5 |
| Adjustments to reconcile net cash provided by (used in) operating activities: | | |
| Depreciation and amortization | 22.9 | 28.2 |
| Loss on extinguishment of debt | 13.3 | 0.0 |
| Gain on disposal of investment | (1.4) | 0.0 |
| Deferred income taxes | 0.2 | 0.3 |
| Equity loss, net of dividends received | 0.0 | 0.7 |
| Change in other liabilities | (6.7) | (5.2) |
| Non-cash interest expense | 1.0 | 3.9 |
| Stock-based compensation | 5.0 | 3.4 |
| Other - net | 0.0 | 2.8 |
| Changes in working capital: | | |
| Accounts receivable | (39.2) | (19.5) |
| Inventories | 4.6 | 6.0 |
| Accounts payable | 1.8 | 4.8 |
| Accrued liabilities | 8.3 | 3.3 |
| Other working capital | (2.9) | (3.9) |
| Net cash provided by operating activities | 31.3 | 34.3 |
| Cash (used in) provided by investing activities: | | |
| Capital expenditures | (34.2) | (21.3) |
| Repayments of loan | 9.5 | 0.0 |
| Net cash provided by divestitures and asset sales | 0.8 | 0.6 |
| Net cash used in investing activities | (23.9) | (20.7) |
| Cash provided by (used in) financing activities: | | |
| Borrowings of revolving credit | 523.3 | 290.3 |
| Repayments of revolving credit | (455.9) | (288.2) |
| Borrowings of long-term debt | 500.0 | 0.0 |
| Repayments of long-term debt | (541.4) | (15.0) |
| Issuances of Common Stock | 1.9 | 0.1 |
| Repurchases of Common Stock | (5.2) | (0.3) |
| Payment of debt issuance costs | (11.0) | (1.4) |
| Net cash provided by (used in) financing activities | 11.7 | (14.5) |
| Effect of exchange rate changes on cash | 0.1 | (4.5) |
| Net increase (decrease) in cash and cash equivalents | 19.2 | (5.4) |
| Cash and cash equivalents at beginning of period | 20.8 | 21.8 |
| Cash and cash equivalents at end of period | $40.0 | $ 16.4 |

The accompanying notes are an integral part of these condensed consolidated financial statements.

KOPPERS HOLDINGS INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

1. Basis of Presentation

The accompanying unaudited condensed consolidated financial statements and related disclosures have been prepared in accordance with accounting principles generally accepted in the United States applicable to interim financial information and with the instructions to Form 10-Q and Rule 10-01 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements. In the opinion of management, all adjustments considered necessary for a fair presentation of Koppers Holdings Inc.'s and its subsidiaries' ("Koppers", "Koppers Holdings" or the "Company") financial position and interim results as of and for the periods presented have been included. All such adjustments are of a normal recurring nature unless disclosed otherwise. Because the Company's business is seasonal, results for interim periods are not necessarily indicative of those that may be expected for a full year. The Condensed Consolidated Balance Sheet for December 31, 2016 has been summarized from the audited balance sheet contained in the Annual Report on Form 10-K for the year ended December 31, 2016. Certain prior period amounts in the notes to the consolidated financial statements have been reclassified to conform to the current period's presentation.

The financial information included herein should be read in conjunction with the Company's audited consolidated financial statements and related notes included in its Annual Report on Form 10-K for the year ended December 31, 2016.

2. New Accounting Pronouncements

The Company adopted Financial Accounting Standards Board ("FASB") Accounting Standards Update ("ASU") No. 2016-09, "Improvements to Employee Share-Based Payment Accounting" effective January 1, 2017. This ASU makes several modifications related to the accounting for forfeitures of share-based awards, employer tax withholding on share-based compensation and the financial statement presentation of excess tax benefits or deficiencies. The Company elected to account for forfeitures when they occur. The impact of adoption was a decrease to retained earnings of $0.2 million, an increase to deferred tax assets of $0.1 million and an increase to additional paid in capital of $0.3 million.

In May 2014, the FASB issued ASU No. 2014-09, "Revenue from Contracts with Customers (Topic 606)." ASU 2014-09 requires an entity to recognize revenue in a manner that depicts the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. Subsequent to the issuance of ASU 2014-09, the FASB issued multiple ASUs which either amended or clarified ASU 2014-09. Collectively, the revenue recognition ASUs are effective for annual reporting periods beginning after December 15, 2017 and allow for the use of either the full retrospective or modified retrospective transition method. The Company has decided to use the modified retrospective method for transition in which the cumulative effect will be recognized at the date of adoption with no restatement of comparative periods presented. The Company has a project team that has made substantial progress in analyzing significant contracts with customers across all major business units to determine the impact of the adoption of the ASUs on the Company's financial statements and disclosures. The Company will continue to assess the impact the ASU updates will have on its revenue arrangements with a final evaluation of the impact of adopting these ASU updates expected to be completed during the third quarter of 2017.

In February 2016, the FASB issued ASU No. 2016-02, "Leases (Topic 842)." ASU 2016-02 requires an entity to recognize a right-of-use asset and lease liability for all leases with terms of more than one year. Recognition,

measurement and presentation of expenses will depend on classification as a finance or operating lease. The standard is effective January 1, 2019 and early adoption is permitted. The guidance requires a modified retrospective adoption. The Company is currently evaluating the impact the adoption of ASU 2016-02 will have on its consolidated financial statements.

In August 2016, the FASB issued ASU No. 2016-15, “Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments.” The update clarifies how entities should classify certain cash receipts and cash payments on the statement of cash flow. The amendments in this update are effective for periods beginning after December 15, 2017. The Company is in the process of assessing the impact the adoption of this ASU will have on its consolidated financial statements.

3. Plant Closures and Divestitures

Over the past three years, the Company has been restructuring its Carbon Materials and Chemicals (“CMC”) business unit in order to concentrate its facilities in regions where the Company believes it holds key competitive advantages to better serve its global customers. These closure activities include:

- In January 2017, the Company entered into an agreement to lease its Follansbee, West Virginia coal tar distillation facility to a third party. It is anticipated that the Company will cease naphthalene refining activities at

the facility within the next nine to 12 months upon commissioning of a new naphthalene refining plant in Stickney, Illinois.

- In November 2016, the Company sold its 30-percent interest in Tangshan Kailuan Koppers Carbon Chemical Company Limited ("TKK") located in the Hebei Province in China.
- In July 2016, the Company discontinued coal tar distillation activities at its CMC plant located in Clairton, Pennsylvania.
- In March 2016, the Company discontinued production at its 60-percent owned CMC plant located in Tangshan, China.
- In February 2016, the Company announced plans to cease coal tar distillation and specialty pitch operations at both of its United Kingdom CMC facilities. In July 2016, the Company sold substantially all of its CMC tar distillation properties and assets in the United Kingdom. In exchange, the Company transferred cash to the buyer and the buyer assumed historical environmental and asset retirement obligations.
- In April 2014, the Company ceased its coal tar distillation activities at its CMC facility located in Uithoorn, the Netherlands.
- In 2011, the Company ceased carbon black production at its CMC facility located in Kurnell, Australia.

Other closure and divestiture activity relates to the Company's Railroad Utility Products and Services ("RUPS") business unit. These actions include:

- In October 2016, the Company agreed to a long-term lease of its wood treatment facility in Houston, Texas to a third party. The facility, owned by the Company's wholly-owned subsidiary, Wood Protection L.P., was engaged in the manufacturing and sale of pressure-treated dimensional lumber.
- In August 2015, the Company closed its RUPS plant located in Green Spring, West Virginia.
- In July 2015, the Company sold the assets of its 50-percent interest in KSA Limited Partnership, a concrete crosstie manufacturer.
- In January 2015, Koppers Inc. sold its RUPS North American utility pole business.

Details of the restructuring activities and related reserves are as follows:

| (Dollars in millions) | Severance and employee benefits | Environmental remediation | Site demolition | Other | Total |
|---|---|---|---|---|---|
| Reserve at December 31, 2015 | $ 2.0 | $ 4.3 | $ 21.9 | $0.0 | $28.2 |
| Accrual | 2.4 | 0.1 | 5.6 | 5.6 | 13.7 |
| Cost charged against assets | 0.0 | 0.0 | 0.0 | (1.9) | (1.9) |
| Reversal of accrued charges | (1.9) | (0.5) | (8.7) | (0.1) | (11.2) |
| Cash paid | (1.0) | (2.4) | (8.1) | (0.2) | (11.7) |
| Currency translation | (0.1) | 0.0 | (0.7) | (0.2) | (1.0) |
| Reserve at December 31, 2016 | $ 1.4 | $ 1.5 | $ 10.0 | $3.2 | $16.1 |
| Accrual | 0.1 | 2.1 | 0.0 | 3.5 | 5.7 |
| Cost charged against assets | 0.0 | 0.0 | 0.0 | (3.2) | (3.2) |
| Reversal of accrued charges | (0.1) | 0.0 | (0.3) | 0.0 | (0.4) |
| Cash paid | (0.1) | (0.7) | (0.9) | (0.3) | (2.0) |
| Currency translation | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 |
| Reserve at June 30, 2017 | $ 1.3 | $ 3.0 | $ 8.8 | $3.2 | $16.3 |

4. Related Party Transactions

As of December 31, 2016 the Company had loaned $10.0 million, gross of accumulated equity losses of $1.1 million, to TKK, including interest. The Company had a 30-percent interest in TKK until its sale to TKK's controlling shareholder in November 2016. The loan and interest has been fully repaid and the Company recorded a gain of $1.3 million in the six months ended June 30, 2017.

5. Fair Value Measurements

Carrying amounts and the related estimated fair values of the Company's financial instruments as of June 30, 2017 and December 31, 2016 are as follows:

| | June 30, 2017 | | December 31, 2016 | |
|---|---|---|---|---|
| | Fair Value | Carrying Value | Fair Value | Carrying Value |
| (Dollars in millions) | | | | |
| Financial assets: | | | | |
| Cash and cash equivalents, including restricted cash | $40.0 | $ 40.0 | $20.8 | $ 20.8 |
| Investments and other assets[(a)] | 1.1 | 1.1 | 1.1 | 1.1 |
| Financial liabilities: | | | | |
| Long-term debt (including current portion) | $722.9 | $ 692.9 | $669.6 | $ 662.4 |

(a) Excludes equity method investments.

Cash and cash equivalents – The carrying amount approximates fair value because of the short maturity of those instruments.

Investments and other assets – Represents the broker-quoted cash surrender value on universal life insurance policies. This asset is classified as Level 2 in the valuation hierarchy and is measured from values received from financial institutions.

Debt – The fair value of the Company's long-term debt is estimated based on the market prices for the same or similar issues or on the current rates offered to the Company for debt of the same remaining maturities (Level 2). The fair value of the Company's revolving credit facility approximates carrying value due to the variable rate nature of this instrument.

6. Comprehensive Income and Equity (Deficit)

Total comprehensive income for the three and six months ended June 30, 2017 and 2016 is summarized in the table below:

| | Three Months Ended June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| (Dollars in millions) | | | | |
| Net income | $19.8 | $11.3 | $24.4 | $9.5 |

| | | | | |
|---|---|---|---|---|
| Other comprehensive income: | | | | |
| Change in currency translation adjustment | 4.9 | (3.0 ) | 10.9 | 3.4 |
| Unrealized (losses) gains on cash flow hedges, net of tax (benefit) expense of $(0.3), $0.9, $0.6 and $2.5 | (0.4 ) | 1.3 | 0.9 | 3.7 |
| Change in unrecognized pension net loss, net of tax expense of $0.2, $0.1, $0.4 and $0.3 | 0.4 | 0.3 | 0.7 | 0.7 |
| Total comprehensive income | 24.7 | 9.9 | 36.9 | 17.3 |
| Less: Comprehensive income (loss) attributable to noncontrolling interests | 0.2 | (1.0 ) | 0.4 | (1.5 ) |
| Comprehensive income attributable to Koppers | $24.5 | $10.9 | $36.5 | $18.8 |

Amounts reclassified from accumulated other comprehensive loss to net income consist of amounts shown for changes in unrecognized pension net loss and unrecognized prior service cost. These components of accumulated other comprehensive income are included in the computation of net periodic pension cost as disclosed in Note 13 – Pensions and Postretirement Benefit Plans. Other amounts reclassified from accumulated other comprehensive income include income related to derivative financial instruments, net of tax, of $1.3 million and $2.6 million for the three and six months ended June 30, 2017, respectively, and losses of $1.7 million and $3.2 million for the three and six months ended June 30, 2016, respectively.

The following tables present the change in equity (deficit) for the six months ended June 30, 2017 and 2016, respectively:

| (Dollars in millions) | Total Koppers Shareholders' Equity | Noncontrolling Interests | Total Equity |
|---|---|---|---|
| Balance at December 31, 2016 | $ 30.4 | $ 4.2 | $ 34.6 |
| Net income | 24.1 | 0.3 | 24.4 |
| Issuance of common stock | 1.9 | 0.0 | 1.9 |
| Employee stock plans | 5.3 | 0.0 | 5.3 |
| Other comprehensive income | 12.4 | 0.1 | 12.5 |
| Repurchases of common stock | (5.2) | 0.0 | (5.2) |
| Balance at June 30, 2017 | $ 68.9 | $ 4.6 | $ 73.5 |

| (Dollars in millions) | Total Koppers Shareholders' Equity (Deficit) | Noncontrolling Interests | Total Equity (Deficit) |
|---|---|---|---|
| Balance at December 31, 2015 | $ (18.5) | $ 6.1 | $ (12.4) |
| Net income (loss) | 10.8 | (1.3) | 9.5 |
| Employee stock plans | 3.4 | 0.0 | 3.4 |
| Other comprehensive income (loss) | 8.0 | (0.2) | 7.8 |
| Repurchases of common stock | (0.3) | 0.0 | (0.3) |
| Balance at June 30, 2016 | $ 3.4 | $ 4.6 | $ 8.0 |

7. Earnings per Common Share

The computation of basic earnings per common share for the periods presented is based upon the weighted average number of common shares outstanding during the periods. The computation of diluted earnings per common share includes the effect of non-vested nonqualified stock options and restricted stock units assuming such options and stock units were outstanding common shares at the beginning of the period. The effect of antidilutive securities is excluded from the computation of diluted loss per common share, if any.

The following table sets forth the computation of basic and diluted earnings per common share:

| (Dollars in millions, except share amounts, in thousands, and per share amounts) | Three Months Ended June 30, 2017 | 2016 | Six Months Ended June 30, 2017 | 2016 |
|---|---|---|---|---|
| Net income attributable to Koppers | $19.7 | $12.1 | $24.1 | $10.8 |
| Less: (Loss) income from discontinued operations | (1.1) | 0.0 | (1.2) | 0.6 |
| Income from continuing operations attributable to Koppers | $20.8 | $12.1 | $25.3 | $10.2 |
| Weighted average common shares outstanding: | | | | |
| Basic | 20,782 | 20,640 | 20,752 | 20,611 |
| Effect of dilutive securities | 1,101 | 304 | 1,146 | 187 |
| Diluted | 21,883 | 20,944 | 21,898 | 20,798 |
| Income per common share – continuing operations: | | | | |
| Basic income per common share | $1.00 | $0.58 | $1.22 | $0.49 |
| Diluted income per common share | 0.95 | 0.57 | 1.15 | 0.49 |
| Other data: | | | | |
| Antidilutive securities excluded from computation of diluted earnings per common share | 509 | 424 | 344 | 572 |

8. Stock-based Compensation

The amended and restated 2005 Long-Term Incentive Plan (the “LTIP”) provides for the grant to eligible persons of stock options, stock appreciation rights, restricted stock, restricted stock units, performance shares, performance awards, dividend equivalents and other stock-based awards, which are collectively referred to as the awards.

Restricted Stock Units and Performance Stock Units

Under the LTIP, the board of directors grants restricted stock units and performance stock units to certain employee participants (collectively, the “stock units”). For grants to most employees in 2015 and thereafter, the restricted stock units vest in four equal annual installments. Restricted stock units that have one-year vesting periods are also issued under the LTIP to members of the board of directors in connection with annual director compensation and, from time to time, are issued to employees in connection with employee compensation with vesting periods of two years or less typically.

Compensation expense for non-vested stock units is recorded over the vesting period based on the fair value at the date of grant. The fair value of restricted stock units and performance stock units with a performance condition is the market price of the underlying common stock on the date of grant.

Performance stock units granted prior to 2016 have vesting based upon a performance condition. These performance stock units generally have three-year performance objectives and all performance stock units have a three-year period for vesting (if the applicable performance objective is achieved). For awards granted prior to 2016, the applicable performance objective is based upon a multi-year cumulative value creation calculation that considers the Company’s financial performance commencing on the first day of each grant year. The number of performance stock units granted represents the target award and participants have the ability to earn between zero and 200 percent (depending on the grant date) of the target award based upon actual performance. If minimum performance criteria are not achieved, no performance stock units will vest. Performance stock units granted in 2014 did not meet the value creation threshold and were forfeited in February 2017.

Performance stock units granted in 2016 and 2017 have vesting based upon a market condition. These performance stock units have a three-year performance objective and a three-year period for vesting (if the applicable performance objective is achieved). The applicable performance objective is based on the Company’s total shareholder return relative to the Standard & Poors SmallCap 600 Materials Index. The number of performance stock units granted represents the target award and participants have the ability to earn between zero and 200 percent of the target award based upon actual performance. If minimum performance criteria are not achieved, no performance stock units will vest. The Company has the discretion to settle the award in cash rather than shares, although the Company currently expects that all awards will be settled by the issuance of shares.

Compensation expense for non-vested performance stock units with a market condition is recorded over the vesting period based on the fair value at the date of grant. The Company calculated the fair value of the awards on the date of grant using the Monte Carlo valuation model and the assumptions listed below:

| | March 2017 Grant | March 2016 Grant |
|---|---|---|
| Grant date price per share of performance award | $ 44.10 | $18.11 |
| Expected dividend yield per share | 0.00 % | 0.00 % |
| Expected volatility | 43.50 % | 40.86% |
| Risk-free interest rate | 1.54 % | 0.96 % |
| Look-back period in years | 2.83 | 2.84 |
| Grant date fair value per share of performance award | $ 64.02 | $23.70 |

Dividends declared, if any, on the Company's common stock during the period prior to vesting of the stock units are credited at equivalent value as additional stock units and become payable as additional common shares upon vesting. In the event of termination of employment, other than retirement, death or disability, any non-vested stock units are forfeited, including additional stock units credited from dividends. In the event of termination of employment due to retirement, death or disability, pro-rata vesting of the stock units over the service period will result. There are special vesting provisions for the stock units related to a change in control.

The following table shows a summary of the performance stock units as of June 30, 2017:

| | Minimum | Target | Maximum |
|---|---|---|---|
| Performance Period | Shares | Shares | Shares |
| 2015 – 2017 | 0 | 203,953 | 407,906 |
| 2016 – 2018 | 0 | 260,588 | 521,176 |
| 2017 – 2019 | 0 | 117,010 | 234,020 |

The following table shows a summary of the status and activity of non-vested stock units for the six months ended June 30, 2017:

| | Restricted Stock Units | Performance Stock Units | Total Stock Units | Weighted Average Grant Date Fair Value per Unit |
|---|---|---|---|---|
| Non-vested at December 31, 2016 | 279,807 | 554,388 | 834,195 | $ 23.09 |
| Granted | 82,279 | 117,010 | 199,289 | $ 55.32 |
| Vested | (127,443) | 0 | (127,443) | $ 24.90 |
| Forfeited | (138) | (89,847) | (89,985) | $ 37.80 |
| Non-vested at June 30, 2017 | 234,505 | 581,551 | 816,056 | $ 29.06 |

Stock Options

Prior to 2015, stock options to most executive officers vest and become exercisable upon the completion of a three-year service period commencing on the grant date. For grants in 2015 and thereafter, the stock options vest in four equal annual installments. The stock options have a term of ten years. In the event of termination of employment, other than retirement, death or disability, any non-vested options are forfeited. In the event of termination of employment due to retirement, death or disability, pro-rata vesting of the options over the service period will result. There are special vesting provisions for the stock options related to a change in control.

Compensation expense for non-vested stock options is recorded over the vesting period based on the fair value at the date of grant. The Company calculated the fair value of stock options on the date of grant using the Black-Scholes-Merton model and the assumptions listed below:

| | March 2017 Grant | March 2016 Grant | March 2015 Grant |
|---|---|---|---|
| Grant date price per share of stock option award | $ 44.10 | $ 18.11 | $ 17.57 |
| Expected dividend yield per share | 0.00 % | 0.00 % | 3.40 % |
| Expected life in years | 5.77 | 5.96 | 5.75 |
| Expected volatility | 39.70 % | 40.86 % | 42.27 % |
| Risk-free interest rate | 2.13 % | 1.45 % | 1.73 % |
| Grant date fair value per share of option award | $ 17.90 | $ 7.41 | $ 5.20 |

The dividend yield is based on the Company’s current and prospective dividend rate which calculates a continuous dividend yield based upon the market price of the underlying common stock. The Company suspended its dividend in February 2015 and does not expect to declare any dividends for the foreseeable future. The expected life in years is based on historical exercise data of options previously granted by the Company. Expected volatility is based on the historical volatility of the Company’s common stock and the historical volatility of certain other similar public companies. The risk-free interest rate is based on U.S. Treasury bill rates for the expected life of the option.

The following table shows a summary of the status and activity of stock options for the six months ended June 30, 2017:

| | Options | Weighted Average Exercise Price per Option | Weighted Average Remaining Contractual Term (in years) | Aggregate Intrinsic Value (in millions) |
|---|---|---|---|---|
| Outstanding at December 31, 2016 | 935,454 | $ 26.09 | | |
| Granted | 97,403 | $ 44.10 | | |
| Exercised | (69,365 ) | $ 27.52 | | |
| Outstanding at June 30, 2017 | 963,492 | $ 27.81 | 6.58 | $ 10.2 |
| Exercisable at June 30, 2017 | 551,717 | $ 30.62 | 5.13 | $ 4.3 |

Stock Compensation Expense

Total stock-based compensation expense recognized for three and six months ended June 30, 2017 and 2016 is as follows:

| | Three Months Ended June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| (Dollars in millions) | 2017 | 2016 | 2017 | 2016 |
| Stock-based compensation expense recognized: | | | | |
| Selling, general and administrative expenses | $2.7 | $2.3 | $5.0 | $3.4 |
| Less related income tax benefit | 0.7 | 1.0 | 1.2 | 1.4 |
| | $2.0 | $1.3 | $3.8 | $2.0 |

As of June 30, 2017, total future gross compensation expense related to non-vested stock-based compensation arrangements, which are expected to vest, totaled $19.9 million and the weighted-average period over which this cost is expected to be recognized is approximately 29 months.

9. Segment Information

The Company has three reportable segments: Railroad and Utility Products and Services, Performance Chemicals and Carbon Materials and Chemicals. The Company's reportable segments contain multiple aggregated business units since management believes the long-term financial performance of these business units is affected by similar economic conditions. The reportable segments are each managed separately because they manufacture and distribute distinct products with different production processes.

The Company's Railroad and Utility Products and Services segment sells treated and untreated wood products, manufactured products and services primarily to the railroad and public utility markets. Railroad products and services include procuring and treating items such as crossties, switch ties and various types of lumber used for railroad bridges and crossings and the manufacture of rail joint bars. The segment also operates a railroad services business that conducts engineering, design, repair and inspection services for railroad bridges. Utility products include the treating of transmission and distribution poles and pilings.

The Company's Performance Chemicals segment develops, manufactures, and markets wood preservation chemicals and wood treatment technologies and services a diverse range of end-markets including infrastructure, residential and commercial construction, and agriculture.

The Company's Carbon Materials and Chemicals segment is primarily a manufacturer of creosote, carbon pitch, naphthalene, phthalic anhydride and carbon black feedstock. Creosote is used in the treatment of wood and carbon black feedstock is used in the production of carbon black. Carbon pitch is a critical raw material used in the production of aluminum and for the production of steel in electric arc furnaces. Naphthalene is used for the production of phthalic anhydride and as a surfactant in the production of concrete. Phthalic anhydride is used in the production of plasticizers, polyester resins and alkyd paints.

The Company evaluates performance and determines resource allocations based on a number of factors, the primary measure being operating profit or loss from operations. Operating profit does not include equity in earnings of affiliates, other income, interest expense, income taxes or operating costs of Koppers Holdings Inc. The accounting policies of the reportable segments are the same as those described in the summary of significant accounting policies. Intersegment transactions are eliminated in consolidation.

The following table sets forth certain sales and operating data, net of all intersegment transactions, for the Company's segments for the periods indicated:

| | Three Months Ended June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| (Dollars in millions) | 2017 | 2016 | 2017 | 2016 |

| | | | | |
|---|---|---|---|---|
| Revenues from external customers: | | | | |
| Railroad and Utility Products and Services | $135.9 | $164.4 | $271.4 | $315.8 |
| Performance Chemicals | 111.8 | 108.4 | 208.5 | 196.4 |
| Carbon Materials and Chemicals | 130.3 | 112.3 | 244.7 | 219.7 |
| Total | $378.0 | $385.1 | $724.6 | $731.9 |
| Intersegment revenues: | | | | |
| Performance Chemicals | $1.5 | $1.9 | $3.2 | $3.9 |
| Carbon Materials and Chemicals | 19.0 | 21.0 | 37.9 | 41.9 |
| Total | $20.5 | $22.9 | $41.1 | $45.8 |
| Depreciation and amortization expense: | | | | |
| Railroad and Utility Products and Services | $2.9 | $3.1 | $5.9 | $6.3 |
| Performance Chemicals | 4.5 | 4.8 | 8.9 | 9.6 |
| Carbon Materials and Chemicals | 4.3 | 5.2 | 8.1 | 12.3 |
| Total | $11.7 | $13.1 | $22.9 | $28.2 |
| Operating profit (loss): | | | | |
| Railroad and Utility Products and Services | $11.0 | $18.5 | $20.0 | $32.0 |
| Performance Chemicals | 19.6 | 22.4 | 38.2 | 35.0 |
| Carbon Materials and Chemicals | 7.8 | (8.3) | 8.2 | (25.9) |
| Corporate[(a)] | (0.8) | (0.6) | (1.2) | (1.3) |
| Total | $37.6 | $32.0 | $65.2 | $39.8 |

(a) Operating loss for Corporate includes primarily general and administrative costs for Koppers Holdings Inc., the parent company of Koppers Inc.

The following table sets forth certain tangible and intangible assets allocated to each of the Company's segments as of the dates indicated:

| (Dollars in millions) | June 30, 2017 | December 31, 2016 |
|---|---|---|
| Segment assets: | | |
| Railroad and Utility Products and Services | $260.2 | $ 264.2 |
| Performance Chemicals | 489.7 | 442.9 |
| Carbon Materials and Chemicals | 371.2 | 333.0 |
| All other | 47.3 | 47.4 |
| Total | $1,168.4 | $ 1,087.5 |
| Goodwill: | | |
| Railroad and Utility Products and Services | $10.4 | $ 9.9 |
| Performance Chemicals | 177.5 | 176.5 |
| Total | $187.9 | $ 186.4 |

10. Income Taxes

Effective Tax Rate

The income tax provision for interim periods is comprised of an estimated annual effective income tax rate applied to current year ordinary income and tax associated with discrete items. These discrete items generally relate to adjustments to uncertain tax positions and changes of estimated tax to the actual liability determined upon filing tax returns. To determine the annual effective tax rate, management is required to make estimates of annual pretax income in each domestic and foreign jurisdiction in which the Company conducts business. Entities that have historical pre-tax losses and current year estimated pre-tax losses that are not projected to generate a future benefit are excluded from the estimated annual effective income tax rate.

The estimated annual effective income tax rate, excluding discrete items discussed above, was 24.6 percent and 31.1 percent for the six months ended June 30, 2017 and 2016, respectively. The estimated annual effective income tax rate differs from the U.S. federal statutory tax rate due to:

| | June 30, 2017 | | June 30, 2016 | |
|---|---|---|---|---|
| Federal income tax rate | 35.0 | % | 35.0 | % |

| | | | | |
|---|---|---|---|---|
| State income taxes, net of federal tax benefit | 2.1 | | 1.6 | |
| Foreign earnings taxed at different rates | (15.7 | ) | (6.5 | ) |
| Change in tax contingency reserves | 0.3 | | 0.5 | |
| Nondeductible expenses | 2.1 | | 0.9 | |
| Tax credits | (0.3 | ) | (0.4 | ) |
| Other | 1.1 | | 0.0 | |
| Estimated annual effective income tax rate | 24.6 | % | 31.1 | % |

Income taxes as a percentage of pretax income were 24.0 percent and 37.6 percent for the three months ended June 30, 2017 and 2016, respectively, principally because the estimated annual effective income tax rate is applied to pre-tax earnings excluding the results of our Chinese subsidiaries that are not expected to generate a future tax benefit. These results are excluded from the determination of the annual effective income tax rate as discussed above. Discrete items included in income taxes for the three months ended June 30, 2017 and 2016, respectively, were not material.

Income taxes as a percentage of pretax income were 22.9 percent for the six months ended June 30, 2017. This is lower than the estimated annual effective tax rate principally due to discrete items, but also because the estimated annual effective income tax rate is applied to pre-tax earnings excluding the results of our Chinese subsidiaries that are not expected to generate a future tax benefit. Discrete items included in income taxes for the six months ended June 30, 2017 were a net benefit of $0.3 million, which includes excess tax benefits for stock-based compensation of $0.9 million offset by additional accruals for uncertain tax positions of $0.6 million.

Income taxes as a percentage of pretax income were 41.4 percent for the six months ended June 30, 2016. This is higher than the estimated annual effective tax rate principally because the estimated annual effective income tax rate is applied to pre-tax earnings excluding the results of our Chinese subsidiaries that are not expected to generate a future tax benefit. Discrete items included in income taxes for the six months ended June 30, 2016 were not material.

During the year, management regularly updates estimates of pre-tax income and income tax expense based on changes in pre-tax income projections by taxable jurisdiction, repatriation of foreign earnings, uncertain tax positions and other tax matters. To the extent that actual results vary from these estimates, the actual annual effective income tax rate at the end of the year could be materially different from the estimated annual effective income tax rate as of the end of the second quarter.

Uncertain Tax Positions

The Company and its subsidiaries file income tax returns in the U.S. federal jurisdiction, individual U.S. state jurisdictions and non-U.S. jurisdictions. With few exceptions, the Company is no longer subject to U.S. federal, state and local, or non-U.S. income tax examinations by tax authorities for years prior to 2012.

Unrecognized tax benefits totaled $7.0 million and $9.7 million as of June 30, 2017 and December 31, 2016, respectively. As of June 30, 2017 and December 31, 2016, the total amount of unrecognized tax benefits that, if recognized, would affect the effective tax rate, was approximately $3.0 million and $5.7 million, respectively. The Company recognizes interest expense and any related penalties from uncertain tax positions in income tax expense. As of June 30, 2017 and December 31, 2016, the Company had accrued approximately $3.4 million and $4.2 million for interest and penalties, respectively.

Unrecognized tax benefits decreased in the first six months of 2017 principally due to the settlement related to a transfer pricing matter. The Company does not anticipate significant increases or decreases to the amount of unrecognized tax benefits within the next twelve months.

11. Inventories

Net inventories as of June 30, 2017 and December 31, 2016 are summarized in the table below:

| (Dollars in millions) | June 30, 2017 | December 31, 2016 |
|---|---|---|
| Raw materials | $ 161.7 | $ 157.7 |
| Work in process | 11.3 | 14.2 |
| Finished goods | 102.3 | 103.6 |
| | $ 275.3 | $ 275.5 |
| Less revaluation to LIFO | 45.6 | 46.8 |
| Net | $ 229.7 | $ 228.7 |

12. Property, Plant and Equipment

Property, plant and equipment as of June 30, 2017 and December 31, 2016 are summarized in the table below:

| (Dollars in millions) | June 30, 2017 | December 31, 2016 |
|---|---|---|
| Land | $ 17.5 | $ 17.0 |
| Buildings | 59.9 | 58.2 |
| Machinery and equipment | 730.7 | 716.0 |
| | $ 808.1 | $ 791.2 |
| Less accumulated depreciation | 504.7 | 510.4 |
| Net | $ 303.4 | $ 280.8 |

Impairments – There were no impairment charges incurred for the six months ended June 30, 2017 and 2016.

13. Pensions and Postretirement Benefit Plans

The Company and its subsidiaries maintain a number of defined benefit and defined contribution plans to provide retirement benefits for employees in the U.S., as well as employees outside the U.S. These plans are maintained and contributions are made in accordance with the Employee Retirement Income Security Act of 1974 (“ERISA”), local statutory law or as determined by the board of directors. The defined benefit pension plans generally provide benefits based upon years of service and compensation. Pension plans are funded except for three domestic non-qualified defined benefit pension plans for certain key executives.

In the U.S., all qualified defined benefit pension plans for salaried and hourly employees have been closed to new participants and have been frozen. Accordingly, these pension plans no longer accrue additional years of service or recognize future increases in compensation for benefit purposes.

The defined contribution plans generally provide retirement assets to employee participants based upon employer and employee contributions to the participant's individual investment account. The Company also provides retiree medical insurance coverage to certain U.S. employees and a life insurance benefit to most U.S. employees. For salaried employees, the retiree medical and retiree insurance plans have been closed to new participants.

On July 31, 2017, the Company completed an irrevocable transaction with an insurance company to annuitize approximately $31 million of retiree pension obligations in its U.S. qualified defined benefit pension plan for a selected group of retirees. The transaction was funded by transferring a similar amount of assets from the pension plan to the insurance company. Subsequent to this transfer, the insurance company has assumed all remaining pension obligations associated with these retirees. This represents approximately 20 percent of the plan's discounted pension obligation as of that date and the Company will record a settlement charge of approximately $8 million in the third quarter of 2017.

The following table provides the components of net periodic benefit cost for the pension plans and other benefit plans for the three and six months ended June 30, 2017 and 2016:

| | Three Months Ended June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| (Dollars in millions) | 2017 | 2016 | 2017 | 2016 |
| Service cost | $0.5 | $0.4 | $1.0 | $0.9 |
| Interest cost | 2.5 | 2.8 | 4.9 | 5.6 |
| Expected return on plan assets | (2.5) | (2.6) | (5.0) | (5.3) |
| Amortization of net loss | 0.5 | 0.6 | 1.0 | 1.2 |
| Net periodic benefit cost | $1.0 | $1.2 | $1.9 | $2.4 |
| Defined contribution plan expense | $1.8 | $1.7 | $4.0 | $3.8 |

14. Debt

Debt at June 30, 2017 and December 31, 2016 was as follows:

| (Dollars in millions) | Weighted Average Interest Rate | Maturity | June 30, 2017 | December 31, 2016 |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| Term Loan | | | $ 0.0 | $ 232.5 |
| Revolving Credit Facility | 3.94 | % 2022 | 168.1 | 100.1 |
| Construction and other loans | 4.71 | % 2020 | 37.5 | 40.4 |
| Senior Notes due 2025 | 6.00 | % 2025 | 500.0 | 0.0 |
| Senior Notes due 2019 | | | 0.0 | 298.1 |
| Debt | | | 705.6 | 671.1 |
| Less short term debt and current maturities of long-term debt | | | 12.5 | 42.6 |
| Less unamortized debt issuance costs | | | 12.7 | 8.7 |
| Long-term debt | | | $ 680.4 | $ 619.8 |

Senior Notes due 2025

In January 2017, Koppers Inc. completed a private placement offering of $500.0 million 6.00 percent Senior Notes due 2025 (the “2025 Notes”). Koppers Inc. used the proceeds from the offering of the 2025 Notes to repay its outstanding term loan and to fund a tender offer to repurchase its senior notes due 2019.

The 2025 Notes are our senior obligations, are unsecured and are guaranteed by Koppers Holdings Inc. and certain of Koppers Inc.’s domestic subsidiaries. The 2025 Notes pay interest semi-annually in arrears on February 15 and August 15 beginning on August 15, 2017 and will mature on February 15, 2025 unless earlier redeemed or repurchased. On or after February 15, 2020, the Company is entitled to redeem all or a portion of the 2025 Senior Notes at a redemption price of 104.5 percent of principal value, declining to a redemption price of 101.5 percent on or after February 15, 2022 until the redemption price is equivalent to the principal value on February 15, 2023.

The indenture governing the 2025 Senior Notes includes customary covenants that restrict, among other things, the ability of Koppers Inc. and its restricted subsidiaries to incur additional debt, pay dividends or make certain other restricted payments, incur liens, merge or sell all or substantially all of the assets of Koppers Inc. or its subsidiaries or enter into various transactions with affiliates.

Revolving Credit Facility

In February 2017, the Company entered into a new $400.0 million senior secured revolving credit facility (“the Revolving Credit Facility”). The maturity date is February 2022 and the interest rate is variable and is based on LIBOR.

Borrowings under the Revolving Credit Facility are secured by a first priority lien on substantially all of the assets of Koppers Inc., Koppers Holdings and their material domestic subsidiaries. The Revolving Credit Facility contains certain covenants for Koppers Inc. and its restricted subsidiaries that limit capital expenditures, additional indebtedness, liens, dividends, investments or acquisitions. In addition, such covenants give rise to events of default upon the failure by Koppers Inc. and its restricted subsidiaries to meet certain financial ratios.

As of June 30, 2017, the Company had $187.3 million of unused revolving credit availability for working capital purposes after restrictions from certain letter of credit commitments and other covenants. As of June 30, 2017, $44.6 million of commitments were utilized by outstanding letters of credit.

Loss on Extinguishment of Debt

In February 2017, all of the outstanding Koppers Inc. senior notes due 2019 were repurchased at a premium to carrying value and accordingly, the Company realized a loss on extinguishment of debt totaling $10.0 million consisting of $7.3 million for bond premium and bond tender expenses and $2.7 million for the writeoff of unamortized debt issuance costs.

In February 2017, Koppers Inc. repaid its term loan in full and entered into the Revolving Credit Facility. Accordingly, the Company realized a loss of $3.3 million for the writeoff of unamortized debt issuance costs.

Construction Loans

The Company’s 75-percent owned subsidiary, Koppers (Jiangsu) Carbon Chemical Company Limited (“KJCC”) entered into two committed loan facility agreements for a combined commitment of RMB 265 million or approximately $44 million. The third party bank provided facility has a commitment amount of RMB 198.8 million and the other committed facility of RMB 66.2 million is provided by the 25-percent non-controlling shareholder in KJCC. Borrowings under the third party bank facility are secured by a letter of credit issued by a bank under the Revolving Credit Facility. KJCC will repay the construction loan portion of the third party commitment in six installments every six months starting in June 2018 with a final repayment on December 21, 2020, the maturity date of the loans.

15. Asset Retirement Obligations

The Company recognizes asset retirement obligations for the removal and disposal of residues; dismantling of certain tanks required by governmental authorities; cleaning and dismantling costs for owned rail cars; cleaning costs for leased rail cars and barges; and site demolition, when required by governmental authorities or by contract. The following table reflects changes in the carrying values of asset retirement obligations:

| (Dollars in millions) | June 30, 2017 | December 31, 2016 |
|---|---|---|
| Asset retirement obligation at beginning of year | $ 36.0 | $ 46.5 |
| Divestiture | 0.0 | (8.0) |
| Accretion expense | 1.3 | 7.1 |
| Revision in estimated cash flows | 0.8 | 2.7 |
| Cash expenditures | (5.7) | (11.4) |
| Currency translation | 0.1 | (0.9) |
| Balance at end of period | $ 32.5 | $ 36.0 |

16. Deferred Revenue

The Company defers revenues associated with extended product warranty liabilities based on historical loss experience and sales of extended warranties on certain products. The following table reflects changes in the carrying values of deferred revenue:

| (Dollars in millions) | June 30, 2017 | December 31, 2016 |
|---|---|---|
| Balance at beginning of year | $ 27.2 | $ 30.1 |
| Revenue earned | (0.4) | (0.8) |
| Currency translation | 0.6 | (2.1) |
| Balance at end of period | $ 27.4 | $ 27.2 |

Deferred revenue classified in other long-term liabilities in the consolidated balance sheet totaled $26.5 million as of June 30, 2017 and $26.2 million as of December 31, 2016 with the remainder classified in accrued liabilities.

17. Derivative Financial Instruments

The Company utilizes derivative instruments to manage exposures to risks that have been identified and measured and are capable of being controlled. The primary risks managed by the company by using derivative instruments are commodity price risk associated with copper and foreign currency exchange risk associated with a number of currencies, principally the U.S. dollar, the Canadian dollar, the New Zealand dollar, the Euro and British pounds. Swap contracts on copper are used to manage the price risk associated with forecasted purchases of materials used in the Company's manufacturing processes. Generally, the Company will not hedge cash flow exposures for durations longer than 36 months and the Company has hedged certain volumes of copper through December 2019. The Company enters into foreign currency forward contracts to manage foreign currency risk associated with the Company's receivable and payable balances and foreign currency denominated sales. Generally, the Company enters into master netting arrangements with the counterparties and offsets net derivative positions with the same counterparties. Currently, the Company's agreements do not require cash collateral.

ASC Topic 815-10, "Derivatives and Hedging," requires companies to recognize all derivative instruments as either assets or liabilities at fair value in the balance sheet. Derivative instruments' fair value is determined using significant other observable inputs, or Level 2 in the fair value hierarchy. In accordance with ASC Topic 815-10, the Company designates certain of its commodity swaps as cash flow hedges of forecasted purchases of commodities and certain of its foreign currency swaps as cash flow hedges of forecasted sales. For derivative instruments that are designated and qualify as cash flow hedges, the effective portion of the gain or loss on the derivative is reported as a component of other comprehensive income and is reclassified into earnings in the same period or periods during which the hedged transaction affects earnings. Gains and losses on the derivative instruments representing either hedge ineffectiveness or hedge components excluded from the assessment of effectiveness are recognized in current earnings. The amount of hedge ineffectiveness charged to profit and loss is reported in the table below.

For those commodity and foreign currency swaps which are not designated as cash flow hedges, the fair value of the swap is recognized as an asset or liability in the consolidated balance sheet and the related gain or loss on the derivative is reported in current earnings.

As of June 30, 2017 and December 31, 2016, the Company has outstanding copper swap contracts of the following amounts:

| | Units Outstanding (in Pounds) | | Net Fair Value - Asset (Liability) | |
|---|---|---|---|---|
| | June 30, | December 31, | June 30, | December 31, |
| | 2017 | 2016 | 2017 | 2016 |
| (Amounts in millions) | | | | |
| Cash flow hedges | 32.5 | 42.6 | $13.7 | $ 10.6 |

| | | | | |
|---|---|---|---|---|
| Not designated as hedges | 9.4 | 6.5 | 2.0 | 1.0 |
| Total | 41.9 | 49.1 | $15.7 | $ 11.6 |

As of June 30, 2017 and December 31, 2016, the fair value of the outstanding copper swap contracts is recorded in the balance sheet as follows:

| (Dollars in millions) | June 30, 2017 | December 31, 2016 |
|---|---|---|
| Other current assets | $ 15.8 | $ 12.5 |
| Accrued liabilities | (0.1) | (0.9) |
| Net asset on balance sheet | $ 15.7 | $ 11.6 |
| Accumulated other comprehensive gain, net of tax | $ 6.9 | $ 6.9 |

Based upon contracts outstanding at June 30, 2017, in the next twelve months the Company estimates that $5.0 million of unrealized gains, net of tax, related to commodity price hedging will be reclassified from other comprehensive income into earnings.

See Note 6 – Comprehensive Income and Equity (Deficit), for amounts recorded in other comprehensive income and for amounts reclassified from accumulated other comprehensive income to net income for the periods specified below. For the three and six months ended June 30, 2017 and 2016, the following amounts were recognized in earnings related to copper swap contracts:

| | Three Months Ended June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| (Dollars in millions) | 2017 | 2016 | 2017 | 2016 |
| Gain from ineffectiveness of cash flow hedges | $1.1 | $1.3 | $3.0 | $0.1 |
| Gain from contracts not designated as hedges | 0.3 | 0.1 | 1.0 | 0.3 |
| Net | $1.4 | $1.4 | $4.0 | $0.4 |

As of June 30, 2017, the Company has $17.9 million of USD-denominated forward contracts related to foreign currency, which are designated as cash flow hedges. The fair value of these forward contracts, which expire in the next twelve months, is $1.1 million which has been credited to other comprehensive income for the three and six months ended June 30, 2017. Forward contracts related to foreign currency that are not designated as hedges and the fair value changes associated with these contracts are immediately charged to earnings and are classified in cost of sales in the Condensed Consolidated Statement of Operations and Comprehensive Income. As of June 30, 2017, the Company has outstanding foreign currency forward contracts with a net fair value totaling $(2.2) million, consisting of a gross derivative liability of $2.7 million (recognized in accrued liabilities in the balance sheet) and a gross derivative asset of $0.5 million (recognized in other current assets in the balance sheet). As of December 31, 2016, the Company has outstanding currency forward contracts with a net fair value totaling $1.0 million, consisting of a gross derivative liability of $0.9 million (recognized in accrued liabilities in the balance sheet) and a gross derivative asset of $1.9 million (recognized in other current assets in the balance sheet).

As of June 30, 2017 and December 31, 2016, the net currency units outstanding for these contracts were:

| | June 30, | December 31, |
|---|---|---|
| (In millions) | 2017 | 2016 |
| British Pounds | GBP 7.0 | GBP 7.3 |
| New Zealand Dollars | NZD 15.5 | NZD 15.5 |
| United States Dollars | USD 23.8 | USD 24.7 |
| Canadian Dollars | CAD 0.5 | CAD 0.3 |

18. Commitments and Contingent Liabilities

The Company and its subsidiaries are involved in litigation and various proceedings relating to environmental laws and regulations and toxic tort, product liability and other matters. Certain of these matters are discussed below. The ultimate resolution of these contingencies is subject to significant uncertainty and should the Company or its subsidiaries fail to prevail in any of these legal matters or should several of these legal matters be resolved against the Company or its subsidiaries in the same reporting period, these legal matters could, individually or in the aggregate, be material to the consolidated financial statements.

Legal Proceedings

Coal Tar Pitch Cases. Koppers Inc. is one of several defendants in lawsuits filed in two states in which the plaintiffs claim they suffered a variety of illnesses (including cancer) as a result of exposure to coal tar pitch sold by the defendants. There are 99 plaintiffs in 55 cases pending as of June 30, 2017 and as of December 31, 2016. As of June 30, 2017, there are a total of 54 cases pending in state court in Pennsylvania, and 1 case pending in state court in Tennessee.

The plaintiffs in all 55 pending cases seek to recover compensatory damages. Plaintiffs in 50 of those cases also seek to recover punitive damages. The plaintiffs in the 54 cases filed in Pennsylvania seek unspecified damages in excess of the court’s minimum jurisdictional limit. The plaintiff in the Tennessee state court case seeks damages of $15.0 million. The other defendants in these lawsuits vary from case to case and include companies such as Beazer East, Inc. (“Beazer East”), Honeywell International Inc., Graftech International Holdings, Dow Chemical Company, UCAR Carbon Company, Inc., and SGL Carbon Corporation. Discovery is proceeding in these cases. No trial dates have been set in any of these cases.

The Company has not provided a reserve for these lawsuits because, at this time, the Company cannot reasonably determine the probability of a loss, and the amount of loss, if any, cannot be reasonably estimated. The timing of resolution of these cases cannot be reasonably determined. Although Koppers Inc. is vigorously defending these cases, an unfavorable resolution of these matters may have a material adverse effect on the Company’s business, financial condition, cash flows and results of operations.

Gainesville. Koppers Inc. operated a utility pole treatment plant in Gainesville, Florida from December 29, 1988 until its closure in 2009. The property upon which the utility pole treatment plant was located was sold by Koppers Inc. to Beazer East in 2010.

In November 2010, a putative class action complaint was filed by residential real property owners located in a neighborhood west of and immediately adjacent to the former utility pole treatment plant in Gainesville. The complaint named Koppers Holdings Inc., Koppers Inc., Beazer East and several other parties as defendants. Koppers Holdings Inc. was subsequently dismissed from the case by the district court. In a second amended complaint, plaintiffs alleged that chemicals and contaminants from the Gainesville plant contaminated their properties, caused property damage (diminution in value) and placed residents and owners of the putative class properties at an elevated risk of exposure to and injury from the chemicals at issue. The plaintiffs sought a class comprised of all current property owners of single family residential properties with a polygon-shaped area extending approximately two miles from the former plant area (which area encompasses approximately 7,000 owners).

In September 2015, the plaintiffs filed a motion for class certification in the United States District Court for the Northern District of Florida. A hearing on the plaintiffs' motions for class certification and the parties' motions relating to experts was held in January 2016. On March 20, 2017, the district court denied the motion for class certification and also granted the motion to strike several of the plaintiffs' expert witnesses. Plaintiffs have sought permission to file a third amended complaint for five individual plaintiffs in the district court which is currently opposed by the Company. In July 2017, the district court granted in part and denied in part plaintiffs' motion for permission to file an amended complaint. Plaintiffs were permitted to add a count related to ultra-hazardous activities, but were denied the right to add counts related to public nuisance, medical monitoring and for equitable relief. The Company and the other defendants are preparing their answer to plaintiffs' amended complaint.

The Company has not provided a reserve for this matter because, at this time, it cannot reasonably determine the probability of a loss, and the amount of loss, if any, cannot be reasonably estimated. The timing of resolution of this case cannot be reasonably determined. Although the Company is vigorously defending this case, an unfavorable resolution of this matter may have a material adverse effect on the Company's business, financial condition, cash flows and results of operations.

Environmental and Other Litigation Matters

The Company and its subsidiaries are subject to federal, state, local and foreign laws and regulations and potential liabilities relating to the protection of the environment and human health and safety including, among other things, the cleanup of contaminated sites, the treatment, storage and disposal of wastes, the discharge of effluent into waterways, the emission of substances into the air and various health and safety matters. The Company's subsidiaries expect to incur substantial costs for ongoing compliance with such laws and regulations. The Company's subsidiaries may also face governmental or third-party claims, or otherwise incur costs, relating to cleanup of, or for injuries resulting from, contamination at sites associated with past and present operations. The Company accrues for environmental liabilities when a determination can be made that a liability is probable and reasonably estimable.

Environmental and Other Liabilities Retained or Assumed by Others. The Company's subsidiaries have agreements with former owners of certain of their operating locations under which the former owners retained, assumed and/or agreed to indemnify such subsidiaries against certain environmental and other liabilities. The most significant of these agreements was entered into at Koppers Inc.'s formation on December 29, 1988 (the "Acquisition"). Under the related asset purchase agreement between Koppers Inc. and Beazer East, subject to certain limitations, Beazer East retained the responsibility for and agreed to indemnify Koppers Inc. against certain liabilities, damages, losses and costs, including, with certain limited exceptions, liabilities under and costs to comply with environmental laws to the extent attributable to acts or omissions occurring prior to the Acquisition and liabilities related to products sold by Beazer

East prior to the Acquisition (the “Indemnity”). Beazer Limited, the parent company of Beazer East, unconditionally guaranteed Beazer East’s performance of the Indemnity pursuant to a guarantee (the “Guarantee”).

The Indemnity provides different mechanisms, subject to certain limitations, by which Beazer East is obligated to indemnify Koppers Inc. with regard to certain environmental, product and other liabilities and imposes certain conditions on Koppers Inc. before receiving such indemnification, including, in some cases, certain limitations regarding the time period as to which claims for indemnification can be brought. In July 2004, Koppers Inc. and Beazer East agreed to amend the environmental indemnification provisions of the December 29, 1988 asset purchase agreement to extend the indemnification period for pre-closing environmental liabilities through July 2019. As consideration for the amendment, Koppers Inc. paid Beazer East a total of $7.0 million and agreed to share toxic tort litigation defense costs arising from any sites acquired from Beazer East. The July 2004 amendment did not change the provisions of the Indemnity with respect to indemnification for non-environmental claims, such as product liability claims, which claims may continue to be asserted after July 2019.

Qualified expenditures under the Indemnity are not subject to a monetary limit. Qualified expenditures under the Indemnity include (i) environmental cleanup liabilities required by third parties, such as investigation, remediation and closure costs, relating to pre-December 29, 1988 ("Pre-Closing") acts or omissions of Beazer East or its predecessors; (ii) environmental claims by third parties for personal injuries, property damages and natural resources damages relating to Pre-Closing acts or omissions of Beazer East or its predecessors; (iii) punitive damages for the acts or omissions of Beazer East and its predecessors without regard to the date of the alleged conduct and (iv) product liability claims for products sold by Beazer East or its predecessors without regard to the date of the alleged conduct. If the third party claims described in sections (i) and (ii) above are not made by July 2019, Beazer East will not be required to pay the costs arising from such claims under the Indemnity. However, with respect to any such claims which are made by July 2019, Beazer East will continue to be responsible for such claims under the Indemnity beyond July 2019. The Indemnity provides for the resolution of issues between Koppers Inc. and Beazer East by an arbitrator on an expedited basis upon the request of either party. The arbitrator could be asked, among other things, to make a determination regarding the allocation of environmental responsibilities between Koppers Inc. and Beazer East. Arbitration decisions under the Indemnity are final and binding on the parties.

Contamination has been identified at most manufacturing and other sites of the Company's subsidiaries. One site currently owned and operated by Koppers Inc. in the United States is listed on the National Priorities List promulgated under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"). Currently, at the properties acquired from Beazer East (which includes the National Priorities List site and all but one of the sites permitted under the Resource Conservation and Recovery Act ("RCRA")), a significant portion of all investigative, cleanup and closure activities are being conducted and paid for by Beazer East pursuant to the terms of the Indemnity. In addition, other of Koppers Inc.'s sites are or have been operated under RCRA and various other environmental permits, and remedial and closure activities are being conducted at some of these sites.

To date, the parties that retained, assumed and/or agreed to indemnify the Company against the liabilities referred to above, including Beazer East, have performed their obligations in all material respects. The Company believes that, for the last three years ended December 31, 2016, amounts paid by Beazer East as a result of its environmental remediation obligations under the Indemnity have averaged, in total, approximately $10 million per year. Periodically, issues have arisen between Koppers Inc. and Beazer East and/or other indemnitors that have been resolved without arbitration. Koppers Inc. and Beazer East engage in discussions from time to time that involve, among other things, the allocation of environmental costs related to certain operating and closed facilities.

If for any reason (including disputed coverage or financial incapability) one or more of such parties fail to perform their obligations and the Company or its subsidiaries are held liable for or otherwise required to pay all or part of such liabilities without reimbursement, the imposition of such liabilities on the Company or its subsidiaries could have a material adverse effect on its business, financial condition, cash flows and results of operations. Furthermore, the Company could be required to record a contingent liability on its balance sheet with respect to such matters, which could result in a negative impact to the Company's business, financial condition, cash flows and results of operations.

Domestic Environmental Matters. Koppers Inc. has been named as one of the potentially responsible parties ("PRPs") at the Portland Harbor CERCLA site located on the Willamette River in Oregon. Koppers Inc. operated a coal tar pitch terminal near the site. Koppers Inc. has responded to an Environmental Protection Agency ("EPA") information request and has executed a PRP agreement which outlines the process to develop an allocation of past and future costs among more than 80 parties to the site. Koppers Inc. believes it is a de minimus contributor at the site. Additionally, two separate natural resources damages assessments ("NRDA") are being conducted by local trustee groups. The NRDA is intended to identify further information necessary to estimate liabilities for settlements of national resource damages ("NRD") claims. Koppers Inc. may also incur liabilities under the NRD process and has entered into a separate process to develop an allocation of NRDA costs.

The EPA issued its Record of Decision ("ROD") in January 2017 for the Portland Harbor CERCLA site. The selected remedy includes a combination of sediment removal, capping, enhanced and monitored natural recovery and riverbank improvements. The ROD does not determine who is responsible for remediation costs. The net present value and undiscounted costs of the selected remedy as estimated in the ROD are approximately $1.1 billion and $1.7 billion, respectively. Responsibility for implementing and funding that work will be decided in the separate allocation process.

In September 2009, Koppers Inc. received a general notice letter notifying it that it may be a PRP at the Newark Bay CERCLA site. In January 2010, Koppers Inc. submitted a response to the general notice letter asserting that Koppers Inc. is a de minimus party at this site.

The Company has accrued the estimated costs of participating in the PRP group at the Portland Harbor and Newark Bay CERCLA sites and estimated de minimis settlement amounts at the sites totaling $2.1 million at June 30, 2017. The actual cost could be materially higher as there has not been a determination of how those costs will be allocated among the

PRPs at the sites. Accordingly, an unfavorable resolution of these matters may have a material adverse effect on the Company's business, financial condition, cash flows and results of operations.

In connection with Koppers Inc.'s acquisition of Osmose, Inc., there are two plant sites in the United States where the Company has recorded an environmental remediation liability for soil and groundwater contamination which occurred prior to the acquisition. As of June 30, 2017, the Company's estimated environmental remediation liability for these acquired sites totals $4.9 million.

Foreign Environmental Matters. In connection with Koppers Inc.'s acquisition of Osmose, Inc., there are two plant sites located in the United Kingdom and Australia where the Company has recorded an environmental remediation liability for soil and groundwater contamination which occurred prior to the acquisition. As of June 30, 2017, the Company's estimated environmental remediation liability for these acquired sites totals $3.1 million. Osmose Holdings, Inc. has provided an indemnity of up to $5.0 million for certain environmental response costs incurred prior to August 15, 2017 (the "Osmose Indemnity"). As of June 30, 2017, total recoveries under the Osmose Indemnity total $4.6 million.

In December 2011, the Company ceased manufacturing operations at its Continental Carbon facility located in Kurnell, Australia. The Company has accrued its expected cost of site remediation resulting from the closure of $3.1 million as of June 30, 2017.

Environmental Reserves Rollforward. The following table reflects changes in the accrued liability for environmental matters, of which $6.5 million and $5.2 million are classified as current liabilities at June 30, 2017 and December 31, 2016, respectively:

| | Period ended | |
|---|---|---|
| | June 30, 2017 | December 31, 2016 |
| (Dollars in millions) | | |
| Balance at beginning of year | $12.9 | $ 19.8 |
| Expense | 2.4 | 1.5 |
| Reversal of reserves | (0.3) | (1.0) |
| Cash expenditures | (1.2) | (6.3) |
| Disposal | 0.0 | (0.3) |
| Currency translation | 0.3 | (0.8) |
| Balance at end of period | $14.1 | $ 12.9 |

19. Subsidiary Guarantor Information for Koppers Inc. Senior Notes

On January 25, 2017, Koppers Inc. issued $500.0 million principal value of Senior Notes due 2025 (the "2025 Notes"). Koppers Holdings and each of Koppers Inc.'s 100 percent-owned material domestic subsidiaries other than Koppers Assurance, Inc. fully and unconditionally guarantee the payment of principal and interest on the 2025 Notes. The domestic guarantor subsidiaries include Koppers World-Wide Ventures Corporation, Koppers Delaware, Inc., Koppers Concrete Products, Inc., Concrete Partners, Inc., Koppers Performance Chemicals Inc., Koppers Railroad

Structures Inc., Koppers NZ, LLC, Koppers-Nevada Limited Liability Company, Wood Protection LP, Wood Protection Management LLC, Koppers Asia LLC and Koppers Ventures Inc. Non-guarantor subsidiaries are owned directly or indirectly by Koppers Inc. or are owned directly or indirectly by Koppers World-Wide Ventures Corporation.

The guarantee of a guarantor subsidiary will be automatically and unconditionally released and discharged in the event of:

- any sale of the capital stock or substantially all of the assets of the guarantor subsidiary;
- the designation of the guarantor subsidiary as an unrestricted subsidiary in accordance with the indenture governing the 2025 Notes; and
- the legal defeasance, covenant defeasance or satisfaction and discharge of the indenture governing the 2025 Notes.

Shelf Registration

Under a registration statement on Form S-3, Koppers Holdings may sell a combination of securities, including common stock, debt securities, preferred stock, depository shares, warrants, purchase contracts and units, from time to time in one or more offerings. In addition, Koppers Inc. may sell debt securities from time to time under the registration statement. Debt securities may be fully and unconditionally guaranteed, on a joint and several basis, by Koppers Holdings, Koppers Inc. and/or each of Koppers Inc.'s 100 percent-owned material domestic subsidiaries other than Koppers Assurance, Inc. The domestic guarantor subsidiaries are the same as those which guarantee the 2025 Notes. Non-guarantor subsidiaries are owned directly or indirectly by Koppers Inc. or are owned directly or indirectly by Koppers World-Wide Ventures Corporation. The guarantor subsidiaries that issue guarantees, if any, will be determined when a debt offering actually occurs under the registration statement and accordingly, the condensed consolidating financial information for subsidiary guarantors will be revised to identify the subsidiaries that actually provided guarantees. These guarantees will be governed pursuant to a supplement indenture which the trustee and the issuing company would enter into concurrent with the debt offering.

Reliance of Koppers Holdings on Earnings of Koppers Inc. and its Subsidiaries

Koppers Holdings depends on the dividends from the earnings of Koppers Inc. and its subsidiaries to generate the funds necessary to meet its financial obligations, including the payment of any declared dividend of Koppers Holdings. The Revolving Credit Facility prohibits Koppers Inc. from making dividend payments to Koppers Holdings unless (1) such dividend payments are permitted by the indenture governing Koppers Inc.'s 2025 Notes, (2) no event of default or potential default has occurred or is continuing under the credit agreement, and (3) we are in pro forma compliance with our fixed charge coverage ratio covenant after giving effect to such dividend. The indenture governing the 2025 Notes restricts Koppers Inc.'s ability to finance our payment of dividends if (1) a default has occurred or would result from such financing, (2) Koppers Inc., or a restricted subsidiary of Koppers Inc. which is not a guarantor under the applicable indenture, is not able to incur additional indebtedness (as defined in the applicable indenture), and (3) the sum of all restricted payments (as defined in the applicable indenture) have exceeded the permitted amount (which we refer to as the "basket") at such point in time.

The Koppers Inc. Revolving Credit Facility provides for a revolving credit facility of up to $400.0 million at variable rates. Borrowings under the Revolving Credit Facility are secured by a first priority lien on substantially all of the assets of Koppers Inc. and its material domestic subsidiaries. The Revolving Credit Facility contains certain covenants for Koppers Inc. and its restricted subsidiaries that limit capital expenditures, additional indebtedness, liens, dividends and investments or acquisitions. In addition, such covenants give rise to events of default upon the failure by Koppers Inc. and its restricted subsidiaries to meet certain financial ratios.

As of June 30, 2017, Koppers Inc.'s assets exceeded its liabilities by $72.0 million. There are no net assets unavailable for distribution to Koppers Holdings Inc. by Koppers Inc. as of June 30, 2017. Cash dividends paid to Koppers Holdings Inc. by its subsidiaries totaled $2.0 million and $0.7 million for the six months ended June 30, 2017 and 2016, respectively.

Condensed Consolidating Statement of Operations

For the Three Months Ended June 30, 2017

| | Parent | Koppers Inc. | Domestic Guarantor | Non-Guarantor Subsidiaries | Consolidating Adjustments | Consolidated |
|---|---|---|---|---|---|---|

| | | | Subsidiaries | | | |
|---|---|---|---|---|---|---|
| (Dollars in millions) | | | | | | |
| Net sales | $ 0.0 | $ 153.2 | $ 94.2 | $ 151.8 | $ (21.2) | $ 378.0 |
| Cost of sales including depreciation and amortization | 0.0 | 141.9 | 65.1 | 123.0 | (21.5) | 308.5 |
| Selling, general and administrative | 0.5 | 11.3 | 10.1 | 10.0 | 0.0 | 31.9 |
| Operating profit (loss) | (0.5) | 0.0 | 19.0 | 18.8 | 0.3 | 37.6 |
| Other income | 0.0 | 0.1 | 0.6 | 0.3 | (0.3) | 0.7 |
| Equity income (loss) of subsidiaries | 20.0 | 25.5 | 12.9 | (0.1) | (58.3) | 0.0 |
| Interest expense | 0.0 | 10.0 | (0.1) | 1.2 | (0.3) | 10.8 |
| Income taxes | (0.2) | (4.4) | 7.2 | 4.0 | 0.0 | 6.6 |
| Income from continuing operations | 19.7 | 20.0 | 25.4 | 13.8 | (58.0) | 20.9 |
| Discontinued operations | 0.0 | 0.0 | 0.0 | (1.1) | 0.0 | (1.1) |
| Noncontrolling interests | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 |
| Net income attributable to Koppers | $ 19.7 | $ 20.0 | $ 25.4 | $ 12.6 | $ (58.0) | $ 19.7 |
| Comprehensive income attributable to Koppers | $ 24.5 | $ 24.8 | $ 29.9 | $ 18.5 | $ (73.2) | $ 24.5 |

Condensed Consolidating Statement of Operations

For the Three Months Ended June 30, 2016

| (Dollars in millions) | Parent | Koppers Inc. | Domestic Guarantor Subsidiaries | Non-Guarantor Subsidiaries | Consolidating Adjustments | Consolidated |
|---|---|---|---|---|---|---|
| Net sales | $ 0.0 | $ 181.6 | $ 87.3 | $ 142.3 | $ (26.1) | $ 385.1 |
| Cost of sales including depreciation and amortization | 0.0 | 167.8 | 63.6 | 117.6 | (26.1) | 322.9 |
| Selling, general and administrative | 0.3 | 10.9 | 4.2 | 14.8 | 0.0 | 30.2 |
| Operating profit (loss) | (0.3) | 2.9 | 19.5 | 9.9 | 0.0 | 32.0 |
| Other income | 0.0 | 0.0 | 0.7 | 0.1 | (0.4) | 0.4 |
| Equity income of subsidiaries | 12.4 | 26.3 | 6.0 | 0.0 | (44.7) | 0.0 |
| Interest expense | 0.0 | 13.7 | 0.0 | 1.0 | (0.4) | 14.3 |
| Income taxes | 0.0 | 2.8 | 0.3 | 3.7 | 0.0 | 6.8 |
| Income from continuing operations | 12.1 | 12.7 | 25.9 | 5.3 | (44.7) | 11.3 |
| Noncontrolling interests | 0.0 | 0.0 | 0.0 | (0.8) | 0.0 | (0.8) |
| Net income attributable to Koppers | $ 12.1 | $ 12.7 | $ 25.9 | $ 6.1 | $ (44.7) | $ 12.1 |
| Comprehensive income attributable to Koppers | $ 10.9 | $ 11.3 | $ 24.8 | $ 3.6 | $ (39.7) | $ 10.9 |

Condensed Consolidating Statement of Operations

For the Six Months Ended June 30, 2017

| (Dollars in millions) | Parent | Koppers Inc. | Domestic Guarantor Subsidiaries | Non-Guarantor Subsidiaries | Consolidating Adjustments | Consolidated |
|---|---|---|---|---|---|---|
| Net sales | $ 0.0 | $ 304.1 | $ 175.4 | $ 288.2 | $ (43.1) | $ 724.6 |
| Cost of sales including depreciation and amortization | 0.0 | 290.0 | 119.1 | 228.8 | (41.4) | 596.5 |
| Selling, general and administrative | 1.0 | 22.2 | 20.3 | 19.4 | 0.0 | 62.9 |
| Operating profit (loss) | (1.0) | (8.1) | 36.0 | 40.0 | (1.7) | 65.2 |
| Other income | 0.0 | 0.2 | 1.2 | 1.8 | (0.5) | 2.7 |
| Equity income (loss) of subsidiaries | 24.9 | 51.8 | 30.3 | (0.1) | (106.9) | 0.0 |
| Interest expense | 0.0 | 19.7 | 0.0 | 2.1 | (0.4) | 21.4 |
| Loss on extinguishment of debt | 0.0 | 13.3 | 0.0 | 0.0 | 0.0 | 13.3 |
| Income taxes | (0.2) | (14.0) | 13.7 | 8.1 | 0.0 | 7.6 |
| Income from continuing operations | 24.1 | 24.9 | 53.8 | 31.5 | (108.7) | 25.6 |
| Discontinued operations | 0.0 | 0.0 | 0.0 | (1.2) | 0.0 | (1.2) |
| Noncontrolling interests | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.3 |
| Net income attributable to Koppers | $ 24.1 | $ 24.9 | $ 53.8 | $ 30.0 | $ (108.7) | $ 24.1 |
| Comprehensive income attributable to Koppers | $ 36.5 | $ 37.4 | $ 65.8 | $ 42.0 | $ (145.2) | $ 36.5 |

Condensed Consolidating Statement of Operations

For the Six Months Ended June 30, 2016

| (Dollars in millions) | Parent | Koppers Inc. | Domestic Guarantor Subsidiaries | Non-Guarantor Subsidiaries | Consolidating Adjustments | Consolidated |
|---|---|---|---|---|---|---|
| Net sales | $ 0.0 | $ 349.5 | $ 167.3 | $ 262.7 | $ (47.6) | $ 731.9 |
| Cost of sales including depreciation and amortization | 0.0 | 335.8 | 121.9 | 222.8 | (48.9) | 631.6 |
| Selling, general and administrative | 0.8 | 20.9 | 14.2 | 24.6 | 0.0 | 60.5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Operating profit (loss) | (0.8) | (7.2) | 31.2 | 15.3 | 1.3 | 39.8 |
| Other income | 0.0 | 0.1 | 2.7 | 0.1 | (0.9) | 2.0 |
| Equity income of subsidiaries | 11.6 | 43.5 | 8.1 | 0.0 | (63.2) | 0.0 |
| Interest expense | 0.0 | 25.1 | 0.0 | 2.4 | (0.9) | 26.6 |
| Income taxes | 0.0 | (0.6) | 0.4 | 6.5 | 0.0 | 6.3 |
| Income from continuing operations | 10.8 | 11.9 | 41.6 | 6.5 | (61.9) | 8.9 |
| Discontinued operations | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 | 0.6 |
| Noncontrolling interests | 0.0 | 0.0 | 0.0 | (1.3) | 0.0 | (1.3) |
| Net income attributable to Koppers | $ 10.8 | $ 11.9 | $ 41.6 | $ 8.4 | $ (61.9) | $ 10.8 |
| Comprehensive income attributable to Koppers | $ 18.8 | $ 19.5 | $ 49.3 | $ 12.2 | $ (81.0) | $ 18.8 |

Condensed Consolidating Balance Sheet

June 30, 2017

| (Dollars in millions) | Parent | Koppers Inc. | Domestic Guarantor Subsidiaries | Non-Guarantor Subsidiaries | Consolidating Adjustments | Consolidated |
|---|---|---|---|---|---|---|
| ASSETS | | | | | | |
| Cash and cash equivalents | $0.0 | $0.0 | $ 0.0 | $ 40.0 | $ 0.0 | $ 40.0 |
| Receivables, net | 0.0 | 62.1 | 36.7 | 85.8 | 0.0 | 184.6 |
| Affiliated receivables | 0.0 | 15.9 | 1.5 | 12.7 | (30.1) | 0.0 |
| Inventories, net | 0.0 | 86.7 | 39.6 | 105.9 | (2.5) | 229.7 |
| Other current assets | 0.0 | 6.4 | 17.9 | 22.1 | 0.3 | 46.7 |
| Total current assets | 0.0 | 171.1 | 95.7 | 266.5 | (32.3) | 501.0 |
| Equity investments | 70.5 | 761.2 | 231.1 | 0.0 | (1,062.8) | 0.0 |
| Property, plant and equipment, net | 0.0 | 140.5 | 44.6 | 118.3 | 0.0 | 303.4 |
| Goodwill | 0.0 | 0.8 | 153.1 | 34.0 | 0.0 | 187.9 |
| Intangible assets, net | 0.0 | 7.7 | 104.4 | 24.1 | 0.0 | 136.2 |
| Deferred tax assets | 0.0 | 29.6 | (8.7) | 5.8 | 0.0 | 26.7 |
| Affiliated loan receivables | 0.0 | 34.0 | 217.8 | 21.2 | (273.0) | 0.0 |
| Other assets | 0.0 | 4.6 | 3.3 | 5.2 | 0.1 | 13.2 |
| Total assets | $70.5 | $1,149.5 | $ 841.3 | $ 475.1 | $ (1,368.0) | $ 1,168.4 |
| LIABILITIES AND EQUITY | | | | | | |
| Accounts payable | 0.1 | 62.9 | 42.3 | 43.1 | 0.0 | 148.4 |
| Affiliated payables | 1.5 | 10.7 | 7.5 | 10.4 | (30.1) | 0.0 |
| Accrued liabilities | 0.0 | 52.2 | 14.9 | 49.3 | 0.0 | 116.4 |
| Current maturities of long-term debt | 0.0 | 0.1 | 0.0 | 12.4 | 0.0 | 12.5 |
| Total current liabilities | 1.6 | 125.9 | 64.7 | 115.2 | (30.1) | 277.3 |
| Long-term debt | 0.0 | 655.4 | 0.0 | 25.1 | 0.0 | 680.4 |
| Affiliated debt | 0.0 | 221.5 | 17.1 | 34.4 | (273.0) | 0.0 |
| Other long-term liabilities | 0.0 | 74.7 | 14.2 | 48.2 | 0.0 | 137.2 |
| Total liabilities | 1.6 | 1,077.5 | 96.0 | 222.9 | (303.1) | 1,094.9 |
| Koppers shareholders' equity | 68.9 | 72.0 | 745.3 | 247.6 | (1,064.9) | 68.9 |
| Noncontrolling interests | 0.0 | 0.0 | 0.0 | 4.6 | 0.0 | 4.6 |
| Total liabilities and equity | $70.5 | $1,149.5 | $ 841.3 | $ 475.1 | $ (1,368.0) | $ 1,168.4 |

Condensed Consolidating Balance Sheet

December 31, 2016

| (Dollars in millions) | Parent | Koppers Inc. | Domestic Guarantor Subsidiaries | Non-Guarantor Subsidiaries | Consolidating Adjustments | Consolidated |
|---|---|---|---|---|---|---|
| ASSETS | | | | | | |
| Cash and cash equivalents | $0.0 | $0.0 | $ 0.0 | $ 20.8 | $ 0.0 | $ 20.8 |
| Receivables, net | 0.0 | 50.8 | 25.4 | 64.4 | 0.0 | 140.6 |
| Affiliated receivables | 0.7 | 34.8 | 32.2 | 15.4 | (83.1) | 0.0 |
| Inventories, net | 0.0 | 106.6 | 23.9 | 99.0 | (0.8) | 228.7 |
| Other current assets | 0.0 | 5.1 | 13.4 | 29.2 | 0.3 | 48.0 |
| Total current assets | 0.7 | 197.3 | 94.9 | 228.8 | (83.6) | 438.1 |
| Equity investments | 29.9 | 697.4 | 195.4 | 0.0 | (922.7) | 0.0 |
| Property, plant and equipment, net | 0.0 | 126.7 | 39.6 | 114.5 | 0.0 | 280.8 |
| Goodwill | 0.0 | 0.8 | 153.1 | 32.5 | 0.0 | 186.4 |
| Intangible assets, net | 0.0 | 7.9 | 107.1 | 26.9 | 0.0 | 141.9 |
| Deferred tax assets | 0.0 | 29.7 | (8.4) | 5.8 | 0.0 | 27.1 |
| Affiliated loan receivables | 0.0 | 36.9 | 205.3 | 21.9 | (264.1) | 0.0 |
| Other assets | 0.0 | 5.5 | 6.1 | 1.6 | 0.0 | 13.2 |
| Total assets | $30.6 | $1,102.2 | $ 793.1 | $ 432.0 | $ (1,270.4) | $ 1,087.5 |
| LIABILITIES AND EQUITY | | | | | | |
| Accounts payable | $0.2 | $69.6 | $ 38.9 | $ 35.5 | $ 0.0 | $ 144.2 |
| Affiliated payables | 0.0 | 46.0 | 20.7 | 24.5 | (91.2) | 0.0 |
| Accrued liabilities | 0.0 | 49.5 | 18.9 | 37.9 | 0.0 | 106.3 |
| Current maturities of long-term debt | 0.0 | 30.2 | 0.0 | 12.4 | 0.0 | 42.6 |
| Total current liabilities | 0.2 | 195.3 | 78.5 | 110.3 | (91.2) | 293.1 |
| Long-term debt | 0.0 | 592.0 | 0.0 | 27.8 | 0.0 | 619.8 |
| Affiliated debt | 0.0 | 209.9 | 23.5 | 30.7 | (264.1) | 0.0 |
| Other long-term liabilities | 0.0 | 75.0 | 11.6 | 53.4 | 0.0 | 140.0 |
| Total liabilities | 0.2 | 1,072.2 | 113.6 | 222.2 | (355.3) | 1,052.9 |
| Koppers shareholders' equity | 30.4 | 30.0 | 679.5 | 205.6 | (915.1) | 30.4 |
| Noncontrolling interests | 0.0 | 0.0 | 0.0 | 4.2 | 0.0 | 4.2 |
| Total liabilities and equity | $30.6 | $1,102.2 | $ 793.1 | $ 432.0 | $ (1,270.4) | $ 1,087.5 |

Condensed Consolidating Statement of Cash Flows

For the Six Months Ended June 30, 2017

| (Dollars in millions) | Parent | Koppers Inc. | Domestic Guarantor Subsidiaries | Non-Guarantor Subsidiaries | Consolidating Adjustments | Consolidated |
|---|---|---|---|---|---|---|
| Cash provided by (used in) operating activities | $ 3.3 | $ (8.4) | $ 26.4 | $ 12.0 | $ (2.0) | $ 31.3 |
| Cash provided by (used in) investing activities: | | | | | | |
| Capital expenditures and acquisitions | 0.0 | (23.1) | (8.0) | (3.1) | 0.0 | (34.2) |
| Repayments (loans to) from affiliates | 0.0 | 2.9 | (12.5) | 0.7 | 8.9 | 0.0 |
| Repayment of loan | 0.0 | 0.0 | 0.0 | 9.5 | 0.0 | 9.5 |
| Net cash provided by divestitures and asset sales | 0.0 | 0.0 | 0.5 | 0.3 | 0.0 | 0.8 |
| Net cash (used in) provided by investing activities | 0.0 | (20.2) | (20.0) | 7.4 | 8.9 | (23.9) |
| Cash provided by (used in) financing activities: | | | | | | |
| Borrowings (repayments) of long-term debt | 0.0 | 30.0 | 0.0 | (4.0) | 0.0 | 26.0 |
| Borrowings (repayments) of affiliated debt | 0.0 | 11.6 | (6.4) | 3.7 | (8.9) | 0.0 |
| Debt issuance costs | 0.0 | (11.0) | 0.0 | 0.0 | 0.0 | (11.0) |
| Dividends paid | 0.0 | (2.0) | (0.0) | 0.0 | 2.0 | 0.0 |
| Stock repurchased | (3.3) | 0.0 | 0.0 | 0.0 | 0.0 | (3.3) |
| Net cash provided by (used in) financing activities | (3.3) | 28.6 | (6.4) | (0.3) | (6.9) | 11.7 |
| Effect of exchange rates on cash | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 |
| Net increase in cash and cash | 0.0 | 0.0 | 0.0 | 19.2 | 0.0 | 19.2 |

| | | | | | | |
|---|---|---|---|---|---|---|
| equivalents | | | | | | |
| Cash and cash equivalents at beginning of year | 0.0 | 0.0 | 0.0 | 20.8 | 0.0 | 20.8 |
| Cash and cash equivalents at end of period | $ 0.0 | $ 0.0 | $ 0.0 | $ 40.0 | $ 0.0 | $ 40.0 |

Condensed Consolidating Statement of Cash Flows

For the Six Months Ended June 30, 2016

| (Dollars in millions) | Parent | Koppers Inc. | Domestic Guarantor Subsidiaries | Non-Guarantor Subsidiaries | Consolidating Adjustments | Consolidated |
|---|---|---|---|---|---|---|
| Cash provided by (used in) operating activities | $ 0.2 | $ (2.6) | $ 47.5 | $ 9.0 | $ (19.8) | $ 34.3 |
| Cash provided by (used in) investing activities: | | | | | | |
| Capital expenditures and acquisitions | 0.0 | (14.4) | (1.5) | (5.4) | 0.0 | (21.3) |
| Repayments (loans to) from affiliates | 0.0 | (5.1) | (21.3) | (0.5) | 26.9 | 0.0 |
| Net cash proceeds from divestitures and asset sales | 0.0 | 0.1 | 0.4 | 0.1 | 0.0 | 0.6 |
| Net cash (used in) provided by investing activities | 0.0 | (19.4) | (22.4) | (5.8) | 26.9 | (20.7) |
| Cash provided by (used in) financing activities: | | | | | | |
| Repayments of long-term debt | 0.0 | (13.1) | 0.0 | 0.2 | 0.0 | (12.9) |
| Borrowings (repayments) of affiliated debt | 0.0 | 37.1 | (6.6) | (3.6) | (26.9) | 0.0 |
| Dividends paid | 0.0 | (0.7) | (19.1) | 0.0 | 19.8 | 0.0 |
| Stock repurchased | (0.2) | 0.0 | 0.0 | 0.0 | 0.0 | (0.2) |
| Net cash provided by (used in) financing activities | (0.2) | 21.9 | (25.7) | (3.4) | (7.1) | (14.5) |
| Effect of exchange rates on cash | 0.0 | 0.0 | 0.0 | (4.5) | 0.0 | (4.5) |
| Net decrease in cash and cash equivalents | 0.0 | (0.1) | (0.6) | (4.7) | 0.0 | (5.4) |
| Cash and cash equivalents at beginning of year | 0.0 | 0.1 | 0.7 | 21.0 | 0.0 | 21.8 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Cash and cash equivalents at end of period | $ 0.0 | $ 0.0 | $ 0.1 | $ 16.3 | $ 0.0 | $ 16.4 |

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This report and any documents incorporated herein by reference contain "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995 and may include, but are not limited to, statements about sales levels, acquisitions, restructuring, declines in the value of Koppers assets and the effect of any related impairment charges, profitability and anticipated expenses and cash outflows. All forward-looking statements involve risks and uncertainties. All statements contained herein that are not clearly historical in nature are forward-looking, and words such as "believe," "anticipate," "expect," "estimate," "may," "will," "should," "continue," "plans," "potential," "inte other similar words or phrases are generally intended to identify forward-looking statements. Any forward-looking statement contained herein, in press releases, written statements or documents filed with the Securities and Exchange Commission, or in Koppers communications with and discussions with investors and analysts in the normal course of business through meetings, phone calls and conference calls, regarding expectations with respect to sales, earnings, cash flows, operating efficiencies, restructurings, product introduction or expansion, the benefits of acquisitions and divestitures, joint ventures or other matters as well as financings and debt reduction, are subject to known and unknown risks, uncertainties and contingencies. Many of these risks, uncertainties and contingencies are beyond our control, and may cause actual results, performance or achievements to differ materially from anticipated results, performance or achievements. Factors that might affect such forward-looking statements, include, among other things, the impact of changes in commodity prices, such as oil and copper, on product margins; general economic and business conditions; potential difficulties in protecting our intellectual property; the ratings on our debt and our ability to repay or refinance our outstanding indebtedness as it matures; our ability to operate within the limits of our debt covenants; potential impairment of our goodwill and/or long-lived assets; demand for Koppers goods and services; competitive conditions; interest rate and foreign currency rate fluctuations; availability and costs of key raw materials and unfavorable resolution of claims against us, as well as those discussed more fully elsewhere in this report and in documents filed with the Securities and Exchange Commission by Koppers, particularly our latest annual report on Form 10-K and subsequent filings. We caution you that the foregoing list of important factors may not contain all of the material factors that are important to you. In addition, in light of these risks and uncertainties, the matters referred to in the forward-looking statements contained in this report and the documents incorporated by reference herein may not in fact occur. Any forward-looking statements in this report speak only as of the date of this report, and we undertake no obligation to update any forward-looking statement to reflect events or circumstances after that date or to reflect the occurrence of unanticipated events.

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the unaudited financial statements and related notes included in Item 1 of this Part I as well as the audited consolidated financial statements and the related notes included in our Annual Report on Form 10-K for the year ended December 31, 2016.

Overview

We are a leading integrated global provider of treated wood products, wood preservation chemicals, and carbon compounds. Our products and services are used in a variety of niche applications in a diverse range of end-markets, including the railroad, specialty chemical, utility, residential lumber, agriculture, aluminum, steel, rubber, and construction industries. We serve our customers through a comprehensive global manufacturing and distribution network, with manufacturing facilities located in North America, South America, Australasia, China and Europe.

We operate three principal businesses: Railroad and Utility Products and Services ("RUPS"), Performance Chemicals ("PC") and Carbon Materials and Chemicals ("CMC").

Through our RUPS business, we believe that we are the largest supplier of railroad crossties to the North American railroads. Our other treated wood products include utility poles for the electric and telephone utility industries in

Australia. We also provide rail joint bar products as well as various services to the railroad industry. Through our PC business, we believe that we are the global leader in developing, manufacturing and marketing wood preservation chemicals and wood treatment technologies for use in the pressure treating of lumber for residential, industrial and agricultural applications. Our CMC business processes coal tar into a variety of products, including creosote, carbon pitch, carbon black feedstock, naphthalene and phthalic anhydride, which are intermediate materials necessary in the pressure treatment of wood, the production of aluminum, the production of carbon black, the production of high-strength concrete, and the production of plasticizers and specialty chemicals, respectively.

Outlook

Trend Overview

Our businesses and results of operations are affected by various competitive and other factors including (i) the impact of global economic conditions on demand for our products, including the impact of imported products from competitors in certain regions where we operate; (ii) raw materials pricing and availability, in particular the cost and availability of

hardwood lumber for railroad crossties, scrap copper prices, and the cost and amount of coal tar available in global markets, which is negatively affected by reductions in blast furnace steel production; (iii) volatility in oil prices, which impacts the cost of coal tar and certain other raw materials, as well as selling prices and margins for certain of our products including carbon black feedstock, phthalic anhydride, and naphthalene; (iv) competitive conditions in global carbon pitch markets; and (v) changes in foreign exchange rates.

Railroad and Utility Products and Services

The primary end-market for RUPS is the North American railroad industry, which has an installed base of approximately 700 million wood crossties that require periodic replacement. As a result, demand has historically been relatively stable in the range of 22-25 million wood crossties annually. We sell treated and untreated wood products, rail joint bars and services primarily to the railroad markets in the United States and Canada, and utility poles to the utility sector in Australia. We also operate a railroad services business that conducts engineering, design, repair and inspection services primarily for railroad bridges in the U.S. and Canada.

The supply of untreated crossties can vary at times based upon weather conditions in addition to other factors. We have a nationwide wood procurement team that maintains close working relationships with a network of sawmills. The first component of our revenue stream occurs when we procure the untreated crossties, on behalf of our customers, at a nominal markup. This practice provides the railroad customers with an assured level of inventory and minimizes our working capital usage as untreated crossties go through a six- to nine-month air seasoning process before they are ready to be pressure treated. Subsequent to the air seasoning period, the next phase involves the RUPS segment providing value-added services to customers through treating crossties, switch ties and various types of lumber used for railroad bridges and crossings. The processes include creosote-only treatment as well as a combination of creosote and borate treatments. During any given year, there is a seasonal effect in the winter months on our crosstie business depending on weather conditions for harvesting lumber and installation.

In 2017, the major companies in the rail industry have substantially reduced both operating and capital spending from peak spending levels, which has a negative short-term impact on sales of various products and services that we provide to that industry. We expect that current year revenues and profitability will reflect a decline year-over-year due to the effects of lower demand caused by continued reductions in capital budgets for most North American Class I railroads. The lower demand has caused the market to reduce raw material purchase prices primarily in the Eastern U.S. which will further reduce our revenues in the near term due to certain cost pass-through conditions and have some impact on our profitability as well. Furthermore, the lower demand has also resulted in price reductions for the products we supply the commercial railroad business as competition has increased to replace the lower Class I demand for crossties. We currently supply all seven of the North American Class I railroads and have long-standing relationships with these customers. Approximately 70 percent of our North American sales are under long-term contracts and we believe that we will continue to grow our market position.

Overall, the long-term prognosis for the railroad industry and the products and services that we provide to it remains favorable. Currently, the railroad industry is managing the cyclical downturn in the oil and gas industry, while looking to replace demand lost to what is likely a long-term reduction in coal production. At the same time, the railroads are building their revenue base of shipments of non-energy related products. The Association of American Railroads (“AAR”) reported that the total U.S. rail carload traffic for the six months ending June 30, 2017 was up 6.4 percent year-over-year and intermodal units were 2.7 percent higher than prior year period. Together, the total combined U.S. traffic for the year-to-date period through June 30, 2017 increased 4.5 percent compared to last year and is expected to post mid-single digit year-over-year growth. While there has been a decline in coal transportation due to low natural gas prices and environmental concerns regarding the burning of coal, all other major categories of freight have exceeded expectations thus far in 2017. According to the AAR, the overall levels of railroad investment are forecast to be $22 billion in 2017, a decline from $25 billion in 2016 and $29 billion in 2015. It is expected that the reduction in

coal transport will likely persist; however, the spending by the railroad industry is projected to improve modestly in 2018 as the economy continues to trend favorably and interest rates remain relatively subdued. From a long-term perspective, there remains a need for sustained investment in infrastructure and capacity expansion. We believe that with our vertical integration capabilities in wood treatment, we will benefit from increased infrastructure and capacity expansion when it occurs.

Performance Chemicals

The largest geographic market for wood treating chemicals sold by our PC business is in North America, and the largest application for our products is the residential remodeling market. We also have a market presence in Europe, South America, Australia and New Zealand. Product demand for our PC business has historically been influenced by existing home sales, which is a leading indicator of consumer spending on remodeling projects. The National Association of Realtors estimates that existing home sales will increase two percent in 2017, which we expect will favorably impact repair and remodeling activity. According to the Leading Indicator of Remodeling Activity ("LIRA"), strong gains in home renovation and repair are expected to continue into mid-2017 before moderating somewhat later in the year.

We believe that PC is the largest global manufacturer and supplier of water-based wood preservatives and wood specialty additives to treaters who supply pressure treated wood products to large retailers and independent lumber dealers. These retailers and dealers, in turn, serve the residential, agricultural and industrial pressure-treated wood market. Our primary products are copper-based wood preservatives, including micronized copper azole ("MicroPro®") and micronized pigments ("MicroShades®"). Applications for these products include decking, fencing, utility poles, construction lumber and other outdoor structures. We continue to invest in research and development activities at various locations around the world, particularly in areas that have high fungal decay and termite activity, in order to assess the performance and efficacy of various wood preservation systems.

As most of the products sold by PC are copper-based products, changes in the price and availability of copper can have a significant impact on product pricing and margins. We attempt to moderate the variability in copper pricing by entering into hedging transactions for the majority of our copper needs, which primarily range from six months up to 30 months. Those hedges typically match expected customer purchases and receive hedge accounting treatment. From time to time, we enter into forward transactions based upon long-term forecasted needs of copper. Those forward positions are typically marked to market on a quarterly basis.

In North America, we are vertically integrated due to our manufacturing capabilities for copper compounds for our copper-based wood preservatives. We believe our vertical integration is part of our proprietary processes and reflects an important competitive advantage. In addition, we believe this provides our customers with the security of a continuous supply of wood preservative chemicals. Beginning in mid-2016, we have seen large retailers and lumber dealers opting for a product mix with higher levels of preservative retention driven primarily by changes in treated wood product application standards. This shift towards a higher retention product mix simplifies the treating and stocking processes for the treaters that purchase PC products and their end-customers, as well as provides for higher quality products that will better withstand the effects of insects and fungal decay. Even though it is difficult to predict competitive trends and to quantify the total impact it will have on PC sales, operating profit, and cash flow, we believe the shift to higher retention product mix has continued into 2017 but has begun to moderate as the market completes this transition.

Overall the market for existing homes is showing somewhat mixed signals. The National Association of Realtors reported that total existing home sales pulled back in June to a seasonally adjusted annual rate of 5.5 million closings, approximately one percent above last year. At the same time, another solid year is anticipated for repair and remodel activity with a seven percent growth rate projected for 2017 and moderating to a six percent growth in the first quarter of 2018 according to the Harvard Joint Center for Housing Studies. The Center also reports that U.S. consumers are expected to spend a record $316 billion in home remodeling this year, up from $296 billion in the prior year. These trends are supported by the favorable outlook reported by major domestic home improvement retailers as these businesses are anticipating increases in same-store sales. Additionally, the Consumer Confidence Index®, as reported by The Conference Board, improved to 118.9 in June 2017 versus 113.7 in December 2016, which should continue to drive additional housing related demand. At this point, it now appears that the U.S. Federal Reserve will raise the

Federal Funds rate at a slower pace than originally expected, which should also benefit the residential repair and remodeling market, as well as continue to drive general economic growth.

Carbon Materials and Chemicals

The primary products produced by CMC are creosote, which is a registered pesticide in the U.S. and used primarily in the pressure treatment of railroad crossties, and carbon pitch, which is sold primarily to the aluminum industry for the production of carbon anodes used in the smelting of aluminum. We have reduced capacity in our CMC plants in North America and Europe over the past several years to meet creosote demand in North America for the treatment of railroad crossties. We currently supply our North American RUPS business with 100 percent of its creosote requirements. As discussed in the RUPS outlook, there is a short-term decrease in spending for railroad infrastructure. This will result in a shift in excess distillate production to the less profitable carbon black feedstock market until demand for creosote returns to historical levels.

While the sale of carbon pitch remains a significant portion of our sales volume, the reduction of aluminum smelting capacity in the United States, Australia and Western Europe has led to sharply lower demand for carbon pitch over the

past several years. Accordingly, we have experienced significantly lower sales volumes due to the reduction in aluminum production in parts of the world where the majority of our production facilities are located. In 2017, the aluminum production in the U.S. is expected to be relatively flat due to the reduction of global inventories, modestly improved economic demand, and more rational levels of global aluminum production.

The availability of coal tar, the primary raw material for our CMC business, is linked to levels of metallurgical coke production. As the global steel industry, excluding Asia, has reduced the production of steel using metallurgical coke, the volumes of coal tar have also been reduced. For the past decade, the coal tar distillation industry has operated in an excess capacity mode, which further increased the competition for a limited amount of coal tar in North America. As our CMC business, principally in North America, has consolidated its operating footprint and lowered production levels over the past two years, our raw material needs have been significantly less than historically required and we will continue to evaluate potential opportunities to further lower our overall input costs.

CMC Restructuring Initiatives

We embarked on a plan to restructure our CMC operating footprint that reduced our global number of coal tar distillation facilities from the 11 that existed as of January 1, 2014 to four in total. The remaining facilities are located in regions where we believe we hold key competitive advantages that allow us to better serve our global customers: Stickney, Illinois; Nyborg, Denmark; Mayfield, Australia; and Jiangsu Province, China.

As a result of the reduction in operating capacity at the seven closed or sold coal tar distillation facilities, we have incurred substantial restructuring and impairment costs over the last four years. As a result of these initiatives, we expect additional restructuring and related charges to earnings of between $8 million to $16 million through 2020. The overall expected future cash requirements for the CMC plant closures are estimated to be approximately $40 million through 2020. There may be additional curtailments or closures at our other CMC facilities as part of our efforts to reduce our cost structure and improve capacity utilization in our business.

Through these restructuring initiatives, we are significantly transforming our CMC business model by streamlining the operating footprint and reducing reliance on and exposure to the carbon pitch markets. We believe that the extensive and ongoing efforts to reduce our fixed cost structure will result in a sustainable improvement in earnings in addition to lower volatility in cash flow.

Seasonality and Effects of Weather on Operations

Our quarterly operating results fluctuate due to a variety of factors that are outside of our control, including inclement weather conditions, which in the past have affected operating results. Operations at some of our facilities have at times been reduced during the winter months. Moreover, demand for some of our products declines during periods of inclement weather. As a result of the foregoing, we anticipate that we may experience material fluctuations in quarterly operating results. Historically, our operating results have been significantly lower in the first and fourth calendar quarters as compared to the second and third calendar quarters.

Results of Operations – Comparison of Three Months Ended June 30, 2017 and 2016

Consolidated Results

Net sales for the three months ended June 30, 2017 and 2016 are summarized by segment in the following table:

| (Dollars in millions) | Three Months Ended June 30, 2017 | 2016 | Net Change | |
|---|---|---|---|---|
| Railroad and Utility Products and Services | $135.9 | $164.4 | -17 | % |
| Performance Chemicals | 111.8 | 108.4 | 3 | % |
| Carbon Materials and Chemicals | 130.3 | 112.3 | 16 | % |
| | $378.0 | $385.1 | -2 | % |

RUPS net sales decreased by $28.5 million or 17 percent compared to the prior year period. The sales decrease was primarily due to lower sales volumes of crossties, utility products and railroad bridge services. Sales of crossties declined by $23.4 million. The reduction in treated crossties and structure services is attributed to lower spending in the rail industry due to the impact of reduced freight car loadings and rail traffic across both the Class I and commercial markets. In addition, commercial crosstie pricing has been reduced due to an over-supply of crossties in the non-Class I market. Sales of utility products declined by $0.6 million due to reduced demand for structural timber in Australia.

PC net sales increased by $3.4 million or 3 percent compared to the prior year period. The sales increase was due primarily to higher North American sales volumes for some copper-based wood preservatives and additives. Higher sales volumes were driven primarily by favorable market trends in the repair and remodeling markets and existing home sales as well as treated wood dealers stocking and selling treated wood with higher preservative retention levels. These gains

were offset in part by higher customer development costs, which are reflected as a reduction of net sales, compared to the prior year period.

CMC net sales increased by $18.0 million or 16 percent compared to the prior year period due mainly to higher sales volumes for carbon pitch and carbon black feedstock with higher sales prices for carbon pitch, carbon black feedstock, phthalic anhydride and other coal tar products, partially offset by lower creosote pricing and volumes. Our strategy is to sell as much distillate production to the higher value wood preservative market, however there was a reduction in creosote volume driven by lower demand for treated crossties. The excess distillate was sold as carbon black feedstock. Carbon pitch sales volumes were higher in most regions. Sales of coal tar chemicals increased over the prior year period due to an increase in pricing of phthalic anhydride. The increase was driven by the effect of higher orthoxylene prices, which impact phthalic anhydride market prices. Higher sales prices for carbon pitch and carbon black feedstock in China were driven primarily by reduced supply in that region.

Cost of sales as a percentage of net sales was 78 percent for the quarter ended June 30, 2017 compared to 79 percent in the prior year quarter due mainly to a sales mix shift for PC as higher gross margins were driven by increased sales volumes and lower costs. In addition, higher gross margins for CMC were driven by lower raw material and shipping costs in North America and higher sales prices in Europe and Australasia. This more than offset lower sales volumes and gross margins from RUPS due to reduced sales volumes of crossties, utility poles, and railroad services combined with reduced margins in the commercial crosstie market as a result of inventory over-supply in the non-class I market.

Depreciation and amortization for the quarter ended June 30, 2017 was $1.4 million lower when compared to the prior year period due mainly to a reduction in assets, excluding assets under construction, related to our shutdown of distillation facilities in the United States and United Kingdom.

Impairment and restructuring expenses for the quarter ended June 30, 2017 were $3.9 million lower when compared to the prior year period due mainly to a prior year accrual for exited real estate lease obligations, net of estimated sublease revenue, at our closed coal tar distillation facility in Uithoorn, the Netherlands, as well as severance charges related to our closed coal tar distillation CMC facilities in the United Kingdom and impairment charges for the remaining fixed assets at our coal tar distillation facility in Clairton, Pennsylvania. Current year charges consist of restructuring-related storage tank decommissioning costs and accelerated depreciation for the remaining fixed assets at our coal tar distillation facilities in Clairton, Pennsylvania and Follansbee, West Virginia.

Selling, general and administrative expenses for the quarter ended June 30, 2017 were $1.7 million higher when compared to the prior year period due mainly to increases in consulting and stock-based compensation expense.

Other income for the quarter ended June 30, 2017 was $0.3 million higher when compared to the prior year period. In the quarter ended June 30, 2016, we incurred equity method losses of $0.3 million for CMC related to our TKK facility in China. This facility was sold in the first quarter of 2017.

Interest expense for the quarter ended June 30, 2017 was $3.5 million lower than the prior year period as a result of reduced average debt levels and reduced interest rates related to our new 2025 Notes and our new Revolving Credit Facility.

Income taxes for the quarter ended June 30, 2017 were $6.6 million, a decrease of $0.2 million when compared to the prior year period. The decrease in tax expense is due to a decrease in the effective income tax rate partially offset by pre-tax earnings that are greater than the prior period. The effective income tax rates for the quarters ended June 30, 2017 and June 30, 2016 were 24.0 percent and 37.6 percent, respectively. The decrease in the effective income tax rate is partially due to an increase in foreign pre-tax earnings that are taxed at more favorable rates. Additionally, in the prior period, we incurred losses in certain foreign subsidiaries that did not generate a tax benefit, which increased our

effective tax rate for that prior period.

Segment Results

Segment operating profit for the three months ended June 30, 2017 and 2016 is summarized by segment in the following table:

| (Dollars in millions) | Three Months Ended June 30, 2017 | 2016 | % Change |
|---|---|---|---|
| Operating profit (loss): | | | |
| Railroad and Utility Products and Services | $11.0 | $18.5 | -41 % |
| Performance Chemicals | 19.6 | 22.4 | -13 % |
| Carbon Materials and Chemicals | 7.8 | (8.3 ) | 194 % |
| Corporate | (0.8 ) | (0.6 ) | -33 % |
| | $37.6 | $32.0 | 18 % |
| Operating profit (loss) as a percentage of net sales: | | | |
| Railroad and Utility Products and Services | 8.1 % | 11.3% | -3.2 % |
| Performance Chemicals | 17.5% | 20.7% | -3.2 % |
| Carbon Materials and Chemicals | 6.0 % | (7.4 )% | 13.4 % |
| | 9.9 % | 8.3 % | 1.6 % |

RUPS operating profit decreased by $7.5 million or 41 percent compared to the prior year period. Operating profit as a percentage of net sales for RUPS decreased to 8.1 percent from 11.3 percent in the prior year quarter. Operating profit as a percentage of net sales for the three months ended June 30, 2017 was impacted by reduced sales volumes of crossties, utility poles, and railroad services combined with reduced margins in the commercial crosstie market as a result of inventory over-supply in the commercial market. The negative impact from these factors was slightly offset by favorable volumes and sales mix of rail joint products.

PC operating profit decreased by $2.8 million or 13 percent compared to the prior year period. Operating profit as a percentage of net sales for PC decreased to 17.5 percent from 20.7 percent in the prior year quarter. Sales volumes have improved due to favorable market trends in the repair and remodeling markets and existing home sales. The increase was driven primarily by changes in treated wood product application standards in 2016 resulting in treated wood dealers stocking and selling more high retention ground contact treated wood, which has moderated in 2017 as dealer inventory has sufficiently been substantially restocked with higher retention treated wood. However, although we hedge the majority of our copper purchases, higher copper prices more than offset our sales increase and negatively impacted our operating profit margin for the three months ended June 30, 2017.

CMC operating profit increased by $16.1 million or 194 percent compared to the prior year period. Operating profit as a percentage of net sales for CMC increased to 6.0 percent from a loss of 7.4 percent in the prior year quarter. Operating profit for the three months ended June 30, 2017 was positively affected by lower raw material and logistics costs in North America, higher sales prices in Europe and higher sales volumes in Australasia particularly related to carbon pitch. The positive impacts were partially offset by lower sales prices in North America, accelerated depreciation, and unabsorbed fixed costs.

Corporate operating loss increased by $0.2 million or 33 percent compared to the prior year period due to increased foreign currency losses in the current year period.

Results of Operations – Comparison of Six Months Ended June 30, 2017 and 2016

Consolidated Results

Net sales for the six months ended June 30, 2017 and 2016 are summarized by segment in the following table:

| | Six Months Ended June 30, | | | |
|---|---|---|---|---|
| | 2017 | 2016 | Net Change | |
| (Dollars in millions) | | | | |
| Railroad and Utility Products and Services | $271.4 | $315.8 | -14 | % |
| Performance Chemicals | 208.5 | 196.4 | 6 | % |
| Carbon Materials and Chemicals | 244.7 | 219.7 | 11 | % |
| | $724.6 | $731.9 | -1 | % |

RUPS net sales decreased by $44.4 million or 14 percent compared to the prior year period. The sales decrease was primarily due to lower sales volumes of crossties, utility products and railroad bridge services. Sales of crossties declined by $34.8 million or 14 percent. The reduction in treated crossties and structure services is attributed to lower spending in the rail industry due to the impact of reduced freight car loadings and rail traffic across both the Class I and commercial markets. In addition, commercial crosstie pricing has been reduced due to an over-supply of crossties in the commercial

market. Sales of utility products declined by $1.6 million or 11 percent due to reduced demand for structural timber in Australia.

PC net sales increased by $12.1 million or 6 percent compared to the prior year period. The sales increase was due primarily to higher North American sales volumes for some copper-based wood preservatives and additives. Higher sales volumes were driven primarily by favorable market trends in the repair and remodeling markets and existing home sales as well as treated wood dealers stocking and selling treated wood with higher preservative retention levels. These gains were offset in part by higher customer development costs, which are reflected as a reduction of net sales, compared to the prior year period.

CMC net sales increased by $25.0 million or 11 percent compared to the prior year period due mainly to higher sales prices for carbon black feedstock, carbon pitch and other coal tar products with higher sales volumes for carbon black feedstock and phthalic anhydride, partially offset by lower carbon pitch and creosote volumes. Our strategy is to sell as much distillate production to the higher value wood preservative market, however there was a reduction in creosote volume driven by lower demand for treated crossties in the first six months of 2017. The excess distillate was sold as carbon black feedstock. Sales of coal tar chemicals increased over the prior year period due to an increase in sales volumes and pricing of phthalic anhydride. The increase was driven by the effect of higher orthoxylene prices, which impact phthalic anhydride market prices. Higher sales prices for carbon pitch and carbon black feedstock in China were driven primarily by reduced supply in that region.

Cost of sales as a percentage of net sales was 79 percent for the six months ended June 30, 2017 compared to 81 percent in the prior year period due mainly to a sales mix shift for PC as higher gross margins were driven by increased sales volumes and lower costs. In addition, higher gross margins for CMC were driven by lower raw material and shipping costs in North America and higher sales volumes and prices in Europe and Australasia. This more than offset lower sales volumes and gross margins from RUPS due to reduced sales volumes of crossties, utility poles, and railroad services combined with reduced margins in the commercial crosstie market as a result of inventory over-supply in the non-class I market.

Depreciation and amortization for the six months ended June 30, 2017 was $5.3 million lower when compared to the prior year period due mainly to a reduction in assets, excluding assets under construction, related to our shutdown of distillation facilities in the United States and United Kingdom.

Impairment and restructuring expenses for the six months ended June 30, 2017 were $7.5 million lower when compared to the prior year period due mainly to a prior year accrual for exited real estate lease obligations, net of estimated sublease revenue, at our closed coal tar distillation facility in Uithoorn, the Netherlands, as well as severance charges related to our closed coal tar distillation CMC facilities in the United Kingdom and impairment charges for the remaining fixed assets at our coal tar distillation facility in Clairton, Pennsylvania. Current year charges consist of restructuring-related storage tank decommissioning costs and accelerated depreciation for the remaining fixed assets at our coal tar distillation facilities in Clairton, Pennsylvania and Follansbee, West Virginia.

Selling, general and administrative expenses for the six months ended June 30, 2017 were $2.4 million higher when compared to the prior year period due mainly to increases in consulting and stock-based compensation expense offset by decreases in customer development costs.

Other income for the six months ended June 30, 2017 was $0.7 million higher when compared to the prior year period. In the six months ended June 30, 2016, we incurred equity method losses of $0.7 million for CMC related to our TKK facility in China. This facility was sold in the first quarter of 2017.

Interest expense for the six months ended June 30, 2017 was $5.2 million lower than the prior year period as a result of reduced average debt levels and reduced interest rates related to our new 2025 Notes and our new Revolving Credit Facility.

Loss on extinguishment of debt for the six months ended June 30, 2017 was $13.3 million higher when compared to the prior year period. In the current year period, all of our senior notes due 2019 were repurchased at a premium to carrying value and accordingly, we realized a loss on extinguishment of debt totaling $10.0 million consisting of $7.3 million for bond premium and bond tender expenses and $2.7 million for the writeoff of unamortized debt issuance costs. In addition, we repaid our term loan in full and entered into a new revolving credit facility. Accordingly, we realized a loss of $3.3 million for the writeoff of unamortized debt issuance costs.

Income taxes for the six months ended June 30, 2017 were $7.6 million, an increase of $1.3 million when compared to the prior period. The increase in tax expense is due to an increase in pre-tax earnings that are greater than the prior period partially offset by a lower effective income tax rate. The effective income tax rates for the six months ended June 30, 2017 and June 30, 2016 were 22.9 percent and 41.4 percent, respectively. The decrease in the effective income tax rate is partially due to an increase in foreign pre-tax earnings that are taxed at more favorable rates. Additionally, in the

prior period, we incurred losses in certain foreign subsidiaries that did not generate a tax benefit, which increased our effective tax rate for that prior period.

Segment Results

Segment operating profit for the six months ended June 30, 2017 and 2016 is summarized by segment in the following table:

| | Six Months Ended June 30, | | |
|---|---|---|---|
| | 2017 | 2016 | % Change |
| (Dollars in millions) | | | |
| Operating profit (loss): | | | |
| Railroad and Utility Products and Services | $20.0 | $32.0 | -38 % |
| Performance Chemicals | 38.2 | 35.0 | 9 % |
| Carbon Materials and Chemicals | 8.2 | (25.9) | 132 % |
| Corporate | (1.2) | (1.3) | 8 % |
| | $65.2 | $39.8 | 64 % |
| Operating profit (loss) as a percentage of net sales: | | | |
| Railroad and Utility Products and Services | 7.4 % | 10.1 % | -2.7 % |
| Performance Chemicals | 18.3% | 17.8 % | 0.5 % |
| Carbon Materials and Chemicals | 3.4 % | (11.8)% | 15.2 % |
| | 9.0 % | 5.4 % | 3.6 % |

RUPS operating profit decreased by $12.0 million or 38 percent compared to the prior year period. Operating profit as a percentage of net sales for RUPS decreased to 7.4 percent from 10.1 percent in the prior year period. Operating profit as a percentage of net sales for the six months ended June 30, 2017 was impacted by reduced sales volumes of crossties, utility poles, and railroad services combined with reduced margins in the commercial crosstie market as a result of inventory over-supply in the commercial market. The negative impact from these factors was slightly offset by favorable volumes and sales mix of rail joint products.

PC operating profit increased by $3.2 million or 9 percent compared to the prior year period. Operating profit as a percentage of net sales for PC increased to 18.3 percent from 17.8 percent in the prior year quarter. Operating profit for the six months ended June 30, 2017 was positively impacted due primarily to higher North American sales volumes for copper-based wood preservatives. Sales volumes have improved due to favorable market trends in the repair and remodeling markets and existing home sales. Higher sales volumes were driven primarily by changes in treated wood product application standards in 2016 resulting in treated wood dealers stocking and selling more high retention ground contact treated wood, which has moderated in 2017 as dealer inventory has been sufficiently restocked with higher retention treated wood.

CMC operating profit increased by $34.1 million or 132 percent compared to the prior year period. Operating profit as a percentage of net sales for CMC increased to 3.4 percent from a loss of 11.8 percent in the prior year period. Operating profit for the six months ended June 30, 2017 was positively affected by lower raw material and shipping costs in North America and higher sales volumes and prices in Europe and Australasia. The positive impacts were partially offset by lower sales prices in North America, accelerated depreciation, and unabsorbed fixed costs.

Corporate operating loss decreased by $0.1 million or 8 percent compared to the prior year period due to reduced foreign currency losses in the current year period.

Cash Flow

Net cash provided by operating activities for the six months ended June 30, 2017 was $31.3 million compared to net cash provided by operating activities of $34.3 million in the prior year period. The net decrease of $3.0 million in cash from operations was due primarily to higher working capital usage compared to the prior year period principally as a result of an increase in accounts receivable due to the increase in sales in the first half of 2017 from the fourth quarter of 2016 exceeding the increase in sales in the first half of 2016 from the fourth quarter of 2015.

Net cash used in investing activities amounted to $23.9 million for the six months ended June 30, 2017 compared to net cash used in investing activities of $20.7 million in the prior year period. The increase in cash used for investing activities of $3.2 million is primarily due to current year capital expenditures to expand production capacity at PC in the United States and continued spending on the new naphthalene unit construction at our CMC plant in Stickney, Illinois offset by our cash proceeds of $9.5 million from the loan repayment by TKK.

Net cash provided by financing activities was $11.7 million for the six months ended June 30, 2017 compared to $14.5 million of net cash used in financing activities in the prior year period. The cash provided by financing activities in the six months ended June 30, 2017, reflected net borrowings of revolving credit of $67.4 million offset by net repayments of

long-term debt of $41.4 million, payment of debt issuance costs of $11.0 million from the issuance of new debt and repurchases of common stock of $5.2 million. The cash provided by financing activities in the six months ended June 30, 2016, reflected net borrowings of revolving credit of $2.1 million offset by repayments of long-term debt of $15.0 million.

Liquidity and Capital Resources

In January 2017, Koppers Inc. completed a private placement offering of $500.0 million 6.00 percent Senior Notes due 2025 (the "2025 Notes"). The 2025 Notes will pay interest semi-annually in arrears on February 15 and August 15 beginning on August 15, 2017 and will mature on February 15, 2025 unless earlier redeemed or repurchased. The 2025 Notes are unsecured and are guaranteed by Koppers Holdings Inc. and certain of Koppers Inc.'s domestic subsidiaries.

Koppers Inc. used the proceeds from the offering of the 2025 Notes to repay its outstanding term loan and to fund a tender offer to repurchase its senior notes due 2019 (the "2019 Notes"). The tender offer for the 2019 Notes was completed in early February 2017. Any 2019 Notes remaining outstanding following the tender offer were called for redemption and Koppers Inc. concurrently satisfied and discharged its remaining obligations under the indenture governing the 2019 Notes.

In February 2017, the Company entered into a new $400.0 million senior secured revolving credit facility (the "Revolving Credit Facility"). The maturity date of the Revolving Credit Facility is February 2022. The interest rate on the Revolving Credit Facility is variable and is based on LIBOR.

Expenses associated with the redemption of the 2019 Notes, the repayment of our term loan and placement of the new Revolving Credit Facility were $13.3 million for the six months ended June 30, 2017 and are included in "Loss on Extinguishment of Debt" on the Condensed Consolidated Statement of Operations and Comprehensive Income. These costs consist of tender offer premiums, fees and write off of unamortized debt issuance costs.

Restrictions on Dividends to Koppers Holdings

Koppers Holdings depends on the dividends from the earnings of Koppers Inc. and its subsidiaries to generate the funds necessary to meet its financial obligations, including the payment of any declared dividend of Koppers Holdings. The Revolving Credit Facility prohibits Koppers Inc. from making dividend payments to Koppers Holdings unless (1) such dividend payments are permitted by the indenture governing Koppers Inc.'s 2025 Notes, (2) no event of default or potential default has occurred or is continuing under our Revolving Credit Facility, and (3) we are in pro forma compliance with our fixed charge coverage ratio covenant after giving effect to such dividend. The indenture governing the 2025 Notes restrict Koppers Inc.'s ability to finance our payment of dividends if (1) a default has occurred or would result from such financing, (2) Koppers Inc., or a restricted subsidiary of Koppers Inc. which is not a guarantor under the applicable indenture, is not able to incur additional indebtedness (as defined in the applicable indenture), and (3) the sum of all restricted payments (as defined in the applicable indenture) have exceeded the permitted amount (which we refer to as the "basket") at such point in time.

The basket is governed by a formula based on the sum of a beginning amount, plus or minus a percentage of Koppers Inc.'s consolidated net income (as defined in the applicable indenture), plus the net proceeds of Koppers Inc.'s qualified stock issuance or conversions of debt to qualified stock, plus the net proceeds from the sale of or a reduction in an investment (as defined in the applicable indenture) or the value of the assets of an unrestricted subsidiary which is designated a restricted subsidiary. At June 30, 2017, the basket totaled $147.8 million. Notwithstanding such restrictions, the indenture governing the 2025 Notes permits an additional aggregate amount of $0.30 per share each fiscal quarter to finance dividends on the capital stock of Koppers Holdings, whether or not there is any basket

availability, provided that at the time of such payment, no default in the indenture has occurred or would result from financing the dividends.

In addition, certain required coverage ratios in Koppers Inc.'s Revolving Credit Facility may restrict the ability of Koppers Inc. to pay dividends. Koppers Holdings suspended its dividend in February 2015 and does not expect to declare any dividends for the foreseeable future.

Liquidity

Borrowings under the Revolving Credit Facility are secured by a first priority lien on substantially all of the assets of Koppers Inc., Koppers Holdings and their material domestic subsidiaries. The Revolving Credit Facility contains certain covenants for Koppers Inc. and its restricted subsidiaries that limit capital expenditures, additional indebtedness, liens, dividends and investments or acquisitions. In addition, such covenants give rise to events of default upon the failure by Koppers Inc. and its restricted subsidiaries to meet certain financial ratios.

As of June 30, 2017, we had $187.3 million of unused revolving credit availability for working capital purposes after restrictions by various debt covenants and certain letter of credit commitments. As of June 30, 2017, $44.6 million of commitments were utilized by outstanding letters of credit.

The following table summarizes our estimated liquidity as of June 30, 2017 (dollars in millions):

| | |
|---|---|
| Cash and cash equivalents[(1)] | $40.0 |
| Amount available under Revolving Credit Facility | 187.3 |
| Total estimated liquidity | $227.3 |

(1) Cash includes approximately $40.0 million held by foreign subsidiaries, which if repatriated to the United States, would not incur a material cash tax cost.

Our estimated liquidity was $181.5 million at December 31, 2016.

Our need for cash in the next twelve months relates primarily to contractual obligations which include debt service, purchase commitments and operating leases, as well as working capital, capital maintenance programs and the funding of plant consolidation and rationalizations. We may also use cash to pursue potential strategic acquisitions or voluntary pension plan contributions. Capital expenditures in 2017, excluding acquisitions, if any, are expected to total approximately $70 million to $75 million and are expected to be funded by cash from operations.

Debt Covenants

The covenants that affect availability of the Revolving Credit Facility and which may restrict the ability of Koppers Inc. to pay dividends include the following financial ratios:

- The fixed charge coverage ratio, calculated as of the end of each fiscal quarter for the four fiscal quarters then ended, is not permitted to be less than 1.10. The fixed charge coverage ratio at June 30, 2017 was 1.90.
- The secured leverage ratio, calculated as of the end of each fiscal quarter for the four fiscal quarters then ended, is not permitted to exceed 2.75. The leverage ratio at June 30, 2017 was 1.07.

We are currently in compliance with all covenants governing the Revolving Credit Facility. Our continued ability to meet those financial ratios can be affected by events beyond our control, however, we currently expect that our net cash flows from operating activities and funds available from our Revolving Credit Facility will be sufficient to provide for our working capital needs and capital spending requirements over the next twelve months.

Legal Matters

The information set forth in Note 18 to the Condensed Consolidated Financial Statements of Koppers Holdings Inc. included in Item 1 of this Part I is incorporated herein by reference.

Recently Issued Accounting Guidance

The information set forth in Note 2 to the Condensed Consolidated Financial Statements of Koppers Holdings Inc. included in Item 1 Part I is incorporated herein by reference.

Critical Accounting Policies

There have been no material changes to the Company’s critical accounting policies as disclosed in the Company’s Annual Report on Form 10-K for the year ended December 31, 2016.

Environmental and Other Matters

The information set forth in Note 18 to the Condensed Consolidated Financial Statements of Koppers Holdings Inc. included in Item 1 of Part I is incorporated herein by reference.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

There are no material changes to the disclosure on this matter made in the Company's Annual Report on Form 10-K for the year ended December 31, 2016.

ITEM 4. CONTROLS AND PROCEDURES

The Company's management, with the participation of the Chief Executive Officer and Chief Financial Officer, have evaluated the effectiveness of the Company's disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934 as of the end of the period covered by this report. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that these controls and procedures were effective as of the end of the period covered by this report. There was no change in the Company's internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Exchange Act) that occurred during the quarter ended June 30, 2017 that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

PART II—OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

The information set forth in Note 18 to the Condensed Consolidated Financial Statements of Koppers Holdings Inc. included in Item 1 of Part I of this report is incorporated herein by reference.

ITEM 1A. RISK FACTORS

There have been no material changes to the Risk Factors previously disclosed in Item 1A of the Company's Annual Report on Form 10-K for the year ended December 31, 2016.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

The following table sets forth information regarding Koppers Holdings' repurchases of shares of its common stock during the three months ended June 30, 2017:

| Period | Total Number of Common Shares Purchased [1] | Average Price paid per Common Share | Total Number of Common Shares Purchased as Part of Publicly announced Plans or Programs | Approximate Dollar Value of Common Shares that May Yet be Purchased Under the Plans or Programs (Dollars in Millions) |
|---|---|---|---|---|
| April 1 – April 30 | 0 | $ 0.00 | 0 | $ 0.0 |
| May 1 – May 31 | 100,000 | $ 38.58 | 100,000 | $ 48.9 |
| June 1 – June 30 | 0 | $ 0.00 | 0 | $ 0.0 |

(1) On November 2, 2011, the board of directors approved a common stock repurchase program to allow for the repurchase of up to $75.0 million of common stock from time to time on the open market or in privately negotiated transactions. This column discloses the number of shares purchased on the open market pursuant to such program during the indicated time periods.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

Not applicable.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

Effective August 2, 2017, the Board of Directors of Koppers Holdings approved the amendment and restatement of the Amended and Restated Bylaws of Koppers Holdings (the "Second Amended and Restated Bylaws"). The changes

are intended to address what the Company believes are current best practices in corporate governance.

As revised, Article III of the Second Amended and Restated Bylaws modernizes the manner by which meetings of shareholders can be held. Consistent with other comparable public companies, Article III provides that the Board of Directors may decide to hold a meeting of shareholders by means of electronic technology rather than at a geographic location. Any meeting of shareholders held by means of Internet or other electronic communications technology will be organized and conducted in a manner and to the extent consistent with the Pennsylvania Business Corporation Law.

Article III of the Second Amended and Restated Bylaws also modernizes, in a manner consistent with other comparable public companies, the procedures by which shareholders may propose candidates to stand for election as a director of the Company. Article III specifies the procedures shareholders must follow in order to propose candidates, including requirements as to the form of notice to be delivered to the Company, the information required regarding each candidate and proposing shareholder or shareholders, the proposing shareholder or shareholders' compliance with state and federal laws, and the information and certifications that must be provided by the candidate in order for the candidate to be eligible for nomination and election. Article III requires shareholders to provide the nomination notice and other materials relating to the nomination (i) in the case of an annual meeting that is called for a date that is within 30 days before or 30 days after the anniversary date of the immediately preceding annual meeting of shareholders, not less than 120 days nor more than 150 days prior to such anniversary date and (ii) in the case of an annual meeting called for a date that is not within 30 days before or 30 days after the anniversary date of the immediately preceding annual meeting, not later than the close of business on the tenth day following the day on which notice of the date of the meeting was mailed or public disclosure of the date of the meeting was made, whichever occurs first.

Article III of the Second Amended and Restated Bylaws also modernizes, in a manner consistent with other comparable public companies, the procedures by which shareholders may propose business to be brought before an annual meeting. Article III specifies the procedures shareholders must follow in order to propose business, including requirements as to the form of notice to be delivered to the Company. Article III requires shareholders to provide shareholder business notice and

other materials relating to the proposal of business (i) in the case of an annual meeting that is called for a date that is within 30 days before or 30 days after the anniversary date of the immediately preceding annual meeting of shareholders, not less than 120 days nor more than 150 days prior to such anniversary date, and (ii) in the case of an annual meeting that is called for a date that is not within 30 days before or 30 days after the anniversary date of the immediately preceding annual meeting, not later than the close of business on the tenth day following the day on which notice of the date of the meeting was mailed or public disclosure of the date of the meeting was made, whichever occurs first.

Article VII of the Second Amended and Restated Bylaws updates the scope of indemnification afforded to the Company's directors and officers and clarifies the basis for contribution for the benefit of indemnified representatives of the Company. Article VII creates a presumption that a director or officer of the Company who has served or serves as a director, officer, employee, agent, fiduciary, or trustee of any direct or indirect, wholly or partially owned, subsidiary entity of the Company, or of an employee benefit plan for the benefit of employees of the Company or of any such subsidiary, is acting in that capacity at the request of the Company.

The Second Amended and Restated Bylaws also include a number of administrative, technical, and conforming changes. The foregoing summary is qualified in its entirety by reference to the full text of the Second Amended and Restated Bylaws, filed as Exhibit 3.2 to this report and incorporated by reference herein.

ITEM 6. EXHIBITS

| | |
|---|---|
| 3.2* | Second Amended and Restated Bylaws |
| 12.1* | Computation of ratio of earnings to fixed charges |
| 31.1* | Certification of Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. |
| 31.2* | Certification of Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. |
| 32.1* | Certification of Chief Executive Officer and Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. |
| 101.INS* | XBRL Instance Document |
| 101.SCH* | XBRL Taxonomy Extension Schema Document |
| 101.CAL* | XBRL Taxonomy Extension Calculation Linkbase Document |
| 101.DEF* | XBRL Taxonomy Extension Definition Linkbase Document |
| 101.LAB* | XBRL Taxonomy Extension Label Linkbase Document |
| 101.PRE* | XBRL Taxonomy Extension Presentation Linkbase Document |

*Filed herewith.

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.

KOPPERS HOLDINGS INC.

(REGISTRANT)

Date: August 3, 2017 By: /s/ MICHAEL J. ZUGAY
Michael J. Zugay

Chief Financial Officer
(Principal Financial Officer,

Principal Accounting Officer and Duly Authorized Officer)