

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
(State of incorporation)

20-1878963
(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

	<i>Three Months Ended June 30,</i>		<i>Six Months Ended June 30,</i>	
	<i>2017</i>	<i>2016</i>	<i>2017</i>	<i>2016</i>
<i>(Dollars in millions, except per share amounts)</i>	<i>(Unaudited)</i>	<i>(Unaudited)</i>	<i>(Unaudited)</i>	<i>(Unaudited)</i>
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

	June 30, 2017	December 31, 2016
<i>(Dollars in millions, except per share amounts)</i>	<i>(Unaudited)</i>	
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

	Six Months Ended June 30,	
	2017	2016
(Dollars in millions)	(Unaudited)	(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.

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:

	Severance and employee benefits	Environmental remediation	Site demolition	Other	Total
<i>(Dollars in millions)</i>					
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:

<i>(Dollars in millions)</i>	<i>Total Koppers Shareholders' Equity</i>	<i>Noncontrolling Interests</i>	<i>Total Equity</i>
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

<i>(Dollars in millions)</i>	<i>Total Koppers Shareholders' Equity (Deficit)</i>	<i>Noncontrolling Interests</i>	<i>Total Equity (Deficit)</i>
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:

	<i>Three Months Ended June 30,</i>		<i>Six Months Ended June 30,</i>	
<i>(Dollars in millions, except share amounts, in thousands, and per share amounts)</i>	<i>2017</i>	<i>2016</i>	<i>2017</i>	<i>2016</i>
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:

Performance Period	Minimum Shares	Target Shares	Maximum 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,	
	2017	2016	2017	2016
(Dollars in millions)				
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:

	<i>Three Months Ended June 30,</i>		<i>Six Months Ended June 30,</i>	
	<i>2017</i>	<i>2016</i>	<i>2017</i>	<i>2016</i>
<i>(Dollars in millions)</i>				
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:

		June 30, 2017	December 31, 2016
(Dollars in millions)			
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:

		June 30, 2017		December 31, 2016
<i>(Dollars in millions)</i>				
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:

		June 30, 2017		December 31, 2016
<i>(Dollars in millions)</i>				
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,	
	2017	2016	2017	2016
(Dollars in millions)				
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:

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

		June 30, 2017		December 31, 2016
(Dollars in millions)				
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:

		June 30, 2017		December 31, 2016
(Dollars in millions)				
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, 2017	December 31, 2016	June 30, 2017	December 31, 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:

	June 30, 2017	December 31, 2016
(Dollars in millions)		
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,	
	2017	2016	2017	2016
(Dollars in millions)				
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, 2017	December 31, 2016
(In millions)		
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:

	<i>Period ended</i>	
	<i>June 30, 2017</i>	<i>December 31, 2016</i>
<i>(Dollars in millions)</i>		
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 Subsidiaries	Non-Guarantor Subsidiaries	Consolidating Adjustments	Consolidated
<i>(Dollars in millions)</i>						
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

	<i>Parent</i>	<i>Koppers Inc.</i>	<i>Domestic Guarantor Subsidiaries</i>	<i>Non-Guarantor Subsidiaries</i>	<i>Consolidating Adjustments</i>	<i>Consolidated</i>
<i>(Dollars in millions)</i>						
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

	<i>Parent</i>	<i>Koppers Inc.</i>	<i>Domestic Guarantor Subsidiaries</i>	<i>Non-Guarantor Subsidiaries</i>	<i>Consolidating Adjustments</i>	<i>Consolidated</i>
<i>(Dollars in millions)</i>						
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

	<i>Parent</i>	<i>Koppers Inc.</i>	<i>Domestic Guarantor Subsidiaries</i>	<i>Non-Guarantor Subsidiaries</i>	<i>Consolidating Adjustments</i>	<i>Consolidated</i>
<i>(Dollars in millions)</i>						
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

	Parent	Koppers Inc.	Domestic Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Consolidating Adjustments	Consolidated
(Dollars in millions)						
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

	Parent		Koppers Inc.		Domestic Guarantor Subsidiaries		Non-Guarantor Subsidiaries		Consolidating Adjustments		Consolidated	
(Dollars in millions)												
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

	Parent		Koppers Inc.		Domestic Guarantor Subsidiaries		Non-Guarantor Subsidiaries		Consolidating Adjustments		Consolidated	
(Dollars in millions)												
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 equivalents		0.0		0.0		0.0		19.2		0.0		19.2
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

	Parent		Koppers Inc.		Domestic Guarantor Subsidiaries		Non-Guarantor Subsidiaries		Consolidating Adjustments		Consolidated	
(Dollars in millions)												
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," "intends," "likely," or 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:

	Three Months Ended June 30,		
	2017	2016	Net Change
(Dollars in millions)			
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:

	Three Months Ended June 30,		
	2017	2016	% Change
(Dollars in millions)			
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.

Date: August 3, 2017

KOPPERS HOLDINGS INC.
(REGISTRANT)

By: /s/ MICHAEL J. ZUGAY

Michael J. Zugay
Chief Financial Officer
(Principal Financial Officer,
Principal Accounting Officer and Duly Authorized Officer)

SECOND AMENDED AND RESTATED BYLAWS

OF

Koppers Holdings Inc.
(a Pennsylvania Corporation)
August 2, 2017

ARTICLE I

Offices and Fiscal Year

Section 1.01. **Registered Office Provider.** The name of the registered office provider of the corporation and the county of venue is Corporation Service Company, Allegheny County, until otherwise established by an amendment of the articles of incorporation (the “articles”) or by the Board of Directors and a record of such change is filed with the Pennsylvania Department of State in the manner provided by law.

Section 1.02. **Other Offices.** The corporation may also have offices at such places within or without the Commonwealth of Pennsylvania as the Board of Directors may from time to time appoint or the business of the corporation may require.

Section 1.03. **Fiscal Year.** The fiscal year of the corporation shall begin on the 1st day of January in each year.

ARTICLE II

Notice—Waivers—Meetings Generally

Section 2.01. **Manner of Giving Notice.**

(a) **General Rule.** Whenever written notice is required to be given to any person under the provisions of the Pennsylvania Business Corporation Law of 1988 (as amended from time to time, the “Business Corporation Law”) or by the articles or these bylaws, it may be given to the person: (1) by personal delivery, (2) by facsimile transmission, e-mail or other electronic communication to his or her facsimile number or address for e-mail or other electronic communication supplied by him or her to the corporation for the purpose of notice, or (3) by sending a copy thereof by first class or express mail, postage prepaid, or by telegram (with messenger service specified) or courier service, charges prepaid, to the address of the person appearing on the books of the corporation or, in the case of notice to be given to a director, to the address supplied by the director to the corporation for the purpose of notice. If the notice is sent by mail, telegram or courier service, it shall be deemed to have been given to the person entitled thereto when deposited in the United States mail or with a telegraph office or courier service for delivery to that person. Notice given by facsimile transmission, e-mail or other electronic communication shall be deemed to have been given to the person entitled thereto when sent. A

notice of meeting shall specify the place, day and hour of the meeting and any other information required by any other provision of the Business Corporation Law, the articles or these bylaws.

Section 2.02. Notice of Meetings of Board of Directors. Notice of a regular meeting of the Board of Directors need not be given, except as required by law. Notice of every special meeting of the Board of Directors shall be given to each director at least 24 hours (in the case of notice by telephone, facsimile transmission, e-mail or other electronic communication) or 48 hours (in the case of notice by telegraph, courier service or express mail) or five days (in the case of notice by first class mail) before the time at which the meeting is to be held. Every such notice shall state the time and place of the meeting. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the Board of Directors need be specified in a notice of a meeting.

Section 2.03. Notice of Meetings of Shareholders.

(a) General Rule. Written notice specifying the place, date and time of every meeting of the shareholders shall be given by, or at the direction of, the Secretary or other authorized person to each shareholder of record entitled to vote at the meeting at least (1) ten days prior to the day named for a meeting called to consider a fundamental change under Chapter 19 of the Business Corporation Law or (2) five days prior to the day named for the meeting in any other case. If the Secretary neglects or refuses to give notice of a meeting, the person or persons calling the meeting may do so. In the case of a special meeting of shareholders, the notice shall specify the general nature of the business to be transacted.

(b) Notice of Action by Shareholders on Bylaws. In the case of a meeting of shareholders that has as one of its purposes action on the bylaws, written notice shall be given to each shareholder that the purpose, or one of the purposes, of the meeting is to consider the adoption, amendment or repeal of the bylaws. There shall be included in, or enclosed with, the notice a copy of the proposed amendment or a summary of the changes to be affected thereby.

(c) Adjourned or Recessed Shareholder Meetings. When a meeting of shareholders is adjourned or recessed, it shall not be necessary to give any notice of the adjourned or recessed meeting or of the business to be transacted at an adjourned or recessed meeting, other than by announcement at the meeting at which the adjournment or recess is taken, unless the Board of Directors fixes a new record date for the adjourned or recessed meeting in which event notice shall be given in accordance with this Section 2.03.

Section 2.04. Waiver of Notice.

(a) Written Waiver. Whenever any written notice is required to be given under the provisions of the Business Corporation Law, the articles or these bylaws, a waiver thereof in writing, signed by the person or persons entitled to the notice, whether before or after the time stated therein, shall be deemed equivalent to the giving of the notice. Neither the business to be transacted at, nor the purpose of, a meeting need be specified in the waiver of notice of the meeting.

(b) Waiver by Attendance. Attendance of a person at any meeting shall constitute a waiver of notice of the meeting except where a person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting was not lawfully called or convened.

Section 2.05. Modification of Proposal Contained in Notice. Whenever the language of a proposed resolution is included in a written notice of a meeting required to be given under the provisions of the Business Corporation Law or the articles or these bylaws, the meeting considering the resolution may without further notice adopt it with such clarifying or other amendments as do not enlarge its original purpose.

Section 2.06. Exception to Requirement of Notice-Shareholders Without Forwarding Addresses. Notice or other communications need not be sent to any shareholder with whom the corporation has been unable to communicate for more than 24 consecutive months because communications to the shareholder are returned unclaimed or the shareholder has otherwise failed to provide the corporation with a current address. Whenever the shareholder provides the corporation with a current address, the corporation shall commence sending notices and other communications to the shareholder in the same manner as to other shareholders.

Section 2.07. Use of Conference Telephone and Similar Equipment. Any director may participate in any meeting of the Board of Directors, and the Board of Directors may provide by resolution with respect to a specific meeting or with respect to a class of meetings that one or more persons may participate in a meeting of the shareholders of the corporation, by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other. Participation in a meeting pursuant to this Section 2.07 shall constitute presence in person at the meeting.

ARTICLE III

Shareholders

Section 3.01. Place of Meeting. All meetings of the shareholders of the corporation shall be held at the registered office of the corporation unless another place is designated by the Board of Directors in the notice of a meeting or the Board of Directors determines to hold a meeting by means of electronic technology (as provided in the next sentence) rather than at a fixed geographic location. The Board of Directors may determine that a meeting of shareholders be held solely by means of Internet or other electronic communications technology in the manner and to the extent provided by the Business Corporation Law.

Section 3.02. Annual Meeting. The Board of Directors may fix and designate the date and time of the annual meeting of the shareholders, but if no such date and time is fixed and designated by the Board of Directors, the meeting for any calendar year shall be held on the third Wednesday of April in such year, if not a legal holiday under the laws of the Commonwealth of Pennsylvania, and, if a legal holiday, then on the next succeeding business day, not a Saturday, at 10:00 a.m. The business at an annual meeting of shareholders shall include (a) a review of the business of the preceding year, (b) the election of directors to succeed those whose terms shall expire, and (c) such other business as may properly be brought before the meeting as provided in

this Article III. The proposal of business to be considered by the shareholders at an annual meeting of shareholders shall be made only (w) pursuant to the corporation's notice of meeting, (x) by the chairman of the meeting, (y) by or at the direction of the Board of Directors, or (z) by one or more shareholders in accordance with applicable rules of the Securities and Exchange Commission and the provisions of this Article III.

Section 3.03. Special Meetings. Special meetings of the shareholders may be called at any time by resolution of the Board of Directors or the chairman of the Board of Directors, which may fix the date, time and place of the meeting. If the Board of Directors or chairman does not fix the date, time or place of the meeting, it shall be the duty of the Secretary to do so. A date fixed by the Secretary shall not be more than 60 days after the date of the adoption of the resolution of the Board of Directors calling the special meeting.

Section 3.04. Nominations of Directors.

(a) Only persons who are nominated in accordance with the procedures set forth in this Section 3.04 shall be eligible to serve as directors of the corporation. Nominations of a person for election to the Board of Directors may be made at a meeting of shareholders (1) by or at the direction of the Board of Directors, or (2) by any shareholder of the corporation who is a shareholder of record at the time of giving notice provided for in this Section 3.04, who shall be entitled to vote for the election of the Board of Directors at the meeting of shareholders, and who complied with the substantive and procedural requirements set forth in this Section 3.04.

(b) Nominations by shareholders shall be made pursuant to a timely notice in writing to the Secretary of the corporation. To be timely, a shareholder's notice given pursuant to this Section 3.04 must be received at the principal executive offices of the corporation (1) 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, (2) 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, and (3) in the case of a special meeting at which directors are to be elected, no later than the close of business on the tenth day following the earlier of the day on which notice of the date of the special meeting was mailed or the first public disclosure was made. The first public disclosure of the date of any meeting of shareholders shall be when public disclosure of such meeting date is first made in a filing by the corporation with the Securities and Exchange Commission, in any notice given to the New York Stock Exchange, or in a news release reported by any national news service. In no event shall the public announcement of an adjournment or recess of a meeting commence a new time period for the giving of a shareholder's notice as described above.

(c) The notice required by this Section 3.04 shall set forth

(1) As to each nominee:

- (A) the name, age, business address, and residence address of each proposed nominee,
- (B) the principal occupation of each proposed nominee,
- (C) a representation that the notifying shareholder intends to appear in person or by proxy at the meeting to nominate the person or persons specified in the notice,
- (D) if known, the class and total number of shares of the corporation that are beneficially owned by the proposed nominee,
- (E) the total number of shares of the corporation that will be voted by the notifying shareholder for each proposed nominee,
- (F) a description of all arrangements or understandings between the notifying shareholder and each nominee and any other person or persons (naming such person or persons) pursuant to which the nomination or nominations are to be made by the notifying shareholder,
- (G) as to each proposed nominee, all information relating to such person that is required to be disclosed in solicitations of proxies for election of directors or is otherwise required, in each case, pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), applicable listing standards, and other applicable law (including such person’s written consent to being named in the proxy statement as a nominee and to serving as a director, if elected, and including information as to the purpose of such nomination), and
- (H) a written representation and agreement executed by each nominee (in a form provided by the corporation), delivered to the Secretary of the corporation at the principal executive offices of the corporation, from such proposed nominee
- (i) disclosing and, if elected as director during his or her term of office, providing such director will disclose, (1) any agreement, arrangement, or understanding with, and any commitment or assurance to, any person or entity as to how much such proposed nominee, if elected as a director of the corporation, will act or vote on any issue or question or (2) any other commitments that could limit or interfere with such proposed nominee’s ability to comply, if elected as a director of the corporation, with such proposed nominee’s fiduciary duties under applicable law,

(ii) disclosing, and providing such director will disclose becoming a party to, any agreement, arrangement, or understanding with any person or entity other than the corporation with respect to any direct or indirect compensation, reimbursement, or indemnification for candidacy or services as a director, and

(iii) if elected as a director of the corporation, providing such director will comply with this Section 3.04(c) and all applicable corporate governance, conflict of interest, confidentiality, stock ownership, trading, and other policies and guidelines of the corporation applicable to directors; and

(2) As to the shareholder giving the notice, each beneficial owner, if any, on whose behalf the nomination is made, and any other Shareholder Associated Person (as defined below), if any, of the shareholder or beneficial owner on whose behalf the nomination is made:

(A) the name and address of such shareholder, as they appear on the corporation's books, and of each such beneficial owner and each such Shareholder Associated Person,

(B) the class or series and number of shares of the corporation which are, directly or indirectly, beneficially owned, and the class or series and number of shares held of record, by such shareholder and each such beneficial owner and each such Shareholder Associated Person, as well as any other ownership interests in the corporation held by such shareholder and each such beneficial owner and Shareholder Associated Person, including derivatives, hedged positions, and any other economic or voting interests in the corporation, including, but not limited to:

(i) any option, warrant, convertible security, stock appreciation right, or similar right with an exercise or conversion privilege or a settlement payment or mechanism at a price related to any class or series of shares of the corporation or with a value derived in whole or in part from the value of any class or series of shares of the corporation, any derivative or synthetic arrangement having the characteristics of a long position in any class or series of shares of the corporation, or any contract, derivative, swap or other transaction or series of transactions designed to produce economic benefits and risks that correspond substantially to the ownership of any class or series of shares of the corporation, including due to the fact that the value of such contract, derivative, swap or other transaction

or series of transactions is determined by reference to the price, value or volatility of any class or series of shares of the corporation, whether or not such instrument or right shall be subject to settlement in the underlying class or series of capital stock of the corporation through the delivery of cash or other property, or otherwise, and without regard to whether the shareholder of record, the beneficial owner, if any, or any affiliates or associates or others acting in concert therewith, may have entered into transactions that hedge or mitigate the economic effect of such instrument, contract or right (a “Derivative Instrument”) directly or indirectly owned beneficially by such shareholder or each such beneficial owner or Shareholder Associated Person, and any other direct or indirect opportunity to profit or share in any profit derived from any increase or decrease in the value of shares of the corporation,

(ii) any proxy, contract, arrangement, understanding, or relationship pursuant to which such shareholder or each such beneficial owner or Shareholder Associated Person has a right to vote, direct the voting of, or cause the voting of any shares or any security of the corporation,

(iii) any agreement, arrangement, understanding, relationship or otherwise, including any repurchase or similar so-called “stock borrowing” agreement or arrangement, engaged in, directly or indirectly, by such shareholder, the purpose or effect of which is to mitigate loss to, reduce the economic risk (of ownership or otherwise) of any class or series of the shares of the corporation by, manage the risk of share price changes for, or increase or decrease the voting power of, such shareholder, beneficial owner, or Shareholder Associated Person with respect to any class or series of the shares of the corporation, or which provides, directly or indirectly, the opportunity to profit or share in any profit derived from any decrease in the price or value of any class or series of the shares of the corporation (“Short Interests”),

(iv) any rights to dividends on the shares of the corporation owned beneficially by such shareholder or each such beneficial owner or Shareholder Associated Person that are separated or separable from the underlying shares of the corporation,

(v) any proportionate interest in shares of the corporation or Derivative Instruments or Short Interests held, directly or indirectly, by a general or limited partnership in which such shareholder or each such beneficial owner or Shareholder Associated Person is a general partner or, directly or indirectly, beneficially owns an interest in a general partner of such general or limited partnership,

(vi) any performance-related fees (other than an asset-based fee) that such shareholder or each such beneficial owner or Shareholder Associated Person is entitled to, based on any increase or decrease in the value of shares of the corporation or Derivative Instruments or Short Interests, if any, as of the date of such notice and any updates or supplements, including without limitation, any such interests held by members of the immediate family of such shareholder or each such beneficial owner or Shareholder Associated Person sharing the same household, and

(vii) any significant equity interests or any Derivative Instruments or Short Interests in any principal competitor of the corporation (or of any of the corporation's affiliates) held by such shareholder or each such beneficial owner or Shareholder Associated Person, and any direct or indirect interest of such shareholder, beneficial owner, or Shareholder Associated Person in any contract with the corporation, any affiliate of the corporation, or any principal competitor of the corporation or of any of the corporation's affiliates (including, in any such case, any employment agreement, collective bargaining agreement, or consulting agreement),

(C) a representation whether the shareholder, beneficial owner, or other Shareholder Associated Person, if any, intends or is part of a group which intends to deliver a proxy statement or form of proxy to holders of at least the percentage of the corporation's outstanding capital stock required to elect the nominee, or otherwise to solicit proxies from shareholders in support of such nomination,

(D) whether and the extent to which any other hedging or other transaction or series of transactions has been entered into by or on behalf of, or any other agreement, arrangement, or understanding (including any borrowing or lending of shares) has been made, the effect or intent of which is to mitigate loss or manage risk, or to increase or decrease the voting power of, such shareholder,

beneficial owner, or other any such Shareholder Associated Person with respect to any share of stock of the corporation, and

(E) any other information relating to each other party that would be required to be disclosed in a proxy statement or other filings required to be made in connection with solicitations of proxies for, as applicable, the proposal or for the elections of directors in a contested election pursuant to Section 14 of the Exchange Act (whether or not such party intends to deliver a proxy statement or conduct its own proxy solicitation).

(F) A “Shareholder Associated Person” of any shareholder or beneficial owner includes (X) any person or entity controlling, directly or indirectly, or acting in concert with, such shareholder or beneficial owner, (Y) any beneficial owner of shares of stock of the corporation owned of record or beneficially by such shareholder or beneficial owner, and (Z) any person or entity controlling, controlled by, or under common control with such Shareholder Associated Person.

(G) For purposes of applying Section 3.04(c)(2)(B)(vii), the phrase “equity interest in any principal competitor of the corporation” shall be substituted for the phrase “class or series of shares of the corporation” in the definitions of “Derivative Instrument” and “Short Interest.”

(d) The corporation may require any nominee proposed by a shareholder to (1) submit to background checks (including through a third party investigation firm) and an in-person interview and (2) furnish such other information as may reasonably be required by the corporation to determine the eligibility of such proposed nominee to serve as an independent director of the corporation or that could be material to a reasonable shareholder’s understanding of the independence, or lack thereof, of such nominee.

(e) The notice required by this Section 3.04 shall be updated and supplemented by the shareholder giving notice and any beneficial owner or Shareholder Associated Person, if any, so that the information provided or required to be provided in such notice shall be true and correct (1) as of the record date for the meeting and (2) as of the date that is ten business days prior to the meeting or any adjournment or recess thereof. Such update and supplement shall be delivered to, or mailed and received by, the Secretary of the corporation at the principal executive offices of the corporation not later than five business after the record date for the meeting (in the case of the update and supplement required to be made as of such record date), and not later than five business days prior to the date for the meeting or, if practicable, any adjournment or recess thereof (and, if not practicable, on the first practicable date prior to the date to which the meeting has been adjourned or recessed)(in the case of the update and supplement required to be made as of ten business days prior to the meeting or any adjournment or recess thereof).

(f) This Section 3.04 shall be the exclusive means for a shareholder to make director nominations. The chairman of the meeting of shareholders may refuse to permit any nomination for the election of a director to be made at any meeting by a shareholder who has not complied with all of the foregoing procedures in this Section 3.04. Any such decision by the chairman of the meeting shall be final, binding, and conclusive upon all parties in interest. Notwithstanding the foregoing provisions of this Section 3.04, a shareholder shall also comply with all applicable requirements of the Exchange Act and the rules and regulations thereunder are not intended to, and shall not limit, the requirements applicable to nominations by a shareholder pursuant to this Section 3.04. Subject to complying with the substantive and procedural requirements of this Section 3.04, nothing in this Section 3.04 shall be deemed to affect any rights of shareholders to request inclusion of proposals in the corporation's proxy statement pursuant to Rule 14a-8, or any successor rule, under the Exchange Act.

Section 3.05. Notice of Shareholder Business.

(a) At an annual or special meeting of the shareholders, only such business other than nominations (which nominations are separately governed by Section 3.04 of this Article III) shall be conducted as shall have been brought before the meeting (1) pursuant to the corporation's notice of meeting, (2) by the chairman of the meeting, (3) by or at the direction of the Board of Directors, or (4) as to an annual meeting, by a shareholder of the corporation who is a shareholder of record at the time of giving the notice provided for in this Section 3.05, who shall be entitled to vote at such meeting and who complies with the substantive and procedural requirements set forth in this Section 3.05. Clause (4) shall be the exclusive means for a shareholder to submit other business before an annual meeting of shareholders.

(b) For business to be properly brought before an annual meeting by a shareholder pursuant to clause (4) of Section 3.05(a), the shareholder must have given timely notice thereof in writing to the Secretary of the corporation, and any such proposed business must constitute a proper matter for shareholder action. To be timely, a shareholder's notice given pursuant to this Section 3.05 must be received at the principal executive offices of the corporation (1) 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 (2) 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,

(c) A shareholder's notice to the Secretary shall set forth as to each matter the shareholder proposes to bring before the meeting (1) a brief description of the business desired to be brought before the meeting and the reasons for conducting such business at the meeting, and if a specific action is to be proposed, the text of the resolution or resolutions which the shareholder proposes that the corporation adopt, (2) any material interest of such shareholder of record and the Shareholder Associated Person, if any, on whose behalf the proposal is made in such business, (3) a representation that the shareholder intends to appear in person or by proxy at the meeting to bring before the meeting the business specified in the notice, (4) the total number

of shares of the corporation that will be voted by the notifying shareholder for such proposal, and (5) as it relates to such shareholder and any Shareholder Associated Person and, as applicable to such proposal, the information required by Section 3.04(c)(2). For purposes of applying this Section 3.05(c), the phrase “adopt the proposal” shall be used in place of the phrase “elect the nominee” in Section 3.04(c)(2)(C), and the word “proposal” shall be used in place of the word “nomination” in Section 3.04(c)(2).

(d) The notice required by this Section 3.05 shall be updated and supplemented by the shareholder giving notice and any Shareholder Associated Person, if any, so that the information provided or required to be provided in such notice shall be true and correct (1) as of the record date for the meeting and (2) as of the date that is ten business days prior to the meeting or any adjournment or recess thereof. Such update and supplement shall be delivered to, or mailed and received by, the Secretary of the corporation at the principal executive offices of the corporation not later than five business days after the record date for the meeting (in the case of the update and supplement required to be made as of such record date), and not later than five business days prior to the date for the meeting or, if practicable, any adjournment or recess thereof (and, if not practicable, on the first practicable date prior to the date to which the meeting has been adjourned or recessed)(in the case of the update and supplement required to be made as of ten business days prior to the meeting or any adjournment or recess thereof).

(e) Notwithstanding anything in these bylaws to the contrary, except as set forth in Section 3.04, no business shall be conducted at a meeting of shareholders except in accordance with the procedures set forth in this Section 3.05. The chairman of the meeting may refuse to permit any proposal to be made at any meeting by a shareholder who has not complied with all of the foregoing procedures. Any such decision by the chairman of the meeting shall be final, binding, and conclusive upon all parties in interest. Notwithstanding the foregoing provisions of this Section 3.05, a shareholder shall also comply with all applicable requirements of the Exchange Act and the rules and regulations thereunder, applicable listing standards, and other applicable law with respect to the matters set forth in this Section 3.05. Subject to complying with the substantive and procedural requirements of this Section 3.05, nothing in this Section 3.05 shall be deemed to affect any rights of shareholders to request inclusion of proposals in the corporation’s proxy statement pursuant to Rule 14a-8, or any successor rule, under the Exchange Act.

For the purposes of Section 3.04 and Section 3.05 of this Article III, (a) the beneficial ownership of any person or entity shall be determined in accordance with Rule 13d-3, or any successor rule, under the Exchange Act and (b) the term “control” (including the terms “controlling,” “controlled by” and “under common control with”) shall have the meaning ascribed to such term under Rule 12b-2, or any successor rule, under the Exchange Act.

Section 3.06. Quorum and Adjournment or Recess, General Rule. A meeting of shareholders of the corporation duly called shall not be organized for the transaction of business unless a quorum is present. The presence in person or by proxy of shareholders entitled to cast at least a majority of the votes which all shareholders are entitled to cast on the particular matter shall constitute a quorum for the purposes of acting on such matter. The chairman of the meeting (as determined under Section 3.08) shall have the power to adjourn or recess the meeting.

Section 3.07. Action by Shareholders; Election and Resignation of Directors.

(a) Except as otherwise provided in the Business Corporation Law, the articles, or these bylaws, when a quorum is present at a meeting, the vote of shareholders present, in person or by proxy, entitled to cast at least a majority of the votes which all shareholders present and voting (excluding abstentions) are entitled to cast on a particular matter shall decide such matter.

(b) Subject to any rights of the holders of any class or series of stock to elect directors separately, each director shall be elected by a vote of the majority of the votes cast (excluding abstentions) with respect to that director at any meeting for the election of directors at which a quorum is present, in accordance with Section 3.06 of these bylaws; provided, that, if, at the time when the corporation mails its initial proxy statement relating to, or mails notice of, the meeting at which directors will be elected, the sum of (A) the number of prospective nominees identified by one or more shareholders in compliance with Section 3.04 and not theretofore withdrawn and (B) the number of prospective nominees proposed by the Board of Directors exceeds (C) the number of directors to be elected, the directors shall be elected by the vote of a plurality of the votes cast and entitled to vote on the election of directors in person or by proxy at any such meeting (regardless of any subsequent reduction in the number of prospective or actual nominees or increase in the number of directors to be elected). For purposes of this Section 3.07(b), a vote of the majority of the votes cast means that the number of shares voted “for” a director must exceed 50% of the votes cast (excluding abstentions) with respect to that director.

(c) If an incumbent director is running uncontested and is not elected as provided in subsection (b), such director shall tender his or her resignation to the Board of Directors within ten business days following the certification of the election results. The Nominating and Corporate Governance Committee, or such other committee designated by the Board of Directors, will recommend to the Board of Directors whether to accept or reject the resignation, or whether other action should be taken, as determined in accordance with the corporation’s Corporate Governance Guidelines. The Board of Directors will act on the committee’s recommendation and publicly disclose its decision and the rationale behind it within 120 days following the date of the certification of the election results. The director who tenders his or her resignation will not participate in either the committee’s or the Board of Directors’ decision with respect to such resignation.

Section 3.08. Organization and Conduct. At every meeting of the shareholders, the chairman of the Board of Directors, if there be one, or, in the case of vacancy in office or absence of the chairman of the Board of Directors, one of the following persons present in the order stated: the Chief Executive Officer, the President, the vice presidents in their order of rank and seniority, or a person chosen by vote of the shareholders present, shall act as chairman of the meeting. The chairman of the meeting, consistent with any authority, direction, restriction or limitation given to him or her by the Board of Directors, shall have any and all powers and authority necessary to conduct an orderly meeting, preserve order and determine any and all procedural matters, including the proper means of obtaining the floor, who shall have the right to address the meeting, the manner in which shareholders will be recognized to speak, imposing reasonable limits on the amount of time at the meeting taken up in remarks by any one

shareholder or group of shareholders, the number of times a shareholder may address the meeting, and the person to whom questions should be addressed. The chairman shall announce at the meeting when the polls close for each matter voted upon. If no announcement is made, the ability to cast a vote will be deemed to have closed upon the final adjournment of the meeting. After the polls close, no ballots, proxies, or votes, nor any revocations or changes thereto, may be accepted. The Secretary or, in the absence of the Secretary, an Assistant Secretary shall act as Secretary of the meeting.

Section 3.09. Voting Rights of Shareholders. Unless otherwise provided in the articles, every shareholder of the corporation shall be entitled to one vote for every share outstanding in the name of the shareholder on the books of the corporation.

Section 3.10. Voting and Other Action by Proxy.

(a) General Rule.

(1) Every shareholder entitled to vote at a meeting of shareholders may authorize another person to act for the shareholder by proxy.

(2) The presence of, or vote or other action at a meeting of shareholders by a proxy of a shareholder shall constitute the presence of, or vote or action by the shareholder.

(b) Execution and Filing. Every proxy shall be executed in writing by the shareholder or by the duly authorized attorney-in-fact of the shareholder and filed with the Secretary of the corporation. A proxy, unless coupled with an interest, shall be revocable at will, notwithstanding any other agreement or any provision in the proxy to the contrary, but the revocation of a proxy shall not be effective until written notice thereof has been given to the Secretary of the corporation. An unrevoked proxy shall not be valid after three years from the date of its execution unless a longer time is expressly provided therein.

Section 3.11. Voting by Fiduciaries and Pledgees. Shares of the corporation standing in the name of a trustee or other fiduciary and shares held by an assignee for the benefit of creditors or by a receiver may be voted by the trustee, fiduciary, assignee or receiver. A shareholder whose shares are pledged shall be entitled to vote the shares until the shares have been transferred into the name of the pledgee, or a nominee of the pledgee, but nothing in this Section 3.11 shall affect the validity of a proxy given to a pledgee or nominee.

Section 3.12. Voting by Joint Holders of Shares, General Rule. Where shares of the corporation are held jointly or as tenants in common by two or more persons, as fiduciaries or otherwise:

(a) if only one or more of such persons is present in person or by proxy, all of the shares standing in the names of such persons shall be deemed to be represented for the purpose of determining a quorum and the corporation shall accept as the vote of all the shares the vote cast by a joint owner or a majority of them; and

(b) if the persons are equally divided upon whether the shares held by them shall be voted or upon the manner of voting the shares, the voting of the shares shall be divided equally among the persons without prejudice to the rights of the joint owners or the beneficial owners thereof among themselves.

Section 3.13. Voting by Corporations.

(a) Voting by Corporate Shareholders. Any corporation, limited liability company, partnership, trust, or other entity that is a shareholder of this corporation ("Entity Shareholder") may vote at meetings of shareholders of this corporation by any of its officers, managers, trustees, or agents, or by proxy appointed by any officer, manager, trustee, or agent, unless some other person, by resolution of the Board of Directors or similar governing body of the Entity Shareholder or a provision of its articles, bylaws, operating or partnership agreement, or similar charter document, a copy of which resolution or provision certified to be correct by one of its officers has been filed with the Secretary of this corporation, is appointed its general or special proxy in which case that person shall be entitled to vote the shares.

(b) Controlled Shares. Shares of this corporation owned, directly or indirectly, by it and controlled, directly or indirectly, by the Board of Directors of this corporation, as such, shall not be voted at any meeting and shall not be counted in determining the total number of outstanding shares for voting purposes at any given time.

ARTICLE IV

Board of Directors

Section 4.01. Powers; Personal Liability.

(a) General Rule. Unless otherwise provided by statute, all powers vested by law in the corporation shall be exercised by or under the authority of, and the business and affairs of the corporation shall be managed under the direction of, the Board of Directors.

(b) Personal Liability of Directors.

(1) A director shall not be personally liable, as such, for monetary damages (including, without limitation, any judgment, amount paid in settlement, penalty, punitive damages or expense of any nature (including, without limitation, attorneys' fees and disbursements)) for any action taken, or any failure to take any action, unless: (A) the director has breached or failed to perform the duties of his or her office under Subchapter 17B of the Business Corporation Law or any successor provision; and (B) the breach or failure to perform constitutes self-dealing, willful misconduct or recklessness.

(2) The provisions of paragraph (1) shall not apply to the responsibility or liability of a director pursuant to any criminal statute, or the liability of a director for the payment of taxes pursuant to local, State or Federal law.

(c) Notation of Dissent. A director of the corporation who is present at a meeting of the Board of Directors, or of a committee of the Board of Directors, at which action on any corporate matter is taken on which the director is generally competent to act, shall be presumed to have assented to the action taken unless his or her dissent is entered in the minutes of the meeting or unless the director files his or her written dissent to the action with the Secretary of the meeting before the adjournment or recess thereof or transmits the dissent in writing to the Secretary of the corporation immediately after the adjournment or recess of the meeting. The right to dissent shall not apply to a director who voted in favor of the action. Nothing in this Section 4.01 shall bar a director from asserting that minutes of the meeting incorrectly omitted his or her dissent if, promptly upon receipt of a copy of such minutes, the director notifies the Secretary, in writing, of the asserted omission or inaccuracy.

Section 4.02. Selection of Directors. The number, qualifications, manner of election, time and place of meeting, compensation and powers and duties of the directors of the corporation shall be fixed from time to time by or pursuant to these bylaws and the articles. Nominations for the election of directors may be made only by the Board of Directors or a committee appointed by the Board of Directors or by any shareholder entitled to vote for the election of directors; but a nomination may be made by a shareholder only if written notice of such nomination has been given to the Secretary of the corporation in accordance with Section 3.04 hereof.

Section 4.03. Number and Term of Office.

(a) Number. The Board of Directors shall consist of such number of directors, not less than five nor more than 15, as may be determined from time to time by resolution of the Board of Directors.

(b) Term of Office. Each director shall hold office as provided in the articles.

Section 4.04. Place of Meetings. Meetings of the Board of Directors may be held at such place within or without the Commonwealth of Pennsylvania as the Board of Directors may from time to time appoint or as may be designated in the notice of the meeting.

Section 4.05. The Chairman of the Board of Directors. The Board of Directors may elect from among the members of the Board of Directors a chairman of the Board of Directors and a vice chairman of the Board of Directors. The chairman of the Board of Directors shall preside at all meetings of the Board of Directors at which he or she is present and shall call meetings of the Board of Directors and Board of Directors committees when he or she deems them necessary. Unless otherwise precluded from doing so by these bylaws, the chairman of the Board of Directors may be a member of the committees of the Board of Directors. The chairman of the Board of Directors shall act as chairman at all meetings of the shareholders at which he or she is present unless he or she elects that the Chief Executive Officer shall so preside. The chairman of the Board of Directors may also serve as an officer of the corporation. The chairman of the Board of Directors shall perform all duties as may be assigned to him or her by the Board of Directors.

Section 4.06. Organization of Meetings. At every meeting of the Board of Directors, the chairman of the Board of Directors, if there be one, or, in the case of a vacancy in the office or absence of the chairman of the Board of Directors, the vice chairman of the Board of Directors, if there be one, or, if none, one of the directors present in their order of seniority, shall act as chairman of the meeting. The Secretary or, in the absence of the Secretary, an Assistant Secretary shall act as Secretary of the meeting.

Section 4.07. Regular Meetings. Regular meetings of the Board of Directors shall be held at such time and place as shall be designated from time to time by resolution of the Board of Directors.

Section 4.08. Special Meetings. Special meetings of the Board of Directors shall be held whenever called by the chairman or by two or more of the directors.

Section 4.09. Quorum of and Action by Directors.

(a) General Rule. A majority of the directors in office of the corporation shall be necessary to constitute a quorum for the transaction of business and the acts of a majority of the directors present and voting at a meeting at which a quorum is present shall be the acts of the Board of Directors.

(b) Action by Written Consent. Any action required or permitted to be approved at a meeting of the Board of Directors may be approved without a meeting if a consent or consents to the action in record form are signed, before, on or after the effective date of the action, by all of the directors in office on the date the first consent is signed. The consent or consents must be filed with the minutes of the proceedings of the Board of Directors.

Section 4.10. Committees.

(a) Establishment and Powers. The Board of Directors may, by resolution adopted by a majority of the directors in office, establish one or more committees to consist of one or more directors of the corporation. With respect to each committee established by the Board of Directors, the Board of Directors shall, by one or more resolutions adopted by a majority of the directors of the Board of Directors, determine the duties and responsibilities, determine the number of members, appoint the members and the committee chair and fill each vacancy occurring in the membership.

Section 4.11. Compensation. The Board of Directors shall have the authority to fix the compensation of directors for their services as directors and a director may be a salaried officer of the corporation.

Section 4.12. Vacancies. Vacancies in the Board of Directors, including vacancies resulting from an increase in the number of directors, shall be filled by a majority vote of the directors then in office, though less than a quorum, except as otherwise required by the Business Corporation Law.

ARTICLE V

Officers

Section 5.01. Officers Generally.

(a) Number, Qualifications and Designation. The officers of the corporation shall be a President and Chief Executive Officer, one or more Vice Presidents, a Secretary, a Treasurer, and such other officers as may be elected in accordance with the provisions of Section 5.03. Officers may but need not be directors or shareholders of the corporation.

(b) Bonding. The corporation may secure the fidelity of any or all of its officers by bond or otherwise.

(c) Standard of Care. In lieu of the standards of conduct otherwise provided by law, officers of the corporation shall be subject to the same standards of conduct, including standards of care and loyalty and rights of justifiable reliance, as shall at the time be applicable to directors of the corporation. An officer of the corporation shall not be personally liable, as such, to the corporation or its shareholders for monetary damages (including, without limitation, any judgment, amount paid in settlement, penalty, punitive damages or expense of any nature (including, without limitation, attorneys' fees and disbursements)) for any action taken, or any failure to take any action, unless the officer has breached or failed to perform the duties of his or her office under the articles, these bylaws, or the applicable provisions of law and the breach or failure to perform constitutes self-dealing, willful misconduct or recklessness. The provisions of this subsection shall not apply to the responsibility or liability of an officer pursuant to any criminal statute or for the payment of taxes pursuant to local, state or federal law.

Section 5.02. Election, Term of Office and Resignations.

(a) Election and Term of Office. The officers of the corporation, except those elected by delegated authority pursuant to Section 5.03, shall be elected by the Board of Directors, and each such officer shall hold office until a successor has been selected and qualified or until his or her earlier death, resignation or removal.

(b) Resignations. Any officer may resign at any time upon written notice to the corporation. The resignation shall be effective upon receipt thereof by the corporation or at such subsequent time as may be specified in the notice of resignation.

Section 5.03. Subordinate Officers, Committees and Agents. The Board of Directors may from time to time elect such other officers and appoint such committees, employees or other agents as the business of the corporation may require. The Board of Directors may delegate to any officer or committee the power to elect subordinate officers and to retain or appoint employees or other agents, or committees thereof, and to prescribe the authority and duties of such subordinate officers, committees, employees or other agents.

Section 5.04. Removal of Officers and Agents. Any officer or agent of the corporation may be removed by the Board of Directors with or without cause. The removal shall be without

prejudice to the contract rights, if any, of any person so removed. Election or appointment of an officer or agent shall not of itself create contract rights.

Section 5.05. Authority. General Rule. All officers of the corporation, as between themselves and the corporation, shall have such authority and perform such duties in the management of the corporation as may be provided by or pursuant to resolutions or orders of the Board of Directors or, in the absence of controlling provisions in the resolutions or orders of the Board of Directors, as may be determined by or pursuant to these bylaws.

Section 5.06. The President and Chief Executive Officer. The President shall have such powers and duties as may, from time to time, be prescribed by the Board of Directors. Unless the Board of Directors shall otherwise direct, the President shall be the Chief Executive Officer of the corporation.

The Chief Executive Officer shall have general charge of the affairs of the corporation, subject to the control of the Board of Directors. The Chief Executive Officer may appoint all officers and employees of the corporation for whose election no other provision is made in these bylaws, and may discharge or remove any officer or employee, subject to action thereon by the Board of Directors as required by these bylaws. The Chief Executive Officer shall be the officer through whom the Board of Directors delegates authority to corporate management, and shall be responsible to see that all orders and resolutions of the Board of Directors are carried into effect by the proper officers or other persons. The Chief Executive Officer shall also perform all duties as may be assigned to him or her by the Board of Directors. The Chief Executive Officer shall sign, execute, and acknowledge, in the name of the corporation, deeds, mortgages, bonds, contracts or other instruments, except in cases where the signing and execution thereof shall be expressly delegated by the Board of Directors, or by these bylaws, to some other officer or agent of the corporation.

Section 5.07. The Vice Presidents. The Vice Presidents shall perform such duties as may from time to time be assigned to them by the Board of Directors or the President.

Section 5.08. The Secretary. The Secretary or an Assistant Secretary shall attend all meetings of the shareholders and of the Board of Directors and all committees thereof and shall record all the votes of the shareholders and of the directors and the minutes of the meetings of the shareholders and of the Board of Directors and of committees of the board in a book or books to be kept for that purpose; shall see that notices are given and records and reports properly kept and filed by the corporation as required by law; shall be the custodian of the seal of the corporation and see that it is affixed to all documents to be executed on behalf of the corporation under its seal; and, in general, shall perform all duties incident to the office of Secretary, and such other duties as may from time to time be assigned by the Board of Directors or the President.

Section 5.09. The Treasurer. The Treasurer or an Assistant Treasurer shall have or provide for the custody of the funds or other property of the corporation; shall collect and receive or provide for the collection and receipt of moneys earned by or in any manner due to or received by the corporation; shall deposit all funds in his or her custody as Treasurer in such banks or other places of deposit as the Board of Directors may from time to time designate; shall,

whenever so required by the Board of Directors, render an account showing all transactions as Treasurer, and the financial condition of the corporation; and, in general, shall discharge such other duties as may from time to time be assigned by the Board of Directors or the President.

ARTICLE VI

Certificates of Stock, Transfer, Etc.

Section 6.01. Share Certificates. Every holder of fully-paid stock in the corporation shall be entitled to a certificate or certificates, consecutively numbered, to be in such form as the Board of Directors may from time to time prescribe, and signed (in facsimile or otherwise, as permitted by law) by the President or one of the Vice Presidents or other officer designated by the Board of Directors, countersigned by the Secretary or Treasurer and sealed with the corporate seal of the corporation; and if such certificates of stock are signed or countersigned by a corporate transfer agent or a corporate registrar of this corporation, such signature of the President, Vice President or other officer, such counter-signature of the Secretary or Treasurer, and such seal, or any of them, may be executed in facsimile, engraved or printed.

Section 6.02. Share Register. The share register or transfer books and blank share certificates shall be kept by the Secretary or by any transfer agent or registrar designated by the Board of Directors for that purpose.

ARTICLE VII

Indemnification of Directors, Officers and Other Authorized Representatives

Section 7.01. Scope of Indemnification.

(a) General Rule. The corporation shall indemnify an indemnified representative against any liability incurred in connection with any proceeding in which the indemnified representative may be involved as a party or otherwise by reason of the fact that such person is or was serving in an indemnified capacity, including, without limitation, liabilities resulting from any actual or alleged breach or neglect of duty, error, misstatement or misleading statement, negligence, gross negligence or act giving rise to strict or products liability, except:

- (1) where such indemnification is expressly prohibited by applicable law;
- (2) until such time as the conduct of the indemnified representative has been finally determined pursuant to Section 7.06 or otherwise: (A) to constitute willful misconduct or recklessness within the meaning of 15 Pa. C. S. § 1746(b) or any superseding provision of law sufficient in the circumstances to bar indemnification against liabilities arising from the conduct; or (B) to be based upon or attributable to the receipt by the indemnified representative from the corporation of a personal benefit to which the indemnified representative is not legally entitled; or (C) to the extent such indemnification has been finally

determined in a final adjudication pursuant to Section 7.06 to be otherwise unlawful.

(b) Partial Payment. If an indemnified representative is entitled to indemnification in respect of a portion, but not all, of any liabilities to which such person may be subject, the corporation shall indemnify such indemnified representative to the maximum extent for such portion of the liabilities.

(c) Presumptions. The termination of a proceeding by judgment, order, settlement or conviction or upon a plea of nolo contendere or its equivalent shall not of itself create a presumption that the indemnified representative is not entitled to indemnification. A director or officer of the corporation 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 corporation (whether a corporation, limited liability company, partnership, joint venture, trust, or other entity or enterprise), or of an employee benefit plan for the benefit of employees of the corporation or of any such subsidiary, shall be presumed for purposes of this Article VII to be acting in that capacity at the request of the corporation.

(d) Definitions. For purposes of this Article VII:

(1) “indemnified capacity” means any and all past, present and future service by an indemnified representative in one or more capacities as a director, officer, employee or agent of the corporation, or, at the request of the corporation, as a director, officer, employee, agent, fiduciary or trustee of another corporation, limited liability company, partnership, joint venture, trust, employee benefit plan or other entity or enterprise;

(2) “indemnified representative” means any and all directors and officers of the corporation and any other person designated as an indemnified representative by the Board of Directors of the corporation (which may, but need not, include any person serving at the request of the corporation, as a director, officer, employee, agent, fiduciary or trustee of another corporation, limited liability company, partnership, joint venture, trust, employee benefit plan or other entity or enterprise);

(3) “liability” means any damage, judgment, amount paid in settlement, fine, penalty, punitive damages, excise tax assessed with respect to an employee benefit plan, or cost or expense of any nature (including, without limitation, attorneys’ fees and disbursements); and

(4) “proceeding” means any threatened, pending or completed action, suit, appeal or other proceeding of any nature, whether civil, criminal, administrative or investigative, whether formal or informal, and whether brought by or in the right of the corporation, a class of its security holders or otherwise.

Section 7.02. Proceedings Initiated by Indemnified Representatives. Notwithstanding any other provision of this Article VII, the corporation shall not indemnify under this Article VII

an indemnified representative for any liability incurred in a proceeding initiated (which shall not be deemed to include counter claims or affirmative defenses) or participated in as an intervenor or amicus curiae by the person seeking indemnification unless such initiation of or participation in the proceeding is authorized, either before or after its commencement, by the affirmative vote of a majority of the directors in office. This Section 7.02 does not apply to reimbursement of expenses incurred in successfully prosecuting or defending an arbitration under Section 7.06 or otherwise successfully prosecuting or defending the rights of an indemnified representative granted by or pursuant to this Article VII.

Section 7.03. Advancing Expenses. The corporation shall pay the expenses (including attorneys' fees and disbursements) incurred in good faith by an indemnified representative in advance of the final disposition of a proceeding described in Section 7.01 or the initiation of or participation in a proceeding which is authorized pursuant to Section 7.02 upon receipt of an undertaking by or on behalf of the indemnified representative to repay the amount if it is ultimately determined pursuant to Section 7.06 that such person is not entitled to be indemnified by the corporation pursuant to this Article VII. The financial ability of an indemnified representative to repay an advance shall not be a prerequisite to the making of such advance.

Section 7.04. Securing of Indemnification Obligations. To further effect, satisfy or secure the indemnification obligations provided herein or otherwise, the corporation may maintain insurance, obtain a letter of credit, act as self-insurer, create a reserve, trust, escrow, cash collateral or other fund or account, enter into indemnification agreements, pledge or grant a security interest in any assets or properties of the corporation, or use any other mechanism or arrangement whatsoever in such amounts, at such costs, and upon such other terms and conditions as the Board of Directors shall deem appropriate. Absent fraud, the determination of the Board of Directors with respect to such amounts, costs, terms and conditions shall be conclusive against all security holders, officers and directors and shall not be subject to voidability.

Section 7.05. Payment of Indemnification. An indemnified representative shall be entitled to indemnification within 30 days after a written request for indemnification has been delivered to the Secretary of the corporation.

Section 7.06. Arbitration.

(a) General Rule. Any dispute related to the right to indemnification, contribution or advancement of expenses as provided under this Article VII, except with respect to indemnification for liabilities arising under the Securities Act of 1933 that the corporation has undertaken to submit to a court for adjudication, shall be decided by arbitration in Pittsburgh, Pennsylvania, in accordance with the commercial arbitration rules then in effect of the American Arbitration Association, before a single arbitrator selected by agreement of the parties. In the event that the parties cannot agree upon the selection of an arbitrator within ten days after arbitration is initiated, the parties agree that the American Arbitration Association in Pittsburgh, Pennsylvania will select the arbitrator.

(b) Arbitration Procedures. The arbitrator shall decide the dispute or controversy in accordance with the following procedures:

(1) Within ten days of the selection of an arbitrator, each party shall submit to the arbitrator its written position (the “Initial Submission”) provided that neither memorandum of position shall exceed ten pages, double spaced plus such documentary evidence as the parties deem necessary. In connection with the Initial Submission, neither of the parties may submit (and the arbitrator may not accept) any additional documentation (including affidavits).

(2) Within ten days of the delivery of the Initial Submission, each party may submit to the arbitrator a reply memorandum (the “Reply Submission”), provided that neither reply memorandum shall exceed five pages, double spaced. In connection with the Reply Submission, neither of the parties may submit (and the arbitrator may not accept) any additional documentation (including affidavits).

(3) Within ten days of the expiration of the period for the delivery of the Reply Submission, the arbitrator, if he or she deems it necessary or advisable, may call a hearing which may be by telephone conference (the “Hearing”). At any Hearing, the arbitrator may ask representatives and counsel for the parties questions with respect to the issue to be decided and positions of the parties. In connection with the Hearing, neither of the parties may offer (and the arbitrator may not accept) any testimony or additional documentation (including affidavits).

(4) Within seven days after the later to occur, if such is to occur, of (A) the Hearing or (B) the Reply Submission, the arbitrator shall render his or her decision.

(5) The arbitrator shall notify promptly the parties in writing of the decision, together with the amount of any dispute resolution costs arising with respect thereto (the “Notice of Decision”). The Notice of Decision need not contain an explanation of the decision or grounds therefor.

(6) The decision entered by the arbitrator shall be final, binding and nonappealable and judgment may be entered thereon by any party in accordance with applicable law in any court of competent jurisdiction, except that the corporation shall be entitled to interpose as a defense in any such judicial enforcement proceeding any prior final judicial determination adverse to the indemnified representative under Section 7.01(a)(2) in a proceeding not directly involving indemnification under this Article VII. This arbitration provision shall be specifically enforceable.

(c) Qualifications of Arbitrator. The arbitrator selected as provided herein is required to be or have been a director or executive officer of a corporation whose shares of common stock were listed during at least one year of such service on the New York Stock Exchange or the American Stock Exchange or quoted on the National Association of Securities Dealers Automated Quotations System.

(d) Burden of Proof. The party or parties challenging the right of an indemnified representative to the benefits of this Article VII shall have the burden of proof.

(e) Expenses. The corporation shall reimburse an indemnified representative for the expenses (including attorneys' fees and disbursements) incurred in successfully prosecuting or defending such arbitration.

Section 7.07. Contribution. If the indemnification provided for in this Article VII or otherwise is unavailable for any reason in respect of any liability or portion thereof, the corporation shall contribute to the liabilities to which the indemnified representative may be subject in such proportion as is appropriate to reflect the intent of this Article VII or otherwise. Contribution for the benefit of an indemnified representative under this section shall be based upon (A) the relative benefits received by the corporation and all other indemnified representatives, on the one hand, and the indemnified representative, on the other hand, from the transaction from which the proceeding arose, as further adjusted by (B) the relative fault of the corporation and all other indemnified representatives who are, or would be if joined to the proceeding, jointly liable with the indemnified representative in connection with the events that resulted in the liability and (C) any other equitable considerations that may be legally required to be considered. Relative fault of a person shall be determined by reference to, among other things, the degree to which the person's actions were motivated by intent to gain personal profit or advantage, the degree to which the person's liability is primary or secondary, and the degree to which the person's conduct is active or passive.

Section 7.08. Contract Rights; Amendment or Repeal. All rights under this Article VII shall be deemed a contract between the corporation and the indemnified representative pursuant to which the corporation and each indemnified representative intend to be legally bound. Any repeal, amendment or modification hereof shall be prospective only and shall not affect any rights or obligations then existing.

Section 7.09. Scope of Article. The rights granted by this Article VII shall not be deemed exclusive of any other rights to which those seeking indemnification, contribution or advancement of expenses may be entitled under any statute, agreement, vote of shareholders or disinterested directors or otherwise, both as to action in an indemnified capacity and as to action in any other capacity. The indemnification, contribution and advancement of expenses provided by or granted pursuant to this Article VII shall continue as to a person who has ceased to be an indemnified representative in respect of matters arising prior to such time, and shall inure to the benefit of the heirs, executors, administrators and personal representatives of such a person.

Section 7.10. Reliance on Provisions. Each person who shall act as an indemnified representative of the corporation shall be deemed to be doing so in reliance upon the rights of indemnification, contribution and advancement of expenses provided by this Article VII.

Section 7.11. Interpretation. The provisions of this Article VII are intended to constitute bylaws authorized by 15 Pa. C. S. § 1746.

ARTICLE VIII

Forum for Adjudicating Disputes

Section 8.01. **Exclusive Forum.** Unless the corporation consents in writing to the selection of an alternative forum, the state courts of the Commonwealth of Pennsylvania in and for Allegheny County or the federal courts of the Western District of Pennsylvania shall be the sole and exclusive forum, to the fullest extent permitted by law, for (a) any derivative action or proceeding brought on behalf of the corporation; (b) any action asserting a claim of a breach of fiduciary duty owed to the corporation or to the corporation's shareholders by any director, officer, or other employee of the corporation; (c) any action asserting a claim against the corporation, or against any director, officer, or other employee of the corporation, arising pursuant to any provision of the Pennsylvania Associations Code, 15 Pa. C. S., the articles, or these bylaws, in each case, as amended; (d) any action seeking to interpret, apply, enforce, or determine the validity of the articles or these bylaws; or (e) any action asserting a claim against the corporation, or any director, officer, or other employee of the corporation, governed by the internal affairs doctrine. Notwithstanding the foregoing sentence, Section 7.06 of these bylaws shall govern all claims under Article VII of these bylaws. If a court of competent jurisdiction finally determines that a shareholder has breached the provisions of this Section 8.01, then the corporation shall be entitled to recover its reasonable legal fees and costs in addition to any and all other rights and remedies that may exist at law or in equity.

Section 8.02. **Submission to Jurisdiction.** Without limiting the effect of 15 Pa. C. S. § 1505, any person or entity purchasing or otherwise acquiring any interest in shares of the corporation shall be deemed, to the fullest extent permitted by law, to be a "shareholder" for purposes of this Article VIII and to have notice of and consented to the provisions of this Article VIII. Any shareholder who initiates an action or proceeding of the type described in parts (a) through (e) of Section 8.01 in a court other than a court specified in Section 8.01 (a "Foreign Action") shall be deemed to have consented to (i) the personal jurisdiction of the courts specified in Section 8.01 in an action or proceeding brought in any of those courts against the shareholder to enforce Section 8.01 (an "Enforcement Action") and (ii) having service of process in an Enforcement Action made upon the shareholder by United States mail addressed to the shareholder at the shareholder's address as it appears on the records of the corporation or upon the shareholder's counsel in the Foreign Action by United States mail addressed to such counsel.

ARTICLE IX

Miscellaneous

Section 9.01. **Corporate Seal.** The corporation shall have a corporate seal in the form of a circle containing the name of the corporation, the year of incorporation and such other details as may be approved by the Board of Directors. The affixation of the corporate seal shall not be necessary to the valid execution, assignment or endorsement by the corporation of any instrument or other document.

Section 9.02. Checks. All checks, notes, bills of exchange or other similar orders in writing shall be signed by such one or more officers or employees of the corporation as the Board of Directors may from time to time designate.

Section 9.03. Contracts and Other Instruments.

(a) General Rule. Except as otherwise provided in the Business Corporation Law in the case of transactions that require action by the shareholders, the Board of Directors may authorize any officer or agent to enter into any contract or to execute or deliver any instrument on behalf of the corporation, and such authority may be general or confined to specific instances.

(b) Statutory Form of Execution of Instruments. Any note, mortgage, evidence of indebtedness, contract or other document, or any assignment or endorsement thereof, executed or entered into between the corporation and any other person, and any ballots, proxies, consents, or other instruments executed by the corporation in its capacity as holder of stock or other securities of another corporation, limited liability company, partnership, joint venture, trust, or other enterprise or entity, when signed by one or more officers or agents having actual or apparent authority to sign it, or by the President or Vice President and Secretary or Assistant Secretary or Treasurer or Assistant Treasurer of the corporation, shall be held to have been properly executed for and in behalf of the corporation, without prejudice to the rights of the corporation against any person who shall have executed the instrument in excess of his or her actual authority.

Section 9.04. Corporate Records.

(a) Required Records. The corporation shall keep complete and accurate books and records of account, minutes of the proceedings of the incorporators, shareholders and directors and a share register giving the names and addresses of all shareholders and the number and class of shares held by each. The share register shall be kept at either the registered office of the corporation in the Commonwealth of Pennsylvania or at its principal place of business wherever situated or at the office of its registrar or transfer agent. Any books, minutes or other records may be in written form or any other form capable of being converted into written form within a reasonable time.

(b) Right of Inspection. Every shareholder shall, upon written verified demand stating the purpose thereof, have a right to examine, in person or by agent or attorney, during the usual hours for business for any proper purpose, the share register, books and records of account, and records of the proceedings of the incorporators, shareholders and directors and to make copies or extracts therefrom. A proper purpose shall mean a purpose reasonably related to the interest of the person as a shareholder. In every instance where an attorney or other agent is the person who seeks the right of inspection, the demand shall be accompanied by a verified power of attorney or other writing that authorizes the attorney or other agent to so act on behalf of the shareholder. The demand shall be directed to the corporation at its registered office in the Commonwealth of Pennsylvania or at its principal place of business wherever situated.

Section 9.05. Severability; Provisions of Bylaws in Conflict with Law or Regulation. The provisions of these bylaws are severable, and if the Board of Directors determines, with the advice of counsel, that any one or more of the provisions contained herein are in conflict with any laws or regulations, then such conflicting provisions shall be deemed never to have constituted a part of these bylaws, and the Board of Directors shall cause these bylaws to be amended accordingly; provided, however, that this determination shall not affect or impact any of the remaining provisions of these bylaws or render invalid or improper any action taken or omitted (including, but not limited to, the election of the directors) prior to such determination. The Board of Directors shall not be liable for the failure to make any determination under this Section 9.05. If any provision of these bylaws shall be held invalid or unenforceable, the invalidity or unenforceability shall attach only to that provision and shall not in any manner affect or render invalid or unenforceable any other provision, and these bylaws shall be carried out as if the invalid or unenforceable provision was not present.

Section 9.06. Interpretation. To the fullest extent permitted by law, and except as otherwise provided in these bylaws, the Board of Directors shall have the power to interpret all of the terms and provisions of these bylaws, which interpretation shall be conclusive.

KOPPERS HOLDINGS INC.
RATIO OF EARNINGS TO FIXED CHARGES
(Dollars in millions, except ratios)

	2012	2013	2014	2015	2016	Six Months Ended June 30, 2017
Earnings:						
Income (loss) from continuing operations before taxes	\$ 100.6	\$ 77.0	\$ (5.9)	\$ (80.1)	\$ 38.5	\$ 33.2
Deduct: Equity earnings net of dividends	0.8	0.8	(1.6)	(3.1)	(1.0)	0.0
Deduct: Pre-tax income of noncontrolling interests	2.0	-	-	-	-	0.3
Add: Fixed charges	41.6	39.4	51.8	64.6	66.4	28.9
Earnings as defined	\$ 139.4	\$ 115.6	\$ 47.5	\$ (12.4)	\$ 105.9	\$ 61.8
Fixed charges:						
Interest expensed	\$ 27.9	\$ 26.8	\$ 39.1	\$ 50.7	\$ 50.8	\$ 21.4
Other	0.0	0.4	1.3	0.0	0.0	0.0
Rents	44.3	39.4	36.7	44.7	50.3	24.3
Interest factor	31%	31%	31%	31%	31%	31%
Estimated interest component of rent	13.7	12.2	11.4	13.9	15.6	7.5
Total fixed charges	\$ 41.6	\$ 39.4	\$ 51.8	\$ 64.6	\$ 66.4	\$ 28.9
Ratio of earnings to fixed charges⁽¹⁾	3.35	2.93	0.92	(0.19)	1.59	2.14

(1) In 2014 and 2015, earnings did not cover fixed charges by \$4.3 million and \$77.0 million, respectively.

CERTIFICATIONS

I, Leroy M. Ball, certify that:

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

Date: August 3, 2017

/s/ LEROY M. BALL, JR.
 Leroy M. Ball, Jr.
 President and Chief Executive Officer

CERTIFICATIONS

I, Michael J. Zugay, certify that:

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

Date: August 3, 2017

/s/ MICHAEL J. ZUGAY
 Michael J. Zugay
 Chief Financial Officer

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

In connection with the Quarterly Report of Koppers Holdings Inc. (the "Company") on Form 10-Q for the quarter ending June 30, 2017 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned hereby certifies in his capacity as an officer of the Company, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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

/s/ LEROY M. BALL, JR.
Leroy M. Ball, Jr.
Chief Executive Officer
August 3, 2017

/s/ MICHAEL J. ZUGAY
Michael J. Zugay
Chief Financial Officer
August 3, 2017