UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-Q

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

For the quarterly period ended March 31, 2019

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 every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit 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.:

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 ☒

Securities registered pursuant to Section 12(b) of the Act.

Title of each class	**Trading Symbol(s)**	**Name of each exchange on which registered**
Common Stock	KOP	The New York Stock Exchange

Common Stock, par value $0.01 per share, outstanding at April 30, 2019 amounted to 20,647,947 shares.

PART I—FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

KOPPERS HOLDINGS INC.
CONDENSED CONSOLIDATED STATEMENT OF OPERATIONS AND COMPREHENSIVE INCOME

	Three Months Ended March 31,	
	2019	*2018*
(Dollars in millions, except per share amounts)	*(Unaudited)*	*(Unaudited)*
Net sales	$ 434.9	$ 406.1
Cost of sales	353.8	311.4
Depreciation and amortization	14.6	11.8
Impairment and restructuring charges	0.3	1.5
Selling, general and administrative expenses	37.8	38.1
Operating profit	28.4	43.3
Other income, net	0.6	0.2
Interest expense	16.7	10.5
Income before income taxes	12.3	33.0
Income tax (benefit) provision	(0.1)	9.2
Income from continuing operations	12.4	23.8
Loss from discontinued operations, net of tax benefit of $0.0	0.0	(0.1)
Net income	12.4	23.7
Net income attributable to noncontrolling interests	0.9	5.9
Net income attributable to Koppers	$ 11.5	$ 17.8
Earnings per common share attributable to Koppers common shareholders:		
Basic -	$ 0.56	$ 0.86
Diluted -	$ 0.55	$ 0.81
Comprehensive income	$ 20.6	$ 16.2
Comprehensive income attributable to noncontrolling interests	1.1	6.1
Comprehensive income attributable to Koppers	$ 19.5	$ 10.1
Weighted average shares outstanding (in thousands):		
Basic	20,575	20,894
Diluted	20,881	22,158

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

KOPPERS HOLDINGS INC.
CONDENSED CONSOLIDATED BALANCE SHEET

(Dollars in millions, except per share amounts)		March 31, 2019 (Unaudited)		December 31, 2018
Assets				
Cash and cash equivalents	$	38.1	$	40.6
Accounts receivable, net of allowance of $2.4 and $2.5		188.1		186.7
Income tax receivable		2.5		2.8
Inventories, net		285.5		284.7
Other current assets		29.1		25.5
Total current assets		543.3		540.3
Property, plant and equipment, net		417.3		417.9
Operating lease right-of-use assets		116.3		0.0
Goodwill		296.4		296.5
Intangible assets, net		183.0		188.0
Deferred tax assets		13.2		15.5
Other assets		23.9		21.7
Total assets	$	1,593.4	$	1,479.9
Liabilities				
Accounts payable	$	143.1	$	177.2
Accrued liabilities		99.5		109.9
Current operating lease liabilities		22.2		0.0
Current maturities of long-term debt		11.6		11.6
Total current liabilities		276.4		298.7
Long-term debt		1,001.1		978.8
Accrued postretirement benefits		48.4		48.2
Deferred tax liabilities		6.8		6.8
Operating lease liabilities		94.9		0.0
Other long-term liabilities		75.8		80.4
Total liabilities		1,503.4		1,412.9
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; 23,161,309 and 23,028,957 shares issued		0.2		0.2
Additional paid-in capital		209.0		206.0
Retained earnings		38.8		27.2
Accumulated other comprehensive loss		(79.2)		(87.2)
Treasury stock, at cost, 2,513,362 and 2,480,213 shares		(90.8)		(90.0)
Total Koppers shareholders' equity		78.0		56.2
Noncontrolling interests		12.0		10.8
Total equity		90.0		67.0
Total liabilities and equity	$	1,593.4	$	1,479.9

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

KOPPERS HOLDINGS INC.
CONDENSED CONSOLIDATED STATEMENT OF CASH FLOWS

	Three Months Ended March 31,	
	2019	*2018*
(Dollars in millions)	*(Unaudited)*	*(Unaudited)*
Cash provided by (used in) operating activities:		
Net income	$ 12.4	$ 23.7
Adjustments to reconcile net cash provided by operating activities:		
Depreciation and amortization	14.6	11.8
Gain on disposal of assets and investment	0.0	0.1
Insurance proceeds	(1.4)	0.0
Deferred income taxes	0.4	(0.1)
Change in other liabilities	(3.2)	(1.4)
Non-cash interest expense	0.6	0.5
Stock-based compensation	2.9	2.9
Other - net	(3.8)	3.2
Changes in working capital:		
Accounts receivable	1.7	(41.7)
Inventories	(0.5)	(10.7)
Accounts payable	(30.1)	2.4
Accrued liabilities	(4.5)	(20.2)
Other working capital	(3.5)	0.5
Net cash used in operating activities	(14.4)	(29.0)
Cash (used in) provided by investing activities:		
Capital expenditures	(11.0)	(22.5)
Acquisitions, net of cash acquired	0.0	(62.9)
Insurance proceeds received	1.4	0.0
Net cash provided by divestitures and asset sales	0.3	0.3
Net cash used in investing activities	(9.3)	(85.1)
Cash provided by (used in) financing activities:		
Net increase in credit facility borrowings	34.0	116.9
Borrowings of long-term debt	0.0	0.3
Repayments of long-term debt	(12.6)	(4.1)
Issuances of Common Stock	0.3	1.3
Repurchases of Common Stock	(0.9)	(7.4)
Payment of debt issuance costs	0.0	(1.1)
Net cash provided by financing activities	20.8	105.9
Effect of exchange rate changes on cash	0.4	0.1
Net decrease in cash and cash equivalents	(2.5)	(8.1)
Cash and cash equivalents at beginning of period	40.6	60.3
Cash and cash equivalents at end of period	$ 38.1	$ 52.2
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash outflow from operating leases	$ 7.6	$ 0.0
Supplemental disclosure of non-cash investing and financing activities:		
Right-of-use assets obtained in exchange for new operating lease liabilities	$ 14.3	$ 0.0

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", the "Company", "we" or "us") 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 our 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, 2018 has been summarized from the audited balance sheet contained in the Annual Report on Form 10-K for the year ended December 31, 2018. 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 our audited consolidated financial statements and related notes included in our Annual Report on Form 10-K for the year ended December 31, 2018.

2. New Accounting Pronouncements

In August 2018, the Securities and Exchange Commission ("SEC") issued SEC Release No. 33-10532, "Disclosure Update and Simplification", which expanded the interim period disclosure requirements for stockholders' equity. Under the release, a reconciliation of the changes in each caption of stockholders' equity must be provided in a note or separate statement for each period that an income statement is required to be filed. We reflected the requirements of this release in "Note 6 – Comprehensive Income and Equity".

In August 2017, the Financial Accounting Standards Board ("FASB") issued ASU No. 2017-12, "Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities." This ASU amends and simplifies existing guidance in order to allow companies to more accurately present the economic effects of risk management activities in the financial statements. We adopted this ASU effective January 1, 2018 and we reclassified a $3.9 million unrealized gain, net of tax, from retained earnings to accumulated other comprehensive loss upon adoption.

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. The standard is effective January 1, 2019 and measurement and presentation of expenses will depend on classification as a finance or operating lease. We adopted ASU 2016-02 effective January 1, 2019 using the modified retrospective approach with no restatement of comparative periods presented. The adoption is accounted for as a change in accounting principle in conformity with FASB Accounting Standards Codification ("ASC") 250, "Accounting Changes and Error Corrections".

We elected a suite of practical expedients, including retaining our current classification of leases, separating lease and non-lease components for certain asset classes and excluding leases expiring within twelve months. As a result, the initial impact of adopting this new standard on our consolidated statement of operations and consolidated statement of cash flows was not material. Approximately $119 million of right-of-use assets and lease liabilities were recognized in the consolidated balance sheet upon adoption. The adoption of Topic 842 did not have a material effect on our Consolidated Condensed Statement of Operations or Condensed Consolidated Statement of Cash Flows. Refer to "Note 16 – Leases" for more details regarding leases as of March 31, 2019.

3. Plant Closures and Divestitures

Over the past five years, we have been restructuring our Carbon Materials and Chemicals ("CMC") segment in order to concentrate our facilities in regions where we believe we hold key competitive advantages to better serve our global customers. These closure activities include:

- The cessation of naphthalene refining activities at our Follansbee, West Virginia coal tar distillation facility in the fourth quarter of 2018 subsequent to the commissioning of a new naphthalene refining plant in Stickney, Illinois.
- In September 2018, we sold our UK-based specialty chemicals business.
- In November 2016, we sold our 30-percent interest in Tangshan Kailuan Koppers Carbon Chemical Company Limited ("TKK") located in the Hebei Province in China.

- In July 2016, we discontinued coal tar distillation activities at our CMC plant located in Clairton, Pennsylvania. In October 2018, we sold the facility and as part of the transaction, we transferred cash to the buyer and the buyer assumed decommissioning, demolition and site restoration responsibilities.
- In March 2016, we discontinued production at our 60-percent owned CMC plant located in Tangshan, China.
- In February 2016, we ceased coal tar distillation and specialty pitch operations at both of our United Kingdom CMC facilities. In July 2016, we sold substantially all of our CMC tar distillation properties and assets in the United Kingdom. In exchange, we transferred cash to the buyer and the buyer assumed historical environmental and asset retirement obligations.
- In April 2014, we ceased coal tar distillation activities at our CMC facility located in Uithoorn, the Netherlands.

Other closure and divestiture activity relates to our Railroad Utility Products and Services (“RUPS”) segment. These actions include:

- In August 2015, we closed a crosstie treating plant located in Green Spring, West Virginia.
- In July 2015, we sold the assets of our 50-percent interest in KSA Limited Partnership, a concrete crosstie manufacturer.

In addition, in 2011, we ceased carbon black production at our CMC facility located in Kurnell, Australia. Costs associated with this closure are included in income from discontinued operations on the consolidated statement of operations and comprehensive income.

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

(Dollars in millions)	*Severance and employee benefits*	*Environmental remediation*	*Asset Retirement*	*Other*	*Total*
Reserve at December 31, 2017	$ 1.7	$ 2.7	$ 10.6	$ 3.3	$ 18.3
Accrual	0.0	0.9	1.8	2.2	4.9
Cost charged against assets	0.0	0.0	0.0	(2.1)	(2.1)
Reversal of accrued charges	0.0	0.0	(0.9)	0.0	(0.9)
Cash paid	0.0	(3.4)	(7.9)	(0.5)	(11.8)
Currency translation	0.0	(0.2)	0.0	(0.1)	(0.3)
Reserve at December 31, 2018	$ 1.7	$ 0.0	$ 3.6	$ 2.8	$ 8.1
Accrual	0.0	0.0	0.3	0.0	0.3
Cash paid	(0.3)	0.0	(1.7)	0.0	(2.0)
Reserve at March 31, 2019	$ 1.4	$ 0.0	$ 2.2	$ 2.8	$ 6.4

4. Acquisitions

On April 10, 2018, Koppers Inc. acquired Cox Industries, Inc. (“Cox”) for net cash consideration of $201.3 million. The transaction was funded by borrowings on Koppers Inc.’s credit facility discussed in “Note 14 - Debt.” Cox was renamed Koppers Utility and Industrial Products Inc. (“UIP”) subsequent to the acquisition. UIP is a manufacturer of treated wood transmission and distribution poles for utility companies and cooperative utility companies. It is also a manufacturer of treated wood pilings used for construction and marine applications. UIP manufactures and sells its treated wood poles and pilings through a network of nine manufacturing facilities and 19 distribution yards located throughout the United States. UIP treats its products with a variety of wood protection chemicals, including chromated copper arsenate and creosote, which are produced by our PC and CMC segments, respectively.

On February 28, 2018, Koppers Inc. acquired M.A. Energy Resources, LLC (“MAER”) for net cash consideration of $62.8 million. The purchase price was funded by borrowings on Koppers Inc.’s credit facility. MAER was renamed Koppers Recovery Resources LLC (“KRR”) subsequent to the acquisition. KRR is a vertically-integrated company that provides material recovery services for crossties that have been taken out of service and other biomass material. KRR converts this recovered material into alternative fuels, such as crosstie-derived fuel or biomass-derived fuel, that is used as a substitute for conventional higher-cost carbon-based fuel. KRR currently operates two processing facilities, each of which is located to serve its Class I railroad customer base.

Combined costs related to these two acquisitions were $2.1 million for the three months ended March 31, 2018 and are recorded within selling, general and administrative expenses in the consolidated statement of operations. As of March 31, 2019, we have completed our valuation analysis to determine the fair values of UIP's and KRR's acquired assets and liabilities.

The following unaudited pro forma information presents a summary of our revenues and income from continuing operations as if the UIP acquisition occurred on January 1, 2017 (the first day of the most recently completed fiscal year prior to the acquisition). The unaudited pro forma information is not necessarily indicative of operating results that would have been achieved had the acquisition been completed as of January 1, 2017 and is not intended to project our future financial results after the acquisition. The unaudited pro forma information is based on certain assumptions, which management believes are reasonable, and does not reflect the cost of any integration activities or the benefits from the acquisition and synergies that may be derived from any integration activities.

		Three Months Ended March 31,
		2018
(Dollars in millions)		
Pro forma revenue	$	452.5
Pro forma income from continuing operations attributable to Koppers		17.8
Pro forma income per share - continuing operations:		
Basic -	$	0.85
Diluted -	$	0.80

5. Revenue Recognition

Effective January 1, 2018 we adopted ASC 606, "Revenue from Contracts with Customers", using the modified retrospective method. The cumulative effect to the opening balance of retained earnings recognized at January 1, 2018 was an increase of $0.3 million, consisting of $5.3 million in revenue and $5.0 million in cost of goods sold not previously recognized during the year ended December 31, 2017. ASC 606 impacted the timing of revenue recognized related to certain services to untreated cross-ties within our RUPS segment where those specific performance obligations were fulfilled prior to shipment and were historically not recognized as revenue until shipped. Refer to "Note 9 – Segment Information" for relevant disclosures regarding the disaggregation of revenue.

Contract Balances

The timing of revenue recognition in accordance with ASC 606 results in both billed accounts receivable and unbilled receivables, both classified as accounts receivable, net of allowance within the consolidated balance sheet. Contract assets of $7.0 million and $5.3 million are recorded within accounts receivable, net of allowance within the consolidated balance sheet as of March 31, 2019 and January 1, 2018, respectively.

6. Comprehensive Income and Equity

Total comprehensive income for the three months ended March 31, 2019 and 2018 is summarized in the table below:

	Three Months Ended March 31,			
		2019		*2018*
(Dollars in millions)				
Net income	$	12.4	$	23.7
Changes in other comprehensive income:				
Currency translation adjustment		1.8		1.2
Unrealized gain (loss) on cash flow hedges, net of tax (expense) benefit of $(2.7) and $4.9		6.2		(9.3)
Change in accounting standard		0.0		0.3
Unrecognized pension net loss, net of tax (expense) of $(0.1)		0.2		0.3
Total comprehensive income		20.6		16.2
Comprehensive income attributable to noncontrolling interests		1.1		6.1
Comprehensive income attributable to Koppers	$	19.5	$	10.1

Amounts reclassified from accumulated other comprehensive (loss) income to net income consist of amounts shown for changes in or amortization of unrecognized pension net loss. This component of accumulated other comprehensive (loss) income is included in the computation of net periodic pension cost as disclosed in "Note 13 – Pensions and Post-Retirement Benefit Plans." Other amounts reclassified from accumulated other comprehensive (loss) income include (loss) income related to derivative financial instruments, net of tax, of $(0.6) million for the three months ended March 31, 2019, and $2.5 million for the three months ended March 31, 2018.

The following tables present the change in equity for the three months ended March 31, 2019 and 2018, respectively:

(Dollars in millions)	*Common Stock*	*Additional Paid-In Capital*	*Retained Earnings*	*Accumulated Other Comprehensive (Loss) Income*	*Treasury Stock*	*Noncontrolling Interests*	*Total Equity*
Balance at December 31, 2018	$ 0.2	$ 206.0	$ 27.2	$ (87.2)	$ (90.0)	$ 10.8	$ 67.0
Net income	0.0	0.0	11.5	0.0	0.0	0.9	12.4
Issuance of common stock	0.0	0.3	0.0	0.0	0.0	0.0	0.3
Employee stock plans	0.0	2.9	0.0	0.0	0.0	0.0	2.9
Other comprehensive income							
Currency translation adjustment	0.0	0.0	0.0	1.5	0.0	0.3	1.8
Unrealized gain on cash flow hedges	0.0	0.0	0.0	6.2	0.0	0.0	6.2
Unrecognized pension net loss	0.0	0.0	0.0	0.2	0.0	0.0	0.2
Repurchases of common stock	0.0	(0.2)	0.1	0.1	(0.8)	0.0	(0.8)
Balance at March 31, 2019	$ 0.2	$ 209.0	$ 38.8	$ (79.2)	$ (90.8)	$ 12.0	$ 90.0

(Dollars in millions)	*Common Stock*	*Additional Paid-In Capital*	*Retained Earnings*	*Accumulated Other Comprehensive (Loss) Income*	*Treasury Stock*	*Noncontrolling Interests*	*Total Equity*
Balance at December 31, 2017	$ 0.2	$ 190.6	$ 7.4	$ (40.1)	$ (58.2)	$ 5.9	$ 105.8
Net income	0.0	0.0	17.8	0.0	0.0	5.9	23.7
Issuance of common stock	0.0	1.3	0.0	0.0	0.0	0.0	1.3
Employee stock plans	0.0	2.8	0.0	0.0	0.0	0.0	2.8
Other comprehensive income							
Currency translation adjustment	0.0	0.0	0.0	1.1	0.0	0.1	1.2
Unrealized loss on cash flow hedges	0.0	0.0	0.0	(9.3)	0.0	0.0	(9.3)
Change in accounting standard	0.0	0.0	(3.6)	3.9	0.0	0.0	0.3
Unrecognized pension net loss	0.0	0.0	0.0	0.3	0.0	0.0	0.3
Repurchases of common stock	0.0	0.0	0.0	(0.1)	(7.4)	0.0	(7.5)
Balance at March 31, 2018	$ 0.2	$ 194.7	$ 21.6	$ (44.2)	$ (65.6)	$ 11.9	$ 118.6

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:

	Three Months Ended March 31, 2019	Three Months Ended March 31, 2018
(Dollars in millions, except share amounts, in thousands)		
Net income attributable to Koppers	$ 11.5	$ 17.8
Loss from discontinued operations	0.0	(0.1)
Income from continuing operations attributable to Koppers	$ 11.5	$ 17.9
Weighted average common shares outstanding:		
Basic	20,575	20,894
Effect of dilutive securities	306	1,264
Diluted	20,881	22,158
Income per common share – continuing operations:		
Basic income per common share	$ 0.56	$ 0.86
Diluted income per common share	0.55	0.81
Other data:		
Antidilutive securities excluded from computation of diluted earnings per common share	534	8

8. Stock-based Compensation

We have outstanding stock-based compensation awards that were granted under the amended and restated 2005 Long-Term Incentive Plan (the “2005 LTIP”) and the 2018 Long-Term Incentive Plan (the “2018 LTIP”). Both the 2005 LTIP and the 2018 LTIP are collectively referred to as the “LTIP”. On May 3, 2018, the 2018 LTIP was approved by our shareholders and the 2005 LTIP was frozen. Similar to the 2005 LTIP, the 2018 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”). 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 is the market price of the underlying common stock on the date of grant and the fair value of performance stock units is determined using a Monte Carlo valuation model. For grants to most employees, 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.

Performance stock units 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 our total shareholder return relative to the Standard & Poor’s 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. We have the discretion to settle the award in cash rather than shares, although we currently expect that all awards will be settled by the issuance of shares. Performance stock units for the 2016-2018 performance period vested at 13 percent of the target share amount in March 2019.

We calculated the fair value of the performance stock unit awards on the date of grant using the assumptions listed below:

	March 2019 Grant	May 2018 Grant	March 2018 Grant	March 2017 Grant
Grant date price per share of performance award	$ 26.63	$ 39.10	$ 41.60	$ 44.10
Expected dividend yield per share	0.00%	0.00%	0.00%	0.00%
Expected volatility	39.00%	39.40%	39.40%	43.50%
Risk-free interest rate	2.50%	2.35%	2.35%	1.54%
Look-back period in years	2.82	2.84	2.84	2.83
Grant date fair value per share	$ 40.30	$ 44.29	$ 47.12	$ 64.02

Dividends declared, if any, on our 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 March 31, 2019:

Performance Period	*Minimum Shares*	*Target Shares*	*Maximum Shares*
2017 – 2019	0	110,262	220,524
2018 – 2020	0	128,093	256,186
2019 – 2021	0	156,287	312,574

The following table shows a summary of the status and activity of non-vested stock units for the three months ended March 31, 2019:

	Restricted Stock Units	*Performance Stock Units*	*Total Stock Units*	*Weighted Average Grant Date Fair Value per Unit*
Non-vested at December 31, 2018	223,561	271,123	494,684	$ 45.65
Granted	193,229	156,287	349,516	$ 32.74
Vested	(79,520)	(32,768)	(112,288)	$ 26.65
Non-vested at March 31, 2019	337,270	394,642	731,912	$ 40.69

Stock Options

Stock options to most executive officers vest and become exercisable 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. We calculated the fair value of stock options on the date of grant using the Black-Scholes-Merton model and the assumptions listed below:

	March 2019 Grant	*May 2018 Grant*	*March 2018 Grant*	*March 2017 Grant*	*March 2016 Grant*
Grant date price per share of stock option award	$ 26.63	$ 39.10	$ 41.60	$ 44.10	$ 18.11
Expected dividend yield per share	0.00%	0.00%	0.00%	0.00%	0.00%
Expected life in years	6.14	5.73	5.73	5.77	5.96
Expected volatility	39.44%	37.05%	37.05%	39.70%	40.86%
Risk-free interest rate	2.53%	2.82%	2.67%	2.13%	1.45%
Grant date fair value per share	$ 11.29	$ 15.48	$ 16.38	$ 17.90	$ 7.41

We suspended our dividend in February 2015 and we do 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 us. Expected volatility is based on the historical volatility of our 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 three months ended March 31, 2019:

	Options	*Weighted Average Exercise Price per Option*	*Weighted Average Remaining Contractual Term (in years)*	*Aggregate Intrinsic Value (in millions)*
Outstanding at December 31, 2018	981,940	$ 29.63		
Granted	145,301	$ 26.63		
Outstanding at March 31, 2019	1,127,241	$ 29.24	6.11	$ 3.9
Exercisable at March 31, 2019	805,623	$ 28.25	4.80	$ 3.5

Stock Compensation Expense

Total stock-based compensation expense recognized under our LTIP and employee stock purchase plan for the three months ended March 31, 2019 and 2018 is as follows:

	Three Months Ended March 31,	
	2019	2018
(Dollars in millions)		
Stock-based compensation expense recognized:		
Selling, general and administrative expenses	$ 2.9	$ 2.9
Less related income tax benefit	0.9	1.0
Decrease in net income attributable to Koppers	$ 2.0	$ 1.9
Intrinsic value of exercised stock options	$ 0.0	$ 0.2
Cash received from the exercise of stock options	$ 0.0	$ 0.9

As of March 31, 2019, total future compensation expense related to non-vested stock-based compensation arrangements totaled $25.0 million and the weighted-average period over which this expense is expected to be recognized is approximately 32 months.

9. Segment Information

We have three reportable segments: Railroad and Utility Products and Services, Performance Chemicals and Carbon Materials and Chemicals. Our 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.

Our 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 and a business related to the recovery of used crossties. In April 2018, we acquired UIP, a manufacturer of treated wood utility transmission and distribution poles for utility companies and cooperative utility companies. It is also a manufacturer of treated wood pilings used for construction and marine applications. In February 2018, we acquired KRR, a vertically-integrated provider of crosstie recovery and disposal services. KRR converts recovered material into alternative fuels, such as crosstie-derived fuel or biomass-derived fuel, that is used as a substitute for conventional higher-cost carbon-based fuel.

Our 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.

Our 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 used in the production of aluminum and 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.

We evaluate performance and determine resource allocations based on a number of factors, the primary measure being operating profit or loss from operations. Operating profit does not include other loss, 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 as disclosed in our Annual Report on Form 10-K for the year ended December 31, 2018, except for those described in “Note 2 – New Accounting Pronouncements.” Intersegment transactions are eliminated in consolidation.

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

	Three Months Ended March 31, 2019	2018
(Dollars in millions)		
Revenues from external customers:		
Railroad and Utility Products and Services	$ 166.1	$ 108.4
Performance Chemicals	99.0	97.4
Carbon Materials and Chemicals	169.8	200.3
Total	$ 434.9	$ 406.1
Intersegment revenues:		
Railroad and Utility Products and Services	$ 0.3	$ 0.0
Performance Chemicals	3.1	1.8
Carbon Materials and Chemicals	17.9	18.2
Total	$ 21.3	$ 20.0
Depreciation and amortization expense:		
Railroad and Utility Products and Services	$ 4.8	$ 3.0
Performance Chemicals	4.9	4.4
Carbon Materials and Chemicals	4.9	4.4
Total	$ 14.6	$ 11.8
Operating profit (loss):		
Railroad and Utility Products and Services	$ 8.7	$ 1.1
Performance Chemicals	12.8	5.6
Carbon Materials and Chemicals	7.4	37.2
Corporate[a]	(0.5)	(0.6)
Total	$ 28.4	$ 43.3

(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 revenues for significant product lines, net of all intersegment transactions, for our segments for the periods indicated:

	Three Months Ended March 31, 2019	2018
(Dollars in millions)		
Railroad and Utility Products and Services:		
Railroad treated products	$ 84.7	$ 79.4
Utility poles	54.5	11.5
Rail joints	8.3	8.3
Railroad infrastructure services	9.3	7.0
Other products	9.3	2.2
	166.1	108.4
Performance Chemicals:		
Wood preservative products	91.3	89.5
Other products	7.7	7.9
	99.0	97.4
Carbon Materials and Chemicals:		
Pitch and related products	107.0	129.2
Creosote and distillates	18.9	22.9
Phthalic anhydride and other chemicals	21.0	22.2
Naphthalene	12.8	13.1
Other products	10.1	12.9
	169.8	200.3
Total	$ 434.9	$ 406.1

The following table sets forth tangible and intangible assets allocated to each of our segments as of the dates indicated:

		March 31, 2019		December 31, 2018
(Dollars in millions)				
Segment assets:				
Railroad and Utility Products and Services	$	567.6	$	538.0
Performance Chemicals		472.6		446.9
Carbon Materials and Chemicals		504.6		457.1
All other		48.6		37.9
Total[(a)]	$	1,593.4	$	1,479.9
Goodwill:				
Railroad and Utility Products and Services	$	120.7	$	121.1
Performance Chemicals		175.7		175.4
Total	$	296.4	$	296.5

(a) The increase in total assets as of March 31, 2019 includes $116 million attributable to the implementation of ASU No. 2016-02 “Leases (Topic 842).”

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 excess stock compensation deductions, changes in tax laws, adjustments to unrecognized tax benefits 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 we conduct 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 30.4 percent and 34.4 percent for the three months ended March 31, 2019 and 2018, respectively. The estimated annual effective income tax rate differs from the U.S. federal statutory tax rate due to:

	March 31, 2019	March 31, 2018
Federal income tax rate	21.0%	21.0%
State income taxes, net of federal tax benefit	0.6	0.9
Foreign earnings taxed at different rates	1.7	3.5
Interest expense deduction limitation	6.9	0.0
Nondeductible expenses	1.2	0.0
Change in tax contingency reserves	0.1	0.1
Valuation allowance adjustments	0.0	(5.7)
GILTI inclusion, net of foreign tax credits	(0.8)	13.1
Other	(0.3)	1.5
Estimated annual effective income tax rate	30.4%	34.4%

In 2018, the estimated annual effective income tax rate included a benefit related to the release of a valuation allowance adjustment for a subsidiary in China. Management determined that sufficient positive evidence exists to support that this entity’s net operating losses were more likely than not to be realized.

Income taxes as a percentage of pretax income were (0.8) percent for the three months ended March 31, 2019. This is lower than the estimated annual effective income tax rate due to discrete items. Discrete items included in income taxes for the three months ended March 31, 2019 were a net benefit of $3.8 million. Discrete items were primarily related to the reversal of various unrecognized tax benefits due to audit closures.

Income taxes as a percentage of pretax income were 27.9 percent for the three months ended March 31, 2018. This was lower than the estimated annual effective income tax rate due to discrete items. Discrete items included in income taxes for the three months ended March 31, 2018 were a net benefit of $2.2 million, which is primarily related to excess tax benefits for stock-based compensation.

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, unrecognized tax benefits 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 for the three months ended March 31, 2019.

Unrecognized Tax Benefits

We and our subsidiaries file income tax returns in the U.S. federal jurisdiction, individual U.S. state jurisdictions and non-U.S. jurisdictions. With few exceptions, we are no longer subject to U.S. federal, U.S. state, or non-U.S. income tax examinations by tax authorities for years prior to 2015.

Unrecognized tax benefits totaled $2.3 million and $7.0 million as of March 31, 2019 and December 31, 2018, respectively. As of March 31, 2019 and December 31, 2018, the total amount of unrecognized tax benefits that, if recognized, would affect the effective tax rate, was approximately $2.3 million and $3.7 million, respectively. We recognize interest expense and any related penalties from unrecognized tax benefits in income tax expense. As of March 31, 2019 and December 31, 2018, we had accrued approximately $0.8 million and $2.2 million for interest and penalties, respectively.

We do not anticipate material changes to the amount of unrecognized tax benefits within the next twelve months.

11. Inventories

Net inventories as of March 31, 2019 and December 31, 2018 are summarized in the table below:

		March 31, 2019		*December 31, 2018*
(Dollars in millions)				
Raw materials	$	205.2	$	199.5
Work in process		12.3		16.0
Finished goods		127.9		128.1
	$	345.4	$	343.6
Less revaluation to LIFO		59.9		58.9
Net	$	285.5	$	284.7

12. Property, Plant and Equipment

Property, plant and equipment as of March 31, 2019 and December 31, 2018 are summarized in the table below:

		March 31, 2019		*December 31, 2018*
(Dollars in millions)				
Land	$	17.6	$	17.5
Buildings		65.7		65.1
Machinery and equipment		807.9		800.9
	$	891.2	$	883.5
Less accumulated depreciation		473.9		465.6
Net	$	417.3	$	417.9

Impairments – There were no impairment charges incurred for the three months ended March 31, 2019 and 2018.

13. Pensions and Post-Retirement Benefit Plans

We 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 and two of the non-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. We also provide 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.

The following table provides the components of net periodic benefit cost for the pension plans for the three months ended March 31, 2019 and 2018:

	Three Months Ended March 31, 2019	Three Months Ended March 31, 2018
(Dollars in millions)		
Service cost	$ 0.4	$ 0.5
Interest cost	2.0	1.8
Expected return on plan assets	(2.0)	(2.1)
Amortization of net loss	0.4	0.4
Net periodic benefit cost	$ 0.8	$ 0.6
Defined contribution plan expense	$ 1.6	$ 2.0

14. Debt

Debt as of March 31, 2019 and December 31, 2018 was as follows:

	Weighted Average Interest Rate	Maturity	March 31, 2019	December 31, 2018
(Dollars in millions)				
Term Loan	5.82%	2024	$ 90.0	$ 92.5
Revolving Credit Facility	5.82%	2024	424.0	390.0
Construction and other loans	4.75%	2020	10.2	20.1
Senior Notes due 2025	6.00%	2025	500.0	500.0
Debt			1,024.2	1,002.6
Less short-term debt and current maturities of long-term debt			11.6	11.6
Less unamortized debt issuance costs			11.5	12.2
Long-term debt			$ 1,001.1	$ 978.8

Senior Notes due 2025

The 2025 Notes are senior obligations of Koppers Inc., 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 and will mature on February 15, 2025 unless earlier redeemed or repurchased. On or after February 15, 2020, we are 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 April 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.

Credit Facility

On April 10, 2018, we amended our $600 million Revolving Credit Facility to enter into a new Secured Term Loan Facility (the “Credit Facility”). The new Credit Facility includes the $600 million Revolving Credit Facility and a secured term loan of $100 million with a quarterly amortization of $2.5 million and a five-year maturity. In addition, the maturity date of the amended Credit Facility was extended one year to April 2023. The interest rate on the amended Credit Facility is variable and is based on LIBOR.

Borrowings under the Credit Facility are secured by a first priority lien on substantially all of the assets of Koppers Inc., Koppers Holdings Inc. and their material domestic subsidiaries. The 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 March 31, 2019, we had $139.2 million of unused revolving credit availability for working capital purposes after restrictions from certain letter of credit commitments and other covenants. As of March 31, 2019, $18.7 million of commitments were utilized by outstanding letters of credit.

Construction Loans

Our 75-percent owned subsidiary, Koppers (Jiangsu) Carbon Chemical Company Limited (“KJCC”) entered into a committed loan facility agreement with a third-party bank. Borrowings under the third-party bank facility totaled $10.2 million at March 31, 2019 and are secured by a letter of credit issued by a bank under the Credit Facility. The construction loan portion of the third-party commitment requires semi-annual installments every six months with a final repayment in December 2020.

Events subsequent to March 31, 2019

On May 1, 2019, we entered into the Third Amendment to our credit agreement (the “Third Amendment”) and amended the Credit Facility to, among other things: (1) reset the Credit Facility termination date to May 1, 2024; and (2) revise certain financial statement covenants and related definitions and other covenants, including revising the definition of Consolidated EBITDA to increase the permitted add back of non-recurring, non-cash charges incurred in connection with the discontinuation or sale of business operations and excluding dividends and distributions made during the fiscal quarter ended September 30, 2018 from the definition of Fixed Charge Coverage Ratio. All other material terms, conditions and covenants with respect to the Credit Facility remain unchanged.

15. Asset Retirement Obligations

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

(Dollars in millions)	*March 31, 2019*	*December 31, 2018*
Asset retirement obligation at beginning of year	$ 27.0	$ 37.1
Accretion expense	0.4	1.7
Revision in estimated cash flows	1.0	0.8
Cash expenditures	(2.3)	(12.5)
Currency translation	0.0	(0.1)
Balance at end of period	$ 26.1	$ 27.0

16. Leases

As described more fully in Note 2 – “New Accounting Pronouncements,” on January 1, 2019, we adopted the provisions of ASU 2016-02 and recognized lease obligations and associated right-of-use assets for existing non-cancelable leases. We have non-cancelable operating leases primarily associated with railcars, office and manufacturing facilities, storage tanks, ships, production equipment and vehicles. Many of our leases include both lease (e.g., fixed rent) and non-lease components (e.g., maintenance and services). For certain asset classes such as railcars, storage tanks and ships, we have separated the lease and non-lease components based on the estimated stand-alone price for each component. For the remaining asset classes, we have elected the practical expedient to account for these components as a single lease component.

Many of our leases include one or more options to renew. The exercise of the lease renewal option is generally at our sole discretion. We evaluate renewal options at the lease commencement date and regularly thereafter to determine if we are reasonably certain to exercise the option, in which case we include the renewal period in our lease term. As most of our leases do not provide an implicit rate, we use our incremental borrowing rate based on information available to determine the present value of the lease payments.

Lease expense for operating leases is recognized on a straight-line basis over the lease term. Variable lease expense is recognized in the period in which the obligation for those payments is incurred. Operating lease costs were $8.0 million and variable lease costs were $0.9 million during the three months ended March 31, 2019.

The following table presents information about the amount and timing of cash flows arising from our operating leases as of March 31, 2019:

(Dollars in millions)		
2019	$	23.4
2020		28.5
2021		22.0
2022		18.3
2023		12.7
Thereafter		51.8
Total lease payments	$	156.7
Less: Interest		(39.6)
Present value of lease liabilities	$	117.1

Supplemental consolidated balance sheet information related to leases is as follows:

		March 31, 2019
(Dollars in millions)		
Operating leases:		
Operating lease right-of-use assets	$	116.3
Current operating lease liabilities	$	22.2
Operating lease liabilities		94.9
Total operating lease liabilities	$	117.1
Weighted average remaining lease term, in years		7.1
Weighted average discount rate		7.7%

17. Derivative Financial Instruments

We utilize derivative instruments to manage exposures to risks that have been identified and measured and are capable of being controlled. The primary risks managed by us 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 our manufacturing processes. Generally, we will not hedge cash flow exposures for durations longer than 30 months and we have hedged certain volumes of copper through December 2020. We enter into foreign currency forward contracts to manage foreign currency risk associated with our receivable and payable balances and foreign currency denominated sales. Generally, we enter into master netting arrangements with the counterparties and offset net derivative positions with the same counterparties. Currently, our 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, we designate certain of our commodity swaps as cash flow hedges of forecasted purchases of commodities. 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.

For those commodity swaps which are not designated as cash flow hedges, the fair value of the commodity 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. These amounts are classified in cost of sales in the consolidated statement of operations.

As of March 31, 2019 and December 31, 2018, we had outstanding copper swap contracts of the following amounts:

	Units Outstanding (in Pounds)		*Net Fair Value - Asset (Liability)*	
	March 31, 2019	*December 31, 2018*	*March 31, 2019*	*December 31, 2018*
(Amounts in millions)				
Cash flow hedges	28.4	35.5	$ 1.5	$ (6.8)
Not designated as hedges	11.0	13.3	0.8	(2.4)
Total	39.4	48.8	$ 2.3	$ (9.2)

As of March 31, 2019 and December 31, 2018, the fair value of the outstanding copper swap contracts is recorded in the balance sheet as follows:

	March 31, 2019	*December 31, 2018*
(Dollars in millions)		
Other current assets	$ 2.4	$ 0.0
Other assets	1.2	0.0
Accrued liabilities	(1.3)	(9.0)
Other long-term liabilities	0.0	(0.2)
Net asset (liability) on balance sheet	$ 2.3	$ (9.2)
Accumulated other comprehensive gain (loss), net of tax	$ 1.1	$ (5.3)

Based upon contracts outstanding at March 31, 2019, in the next twelve months we estimate that $0.8 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”, for amounts recorded in other comprehensive income and for amounts reclassified from accumulated other comprehensive loss to net income for the periods specified below. For the three months ended March 31, 2019 and 2018, the gain (loss) in earnings related to copper swap contracts was $3.1 million and $(3.5) million, respectively.

The fair value associated with forward contracts related to foreign currency that are not designated as hedges are immediately charged to earnings. These amounts are classified in cost of sales in the Condensed Consolidated Statement of Operations and Comprehensive Income.

As of March 31, 2019 and December 31, 2018, the fair value of outstanding foreign currency forward contracts is recorded in the balance sheet as follows:

	March 31, 2019	*December 31, 2018*
(Dollars in millions)		
Other current assets	$ 0.6	$ 0.9
Accrued liabilities	(1.0)	(1.0)
Net liability on balance sheet	$ (0.4)	$ (0.1)

As of March 31, 2019 and December 31, 2018, the net currency units outstanding for these contracts were:

	March 31, 2019	*December 31, 2018*
(In millions)		
British Pounds	GBP 5.7	GBP 5.7
New Zealand Dollars	NZD 16.0	NZD 16.0
United States Dollars	USD 5.5	USD 6.0
Canadian Dollars	CAD 8.7	CAD 0.0
Euro	EUR 1.2	EUR 1.2

18. Commitments and Contingent Liabilities

We and our subsidiaries are involved in litigation and various proceedings relating to environmental laws and regulations, 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 we or our subsidiaries fail to prevail in any of these legal matters or should several of these legal matters be resolved against us or our 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 were 65 plaintiffs in 35 cases pending as of March 31, 2019, which is unchanged from December 31, 2018. As of March 31, 2019, there were 34 cases pending in state court in Pennsylvania, and 1 case pending in state court in Tennessee.

The plaintiffs in all 35 pending cases seek to recover compensatory damages. Plaintiffs in 30 of those cases also seek to recover punitive damages. The plaintiffs in the 34 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.

Pavement Sealer Cases. Koppers Inc. is one of thirteen defendants in separate federal lawsuits recently filed by ten municipalities in the state of Minnesota since December 2018. These lawsuits were filed in federal district court in Minnesota. Each of the complaints allege that contamination caused by coal tar-based pavement sealer products has impacted their stormwater retention ponds resulting in substantially increased disposal costs when the ponds are periodically dredged. The plaintiffs seek to recover compensatory damages and other costs in addition to compelling the defendants to remove the alleged contamination from the plaintiffs' stormwater retention ponds and other stormwater-management devices. Plaintiffs filed a motion to consolidate nine of the ten cases. The tenth case is currently on a different schedule and is not part of the motion to consolidate. Defendants filed an opposition to the motion to consolidate and a hearing on the motion is currently scheduled for May 28, 2019.

We have not provided a reserve for the coal tar pitch or pavement sealer lawsuits because, at this time, we 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 our business, financial condition, cash flows and results of operations.

Environmental and Other Litigation Matters

We 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. We expect to incur substantial costs for ongoing compliance with such laws and regulations. We 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. We accrue 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. We have agreements with former owners of certain of our operating locations under which the former owners retained, assumed and/or agreed to indemnify us 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 our 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 us against the liabilities referred to above, including Beazer East, have performed their obligations in all material respects. We believe that, for the last three years ended December 31, 2018, amounts paid by Beazer East as a result of its environmental remediation obligations under the Indemnity have averaged, in total, approximately $11 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 we or our subsidiaries are held liable for or otherwise required to pay all or part of such liabilities without reimbursement, the imposition of such liabilities on us or our subsidiaries could have a material adverse effect on our business, financial condition, cash flows and results of operations. Furthermore, we could be required to record a contingent liability on our balance sheet with respect to such matters, which could result in a negative impact to our business, financial condition, cash flows and results of operations.

Domestic Environmental Matters. On June 4, 2018, Koppers Inc. received a letter from the U.S. Environmental Protection Agency ("EPA") concerning potential violations of the Clean Water Act observed during inspections and review of Spill Prevention, Control and Countermeasure Plans and Facility Response Plans at our facilities in Follansbee, WV; Green Spring, WV; and Clairton, PA. In addition, the EPA reviewed one facility’s compliance with an earlier consent order regarding above ground storage tank integrity testing. We continue to meet and correspond with the EPA to discuss and present relevant information related to the allegations. We currently cannot estimate the potential penalties, fines or other expenditures, if any, that may result from any EPA actions relating to the alleged potential violations and, therefore, we cannot determine if the ultimate outcome of this matter will have a material impact on our financial position, results of operations or cash flows.

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 EPA information request and has executed a PRP agreement which outlines a private 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 minimis* contributor at the site.

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 private allocation process, which is ongoing.

Additionally, Koppers Inc. is involved in two separate natural resource damages assessments at the Portland Harbor site. An assessment is intended to identify damages to natural resources caused by the releases of hazardous substances to the Willamette River and to serve as the foundation to estimate liabilities for settlements of natural resource damages claims or litigation to recover from those who do not settle with the trustee groups. One of the natural resource damage assessments was filed in January 2017 by the Yakama Nation in Oregon federal court. Yakama Nation seeks recovery for future response costs and the costs of assessing injury to natural resources and recovery for past costs of overseeing investigations conducted on the site. Currently, a magistrate judge has recommended the Yakama Nation case be stayed pending completion of the private allocation process for the Portland Harbor CERCLA site. A final ruling on the stay is pending.

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 minimis* party at this site.

We have 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 $2.2 million at March 31, 2019. 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 our business, financial condition, cash flows and results of operations.

There are two plant sites related to the Performance Chemicals business and one plant site related to the Utility and Industrial Products business in the United States where we have recorded environmental remediation liabilities for soil and groundwater contamination which occurred prior to our acquisition of the businesses. As of March 31, 2019, our estimated environmental remediation liability for these acquired sites totals $5.0 million.

Foreign Environmental Matters. There is one plant site related to the Performance Chemicals business located in Australia where we have recorded an environmental remediation liability for soil and groundwater contamination which occurred prior to the acquisition of the business. As of March 31, 2019, our estimated environmental remediation liability for this acquired site totals $1.4 million.

In December 2011, we ceased manufacturing operations at our Continental Carbon facility located in Kurnell, Australia. As of March 31, 2019, we believe we have fully satisfied all site remediation responsibilities resulting from the closure.

Environmental Reserves Rollforward. The following table reflects changes in the accrued liability for environmental matters, of which $3.5 million and $3.5 million are classified as current liabilities at March 31, 2019 and December 31, 2018, respectively:

		Period ended
	March 31, 2019	*December 31, 2018*
(Dollars in millions)		
Balance at beginning of year	$ 10.1	$ 13.9
Expense	0.0	0.9
Reversal of reserves	0.0	(2.4)
Cash expenditures	(0.1)	(3.8)
Acquisition	0.0	1.9
Currency translation	0.1	(0.4)
Balance at end of period	$ 10.1	$ 10.1

19. Related Party Transactions

At December 31, 2017, KJCC had an outstanding loan from its 25-percent non-controlling shareholder of $2.5 million. This loan was repaid in November 2018.

20. Fair Value Measurements

Carrying amounts and the related estimated fair values of our financial instruments as of March 31, 2019 and December 31, 2018 are as follows:

	March 31, 2019		December 31, 2018	
(Dollars in millions)	*Fair Value*	*Carrying Value*	*Fair Value*	*Carrying Value*
Financial assets:				
Cash and cash equivalents, including restricted cash	$ 38.1	$ 38.1	$ 40.6	$ 40.6
Investments and other assets[(a)]	1.2	1.2	1.2	1.2
Financial liabilities:				
Long-term debt (including current portion)	$ 1,002.7	$ 1,024.2	$ 945.3	$ 1,002.6

(a) Excludes equity method investments.

Cash and cash equivalents – The carrying value 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 our long-term debt is estimated based on the market prices for the same or similar issuances or on the current rates offered to us for debt of the same remaining maturities (Level 2). The fair value of our Credit Facility approximates carrying value due to the variable rate nature of this instrument.

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 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, 2018.

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 the United States and Australia. We also provide rail joint bar products as well as various services to the railroad industry. In April 2018, we re-entered the North American utility pole market with the acquisition of Cox Industries, Inc., which has been renamed Koppers Utility and Industrial Products Inc. ("UIP"). UIP manufactures and sells utility poles and construction and marine pilings through a network of eight manufacturing facilities and 19 distribution yards located throughout the United States. In February 2018, Koppers Inc. acquired M.A. Energy Resources, LLC, a business related to the recovery of used crossties, which was renamed Koppers Recovery Resources LLC ("KRR") subsequent to the acquisition.

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 material pricing and availability, in particular the cost and availability of hardwood lumber for railroad crossties and softwood lumber for utility poles, 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

We provide our customers with treated and untreated wood products, rail joint bars and services primarily for the railroad markets in the United States and Canada. In addition, we supply treated utility poles for the utility sector in the United States and Australia. The primary end-markets for RUPS is the North American railroad industry, which has an installed base of approximately 700 million wood crossties, and the investor-owned utility industry which utilizes wooden distribution and transmission poles. Both crossties and utility poles require periodic replacement. Historically, North American demand for crossties had been in the range of 22-25 million annually. However, the crosstie replacement market has been significantly lower recently. According to the Railway Tie Association (“RTA”), the estimated total crosstie installations in 2018 were approximately 21 million, of which 16 million were for Class I railroads. The RTA has issued a preliminary forecast expecting fundamental demand for the industry to increase from prior year to approximately 23 million in 2019.

For distribution poles, nearly half of the installed base is 40-plus years old and the demand has historically been in the range of two to three million annually. On an overall basis, we believe that the rate at which utilities purchase utility poles will grow as they continue replacement programs within their service territories. Given that backdrop, we anticipate that 2019 will continue to be a stable year from a demand standpoint. 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. We procure untreated crossties, either on behalf of our customers, or for our own inventory for future treating. We also procure switch ties and various other types of lumber used for railroad bridges and crossings. Untreated crossties go through a six- to nine-month air seasoning process before they are ready to be pressure treated. After the air seasoning process is complete, the crossties are pressure treated using creosote-only treatment or a combined creosote and borate treatment. 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.

For the past several years, the major companies in the rail industry substantially reduced both operating and capital spending from peak spending levels, which had a negative impact on sales of various products and services that we provide to that industry. Current year revenues and profitability reflect an increase year-over-year due to a slight rise in demand as capital budgets have now stabilized for most North American Class I railroads. 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 are positioned to maintain or grow our current market position.

According to the Association of American Railroads (“AAR”), the level of business activity for the railroad industry is dependent on, to a large extent, trends occurring in other sectors of the economy. In the recent past, the Class I railroads were highly dependent on the oil and gas and coal mining industries. Currently, the railroads are more correlated to trade relations, commodity prices and interest rates. The AAR reported that rail traffic has been trending down recently. For the three months ended March 31, 2019, total U.S. carload traffic decreased 3.1 percent from last year while intermodal units were lower by 0.6 percent from the prior year. For the three months ended March 31, 2019, combined U.S. traffic for carloads and intermodal units was 1.8 percent lower than prior year. Although year-over-year rail traffic had been relatively positive during the past several years, the amount of heavy-haul loads such as coal and fracking sands have declined significantly from historical levels. As a result, this translates into lighter-weight loads having less wear on tracks and ties.

Over an economic cycle, the long-term prognosis for the railroad industry and the products and services that we provide to it are generally favorable. However, in the near-term, railroad customers have scaled back and are focusing on reducing their operating costs and working capital. In 2019, demand has shown modest improvements in the first quarter of the year and we anticipate that to continue, contingent on the availability of lumber for untreated crosstie production.

In terms of raw material, there was less available inventory of untreated crossties from the sawmills during 2018 and lumber prices increased dramatically due to unfavorable weather conditions affecting production. The RTA indicates that the industry continues to experience a shortage of lumber availability and consequently, the sawmills are reducing their tie production, which has resulted in a tightness in the supply of untreated crossties which challenges our ability to procure needed inventory. In addition, the potential effects from the impending tariffs on trade between China and the U.S. may negatively impact the hardwood industry and the availability of lumber. To the extent that we can build our untreated tie inventory, we anticipate having higher levels of dry crosstie inventory ready for treatment.

In addition, over the last several years, certain Class I railroads have shifted from a treatment-service only model to having suppliers hold untreated inventory until the crossties have been treated. Going forward, we estimate that the remaining potential impact of this transition could be a further increase of working capital of approximately $50 million primarily due to higher inventory, and the associated revenue cycle could be temporarily extended for approximately six to nine months, for approximately $50 million in total. The actual timing of this impact will be dependent on the date, if at all, when the remaining customer makes the transition.

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 and strong customer relationships, we will ultimately benefit from increased demand.

Strategic Initiatives and Integration Synergies

As part of optimizing our business, we continue to evaluate a number of opportunities to improve efficiencies in our operational processes, people and facilities. With 18 treating facilities related to our RUPS and UIP businesses operating at less than full utilization, our goal is to either capture more volume through the existing facilities or consolidate our operating footprint. We are pursuing actions to achieve both goals, which should begin realizing benefits in 2019. Overall, through a combination of strategic initiatives and integration synergies, we expect to deliver $25 million to $40 million in annualized benefits over five years, with $10 million expected to be realized in 2019.

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, New Zealand and Africa. 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.

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.

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 over time by entering into hedging transactions for the majority of our copper needs, which primarily range from six months up to 30 months. These 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. These forward positions are typically marked to market.

Product demand for our PC business has historically been closely associated with consumer spending on home repair and remodeling projects, and therefore, trends in existing home sales serve as a leading indicator. Overall, the market for existing homes continues to show mixed signals. According to the National Association of Realtors® (“NAR”), total existing-home sales in February were up nearly 12 percent from January, although sales were 1.8 percent lower from a year ago.

According to the Leading Indicator of Remodeling Activity (“LIRA”) reported by the Joint Center for Housing Studies of Harvard University, the annual growth in the national market for home improvement and repair has been revised lower and is now expected to grow 5.1 percent compared to 7.5 percent previously. Even so, LIRA projects that spending on these areas is still anticipated to expand to more than $350 billion nationally.

The Conference Board Consumer Confidence Index partially rebounded in April to 129.2, compared with 124.2 in March, but still remains below the levels seen last fall. Even so, the Conference Board indicates that consumers expect the economy to continue growing at a solid pace into the summer months. These relatively strong confidence levels should continue to support consumer spending in the near-term.

From a margin perspective, our profitability has been unfavorably impacted by rising raw material costs, primarily due to copper prices which began to trend higher in 2017, continued into 2018 and then pulled back from highs reached in the first half of 2018. Overall, copper prices in 2018 were higher, and given that we make purchasing commitments approximately 12 to 18 months in advance of the following 12-month period, we expect higher year-over-year raw material costs throughout 2019. Our strategy is to hedge a majority of our requirements over a one-to-three year time frame in order to provide short-term certainty and visibility of our cost structure by lessening the impact that may arise in commodity markets. In a rising copper price environment, as has been the case for much of the past twenty-four months, our average hedged prices have increased from prior year. That trend has continued in 2019. We have begun hedging for our input needs in 2020 and as long as copper prices remain at current levels, we anticipate a year-over-year benefit for that time period. We have implemented pricing actions, where possible, to partially offset the impact of higher input costs.

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 levels required to meet creosote demand in North America for the treatment of railroad crossties. As a result of these initiatives, we expect additional restructuring and related charges to earnings of approximately $6.0 million through 2020. The overall expected future cash requirements for the CMC plant closures are estimated to be approximately $20 million through 2021.

We currently supply our North American RUPS business with 100 percent of its creosote requirements. As discussed in the RUPS outlook, there has been a decrease starting in 2017 with respect to spending for railroad infrastructure. This results in a shift in excess distillate production to the commodity carbon black feedstock market until demand stabilizes for creosote and eventually returns to higher 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. However, beginning in 2018, aluminum production in the U.S. increased to some extent as tariffs are being imposed on certain imported steel and aluminum products that has stimulated restarts of previously idled capacity. This development has resulted in additional demand for carbon pitch in the United States that can likely only be sustained through a continuation of current trade policy.

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. Over the past three years we have consolidated our operating footprint and significantly lowered production levels at the same time that we added distribution assets to move finished products from Europe to the U.S. more efficiently. As a result, our raw material needs in North America have been significantly less than historically required. In early 2017, we entered into several new long-term supply agreements to further lower our exposure to coal tar availability risk and volatile end markets.

For the external markets served by our CMC business, we expect that North America, Europe and Australia will benefit from relatively favorable demand levels for carbon pitch. However, end market pricing for some products has been under pressure in certain regions as competitors are trying to take market share. Also, CMC margins are being negatively impacted by higher cost of raw materials in 2019.

With respect to our largest customer in China, we believe that the pricing we have received has been understated for a number of quarterly periods prior to the fourth quarter of 2018. While we continue to engage in discussions with this customer and hope to resolve the disagreement in accordance with certain provisions in our contractual relationship, we have not recognized any incremental revenue associated with the higher price that we believe is accurate.

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 March 31, 2019 and 2018

Consolidated Results

Net sales for the three months ended March 31, 2019 and 2018 are summarized by segment in the following table:

	Three Months Ended March 31,		
	2019	2018	Net Change
(Dollars in millions)			
Railroad and Utility Products and Services	$ 166.1	$ 108.4	53%
Performance Chemicals	99.0	97.4	2%
Carbon Materials and Chemicals	169.8	200.3	-15%
	$ 434.9	$ 406.1	7%

RUPS net sales increased by $57.7 million or 53 percent compared to the prior year period. The sales increase was primarily due to the acquisition of UIP in the second quarter of the prior year as well as volume increases in the Class I and commercial crosstie markets and rail services in the current year period. Sales of crossties increased by $9.2 million in the current year period. In the prior year period, lower sales volumes of crossties was a result of decreased spending in the rail industry, particularly the Class I market. Also, the railroad bridge business was affected in the prior year period by unfavorable weather conditions in various regions throughout the United States that caused project delays.

PC net sales increased by $1.6 million or two percent compared to the prior year period. The slightly higher sales were due primarily to higher volumes in North America mainly attributable to our new fire retardant product and in Australasia for light organic solvent preservatives. Sales of copper-based preservatives in North America realized a more favorable pricing mix in the current year period, partially offset by a slight decrease in sales volumes of those products.

CMC net sales decreased by $30.5 million or 15 percent compared to the prior year period due mainly to lower sales prices for carbon pitch in China along with lower sales volumes of carbon black feedstock and phthalic anhydride and an unfavorable impact from foreign currency translation, partially offset by increased volumes for carbon pitch in China, North America and Europe. In Australia, higher sales prices for carbon pitch and carbon black feedstock were driven primarily by higher raw material cost and increases in global oil pricing.

Cost of sales as a percentage of net sales was 81 percent for the quarter ended March 31, 2019 compared to 77 percent in the prior year quarter. Lower gross margins for CMC were driven by higher raw material prices globally. These were offset by higher gross margins for PC driven by favorable pricing and higher gross margins for RUPS due to increased sales volumes of crossties.

Depreciation and amortization charges for the quarter ended March 31, 2019 was $2.8 million higher when compared to the prior year period due mainly to assets placed in service over the past year related to our new naphthalene unit at our CMC plant in Stickney, Illinois along with depreciation and amortization from our acquisition of UIP in the second quarter of 2018.

Impairment and restructuring expenses for the quarter ended March 31, 2019 were $1.2 million lower when compared to the prior year period due mainly to prior year charges for 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. Current year charges consist primarily of remaining restructuring-related costs and depreciation at our Follansbee, West Virginia facility.

Selling, general and administrative expenses for the quarter ended March 31, 2019 were $0.3 million lower when compared to the prior year period due primarily to a decrease of $2.1 million of acquisition-related expenses and $2.0 million from lower compensation expense, offset by incremental costs within KRR and UIP in the current year period.

Interest expense for the quarter ended March 31, 2019 was $6.2 million higher when compared to the prior year period primarily due to the higher average debt level to fund our acquisitions of UIP and KRR in 2018.

Income tax benefit for the quarter ended March 31, 2019 was $0.1 million. Income tax expense for the quarter ended March 31, 2018 was $9.2 million. The decrease in income tax expense is primarily due to a reduction in pre-tax earnings when compared to the prior period and due to favorable discrete items. Discrete items were primarily related to the reversal of various unrecognized tax benefits due to audit closures. Income tax (benefit) expense as a percentage of pre-tax profit for the three months ended March 31, 2019 and 2018 were 0.8 percent and 27.9 percent, respectively. The decrease in this percentage is largely due to the effect of the favorable discrete items.

Segment Results

Segment operating profit for the three months ended March 31, 2019 and 2018 is summarized by segment in the following table:

	Three Months Ended March 31, 2019	Three Months Ended March 31, 2018	% Change
(Dollars in millions)			
Operating profit (loss):			
Railroad and Utility Products and Services	$ 8.7	$ 1.1	691%
Performance Chemicals	12.8	5.6	129%
Carbon Materials and Chemicals	7.4	37.2	-80%
Corporate	(0.5)	(0.6)	17%
	$ 28.4	$ 43.3	-34%
Operating profit as a percentage of net sales:			
Railroad and Utility Products and Services	5.2%	1.0%	4.2%
Performance Chemicals	12.9%	5.7%	7.2%
Carbon Materials and Chemicals	4.4%	18.6%	-14.2%
	6.5%	10.7%	-4.2%

RUPS operating profit increased by $7.6 million compared to the prior year period. Operating profit as a percentage of net sales increased to 5.2 percent from 1.0 percent in the prior year period. Operating profit as a percentage of net sales for the three months ended March 31, 2019 was impacted by increased treating volumes of crossties to Class I customers coupled with commercial crosstie market price increases and higher demand.

PC operating profit increased by $7.2 million compared to the prior year period. Operating profit as a percentage of net sales increased to 12.9 percent from 5.7 percent in the prior year quarter. The current year period was favorably impacted by a net amount of $6.6 million due to changes in unrealized gains and losses from our copper swap contracts as compared to the prior year period. Higher year-over-year raw material prices partially offset our slight increase in sales for the quarter ended March 31, 2019.

CMC operating profit decreased by $29.8 million or 80 percent compared to the prior year period. Operating profit as a percentage of net sales decreased to 4.4 percent from 18.6 percent in the prior year quarter. Operating profit for the three months ended March 31, 2019 was negatively affected by lower sales prices for carbon pitch in China along with lower sales volumes of carbon black feedstock and phthalic anhydride, higher raw material costs in Australasia and Europe and an unfavorable impact from foreign currency translation, partially offset by increased volumes for carbon pitch in China, North America and Europe, and a more streamlined and efficient cost structure across the entire segment.

Cash Flow

Net cash used in operating activities for the three months ended March 31, 2019 was $14.4 million compared to net cash used in operating activities of $29.0 million in the prior year period. The net decrease of $14.6 million in cash used in operations was due primarily to lower working capital usage of $32.7 million compared to the prior year period principally as a result of a favorable impact on cash from a period over period change in accrued liabilities of $15.7 million. The cash impact of lower working capital usage was partially offset by a reduction in net income of $11.3 million.

Net cash used in investing activities amounted to $9.3 million for the three months ended March 31, 2019 compared to net cash used in investing activities of $85.1 million in the prior year period. The decrease in cash used for investing activities of $75.8 million is primarily due to $62.9 million of net cash used for acquisitions in the prior year period as well as prior 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. Both of these projects were substantially completed by the end of 2018.

Net cash provided by financing activities was $20.8 million for the three months ended March 31, 2019 compared to $105.9 million of net cash provided by financing activities in the prior year period. The cash provided by financing activities in the three months ended March 31, 2019, reflected net borrowings of $21.4 million and repurchases of common stock of $0.9 million. The cash provided by financing activities in the prior year period reflected net borrowings of revolving credit of $116.9 million and offset by net repayments of long-term debt of $3.8 million, payment of debt issuance costs of $1.1 million from the issuance of new debt and repurchases of common stock of $7.4 million.

Liquidity and Capital Resources

We have a $600.0 million senior secured revolving credit facility and a $100.0 million secured term loan with a maturity date of May 2024. The interest rate on the Credit Facility is variable and is based on LIBOR. On May 1, 2019, we entered into the Third Amendment and amended the Credit Facility to, among other things: (1) reset the Credit Facility termination date to May 1, 2024; and (2) revise certain financial statement covenants and related definitions and other covenants, including revising the definition of Consolidated EBITDA to increase the permitted add back of non-recurring, non-cash charges incurred in connection with the discontinuation or sale of business operations and excluding dividends and distributions made during the fiscal quarter ended September 30, 2018 from the definition of Fixed Charge Coverage Ratio. All other material terms, conditions and covenants with respect to the Credit Facility remain unchanged.

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 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 $500 million Senior Notes due 2025 (the "2025 Notes"), (2) no event of default or potential default has occurred or is continuing under our 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 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 indenture, is not able to incur additional indebtedness (as defined in the indenture), and (3) the sum of all restricted payments (as defined in the 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 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 indenture) or the value of the assets of an unrestricted subsidiary which is designated a restricted subsidiary. At March 31, 2019, the basket totaled $134.9 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 Credit Facility may restrict the ability of Koppers Inc. to pay dividends. Koppers Holdings last declared a dividend in November 2014 and does not expect to declare any dividends for the foreseeable future.

Liquidity

Borrowings under the 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 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 March 31, 2019 we had $139.2 million of unused revolving credit availability for working capital purposes after restrictions by various debt covenants and certain letter of credit commitments. As of March 31, 2019, $18.7 million of commitments were utilized by outstanding letters of credit.

The following table summarizes our estimated liquidity as of March 31, 2019 *(dollars in millions)*:

Cash and cash equivalents[1]	$	38.1
Amount available under Credit Facility		139.2
Total estimated liquidity	$	177.3

(1) Cash includes approximately $34.6 million held by foreign subsidiaries.

Our estimated liquidity was $219.6 million at December 31, 2018.

Our remaining 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, liability transfers of closed facilities and the funding of plant consolidation and rationalizations. We may also use cash to pursue other potential strategic acquisitions or voluntary pension plan contributions. Capital expenditures in 2019, excluding acquisitions, if any, are expected to total approximately $30 million and are expected to be funded by cash from operations

Debt Covenants

The covenants under the Third Amendment that affect availability of the 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 March 31, 2019 was 1.50.
- The total secured leverage ratio, calculated as of the end of each fiscal quarter for the four fiscal quarters then ended, is not permitted to exceed 3.25. The leverage ratio at March 31, 2019 was 2.57.
- The total leverage ratio, calculated as of the end of each fiscal quarter for the four fiscal quarters then ended, is not permitted to exceed 5.50. The leverage ratio at March 31, 2019 was 4.99.

We are currently in compliance with all covenants governing the Credit Facility. Our continued ability to meet those financial ratios can be affected by events beyond our control, however, excluding possible acquisitions, we currently expect that our net cash flows from operating activities and funds available from our 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 of this Part I is incorporated herein by reference.

Critical Accounting Policies

We adopted ASU 2016-02, Leases (Topic 842) effective January 1, 2019 using the modified retrospective approach with no restatement of comparative periods presented. The adoption is accounted for as a change in accounting principle in conformity with FASB Accounting Standards Codification ("ASC") 250, “Accounting Changes and Error Corrections”.

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 this 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 our Annual Report on Form 10-K for the year ended December 31, 2018.

ITEM 4. CONTROLS AND PROCEDURES

Our management, with the participation of the Chief Executive Officer and Chief Financial Officer and utilizing the Committee of Sponsoring Organizations of the Treadway Commission (COSO) Internal Control – Integrated Framework (2013), have evaluated the effectiveness of our 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.

Beginning January 1, 2019, we adopted the provisions of ASU No. 2016-02, Leases (Topic 842). We implemented changes to our processes and control activities as a result of adopting Topic 842 related to lease identification and subsequent accounting for leases entered into, and financial statement disclosure. These included the development of new policies based on the guidance provided in the new lease standard, new training related to Topic 842, ongoing lease contract review requirements, and gathering of information provided for disclosures.

On April 10, 2018, we acquired UIP and on February 28, 2018, we acquired KRR. In conducting our evaluation of the effectiveness of internal controls over financial reporting, we will include UIP and KRR when conducting our annual evaluation of internal controls. We are implementing internal controls over significant processes specific to UIP and KRR that management believes are appropriate in consideration of related integration of operations, systems, control activities. As of the date of this Quarterly Report on Form 10-Q, we are in the process of further integrating the acquired UIP and KRR operations into our overall internal controls 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 our Annual Report on Form 10-K for the year ended December 31, 2018.

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

Not applicable.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

Not applicable.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

Credit Agreement Amendment

On May 1, 2019, we entered into the Third Amendment and amended the Credit Facility to, among other things: (1) reset the Credit Facility termination date to May 1, 2024; and (2) revise certain financial statement covenants and related definitions and other covenants, including revising the definition of Consolidated EBITDA to increase the permitted add back of non-recurring, non-cash charges incurred in connection with the discontinuation or sale of business operations and excluding dividends and distributions made during the fiscal quarter ended September 30, 2018 from the definition of Fixed Charge Coverage Ratio. All other material terms, conditions and covenants with respect to the Credit Facility remain unchanged.

The foregoing description of the Third Amendment is not and does not purport to be a complete statement of the parties' rights and obligations under the Third Amendment and is qualified in its entirety by reference to the Third Amendment, a copy of which is filed as Exhibit 10.126 to this Quarterly Report on Form 10-Q.

Election of Chief Accounting Officer

On May 2, 2019, Bradley A. Pearce, Director, Corporate Control and Taxes for Koppers Inc. ("Koppers"), was elected to the position of Chief Accounting Officer, Koppers and Koppers Holdings Inc., effective immediately.

Mr. Pearce, age 52, has served as Director, Corporate Control and Taxes for Koppers, since April 2008. In that position, Mr. Pearce has had responsibility for the accounting operations of Koppers, including, but not limited to, the preparation of periodic financial reports, maintenance of accounting records, and internal controls. In addition, he managed tax compliance, tax planning and accounting for income taxes.

Mr. Pearce's compensation includes the following:

- Annual base salary of $216,000.
- Participation in the Koppers Annual Incentive Plan, subject to such terms and conditions as the Board of Directors shall determine from time to time, with an annual incentive target of 30% of annual base salary.
- Participation in the Company's 2018 Long Term Incentive Plan (the "LTIP"), subject to the terms and conditions of the LTIP.

ITEM 6. EXHIBITS

10.126*	Third Amendment to Credit Agreement and Joinder, dated as of May 1, 2019, by and among Koppers Inc., as Borrower, the Guarantors party thereto, the Lenders party thereto, and PNC Bank, National Association, as Administrative Agent
31.1*	Certification of Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1*	Certification of Chief Executive Officer and Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS*	XBRL Instance Document
101.SCH*	XBRL Taxonomy Extension Schema Document
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document

* Filed herewith.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

KOPPERS HOLDINGS INC.
(REGISTRANT)

Date: May 3, 2019

By: /s/ MICHAEL J. ZUGAY
Michael J. Zugay
Chief Financial Officer and Treasurer
(Principal Financial Officer,
Principal Accounting Officer and Duly Authorized Officer)

Exhibit 10.126

THIRD AMENDMENT TO CREDIT AGREEMENT

THIS THIRD AMENDMENT TO CREDIT AGREEMENT (the "Amendment"), dated as of May 1, 2019 (the "Third Amendment Closing Date"), is made by and among KOPPERS INC., a Pennsylvania corporation (the "Borrower"), the GUARANTORS (as defined in the Credit Agreement (as hereinafter defined)), the LENDERS (as defined in the Credit Agreement), and PNC BANK, NATIONAL ASSOCIATION, as Administrative Agent for the Lenders (in such capacity, the "Administrative Agent").

W I T N E S S E T H:

WHEREAS, the Borrower, the Guarantors, the Lenders and the Administrative Agent are parties to that certain Credit Agreement dated as of February 17, 2017, as amended by a First Amendment to Credit Agreement dated as of February 26, 2018, and a Second Amendment to Credit Agreement and Joinder dated as of April 10, 2018 (as so amended, the "Credit Agreement"); and

WHEREAS, the Borrower has requested that the Lenders (i) extend the expiration date of the revolving credit facility available to the Borrower under the Credit Agreement and the maturity date of the Term Loan advanced under the Credit Agreement, and (ii) amend certain other provisions of the Credit Agreement which relate to the financial covenants and related definitions, and the Lenders are willing to effect such credit accommodations upon and subject to the terms and conditions of this Amendment.

NOW, THEREFORE, the parties hereto, in consideration of their mutual covenants and agreements hereinafter set forth and intending to be legally bound hereby, covenant and agree as follows:

1. Definitions. Except as set forth in this Amendment, defined terms used herein shall have the meanings given to them in the Credit Agreement.

2. Amendment of Section 1.1 [Certain Definitions]. The following definitions in Section 1.1 of the Credit Agreement are either amended or inserted as follows:

(a) Clause (k) in the definition of Consolidated EBITDA is hereby amended and restated to the following:

"(k) non-recurring cash and non-cash charges to net income related to discontinuation or sale of business operations of Holdings and its Subsidiaries as such charges are incurred in an aggregate amount not greater than the following amounts for the following periods: (y) January 1, 2018 through and including December 31, 2018, $24,400,000 and (z) January 1, 2019 and continuing for the balance of the term of this Agreement, $75,000,000,"

(b) The definition of Expiration Date is hereby amended and restated as follows:

"Expiration Date shall mean May 1, 2024."

(c) The definition of Fixed Charge Coverage Ratio is hereby amended and restated as follows:

“Fixed Charge Coverage Ratio shall mean the ratio of (i) Consolidated EBITDA *minus* Capital Expenditures of Holdings and its Subsidiaries *minus* cash taxes of Holdings and its Subsidiaries, to (ii) Fixed Charges, excluding dividends and distributions made by Holdings during the fiscal quarter ended September 30, 2018.”

(d) The following new definition is hereby inserted in Section 1.1 in alphabetical order:

“Third Amendment Closing Date” shall mean May 1, 2019.

3. New Section 1.5 [Divisions]. The following new Section 1.5 is hereby inserted in the Credit Agreement immediately following Section 1.4:

“1.5 Divisions.
For all purposes under the Loan Documents, in connection with any division or plan of division under Delaware law (or any comparable event under a different jurisdiction’s laws): (a) if any asset, right, obligation or liability of any Person becomes the asset, right, obligation or liability of a different Person, then it shall be deemed to have been transferred from the original Person to the subsequent Person, and (b) if any new Person comes into existence, such new Person shall be deemed to have been organized on the first date of its existence by the holders of its equity interests at such time.”

4. Amendment to Section 8.2.16 [Maximum Total Secured Leverage Ratio]. Section 8.2.16 of the Credit Agreement is hereby amended and restated as follows:

“8.2.16 Maximum Total Secured Leverage Ratio.
The Loan Parties shall not permit the Total Secured Leverage Ratio, calculated as of the end of each fiscal quarter for the four fiscal quarters then ended, to exceed 3.25 to 1.00, with step downs (A) if an Equity Issuance has not occurred, to (i) 3.00 to 1.00 on December 31, 2019, and (ii) 2.75 to 1.00 on December 31, 2020; and (B) if an Equity Issuance has occurred, to (i) 3.00 to 1.00 upon such Equity Issuance, and (ii) 2.75 to 1.00 on December 31, 2019; provided, that if (i) the maximum Total Secured Leverage Ratio required pursuant to this Section 8.2.16 as of such date is not more than 2.75 to 1.00 and (ii) Undrawn Availability is at least $50,000,000, then the Borrower may elect, with prior written notice to the Administrative Agent, to increase the applicable maximum Total Secured Leverage Ratio to 3.00 to 1.00 during the period of four (4) consecutive fiscal quarters immediately following the consummation of a Material Acquisition (commencing with the fiscal quarter in which such Material Acquisition occurs) (a "Material Acquisition Period"); provided further, that (a) immediately after the end of a Material Acquisition Period, the Total Secured Leverage Ratio shall automatically revert to 2.75 to 1.00 and (b) there shall be not more than one (1) Material Acquisition Period during the term of this Agreement.”

5. Amendment to Section 8.2.17 [Maximum Total Leverage Ratio]. Section 8.2.17 of the Credit Agreement is hereby amended and restated as follows:

"8.2.17 Maximum Total Leverage Ratio.

The Loan Parties shall not permit the Total Leverage Ratio, calculated as of the end of each fiscal quarter for the four fiscal quarters then ended, to exceed 5.50 to 1.00, with step downs (A) if an Equity Issuance has not occurred, to (i) 5.25 to 1.00 on December 31, 2019, (ii) 5.00 to 1.00 on December 31, 2020, and (iii) 4.75 to 1.00 on December 31, 2021; and (B) if an Equity Issuance has occurred, to (i) 5.25 to 1.00 upon such Equity Issuance, (ii) 5.00 to 1.00 on December 31, 2019, and (iii) 4.75 to 1.00 on December 31, 2020."

6. Amendment to the Credit Agreement. Effective as of the Third Amendment Closing Date and subject to the terms and conditions set forth herein and in reliance upon the representations and warranties set forth herein, the Credit Agreement shall be amended as set forth above.

7. Amendment to Schedules. (a) Each of the Schedules to the Credit Agreement listed in the table below is hereby amended and restated in its entirety as set forth on the respective correspondingly numbered Schedules attached hereto and made apart hereof:

Schedules:
Schedule 1.1(B) - Commitments of Lenders
Schedule 6.1.1 - Qualifications To Do Business (as of the Third Amendment Closing Date)
Schedule 6.1.2 - Subsidiaries
Schedule 6.1.7 - Owned and Leased Real Property (as of the Third Amendment Closing Date)
Schedule 6.1.16 - Partnership Agreements; LLC Agreements
Schedule 6.1.23 - Environmental Disclosures
Schedule 8.2.9 - Permitted Partnerships, LLC's, Joint Ventures

(b) Each of the Schedules to the Pledge Agreement and the Security Agreement listed in the table below are hereby amended and restated in their entirety as set forth on the respective corresponding Schedules attached hereto and made apart hereof:

Schedules:
Schedule A to Pledge Agreement
Schedules to Security Agreement

(c) Each of the Patent, Trademark and Copyright Security Agreement Schedules and the Material IP Listing are hereby amended and restated in their entirety as set forth in the respective documents delivered to the Administrative Agent.

8. Amendment to Exhibits. Exhibit 8.2.6 and Exhibit 8.3.3 of the Credit Agreement are hereby amended and restated in their entirety as set forth on, Exhibit 8.2.6 [Acquisition Compliance Certificate] and Exhibit 8.3.3 [Quarterly Compliance Certificate], attached hereto and made a part hereof.

9. Revolving Credit Commitments and Term Loans. One or more of the Lenders (each, a "Non-Extending Lender") has elected not to extend its Revolving Credit Commitment

pursuant to the terms of this Amendment, and as a result, its Revolving Credit Commitment shall terminate on the Third Amendment Closing Date, and the Term Loan of each Non-Extending Lender shall be paid in full on the Third Amendment Closing Date. The Revolving Credit Commitments and Term Loans of the Lenders who continue to extend Revolving Credit Commitments and Term Loans to the Borrower are hereby reallocated among the Lenders effective as of the Third Amendment Closing Date. Each such Lender, by executing and delivering this Amendment, agrees in connection therewith (i) to provide a Revolving Credit Commitment in the amount for such Lender as set forth on Schedule 1.1(B) attached hereto, and (iii) to continue to provide a Term Loan to the Borrower in the amount for such Lender as set forth on Schedule 1.1(B) attached hereto. The aggregate amount of the Term Loans outstanding on the Third Amendment Closing Date is $87,500,000.00.

10. Conditions Precedent. The Loan Parties and the Lenders acknowledge and agree that the amendments set forth herein shall only be effective upon the occurrence of all the following conditions precedent:

(a) Amendment; Replacement Notes. The Loan Parties, the Administrative Agent and the Lenders shall have executed and delivered this Amendment to the Administrative Agent. The Borrower shall have executed and delivered to the Administrative Agent replacement Notes for any Lender which (i) is increasing its Revolving Credit Commitment and/or Term Loan as of the Third Amendment Closing Date, and (ii) has requested a replacement Note in the amount of such increased Revolving Credit Commitment or Term Loan.

(b) Officer's Certificates. The Administrative Agent shall have received a certificate of each of the Loan Parties signed by an Authorized Officer, dated as of the date hereof stating that (i) all representations and warranties of the Loan Parties set forth in the Credit Agreement are true and correct in all material respects (ii) the Loan Parties are in compliance with each of the covenants and conditions in this Amendment and the Credit Agreement, (iii) no Event of Default or Potential Default exists, and (iv) no Material Adverse Change has occurred since December 31, 2018.

(c) Secretary's Certificates. The Administrative Agent shall have received a certificate dated as of the date hereof and signed by the Secretary or an Assistant Secretary of each of the Loan Parties, certifying as appropriate as to: (a) all action taken by each Loan Party in connection with this Amendment, (b) the names of the Authorized Officers authorized to sign this Amendment and their true signatures, (c) copies of its organizational document as in effect on the Third Amendment Closing Date certified by the appropriate state official where such documents are filed in a state office or the fact that the previously delivered organizational documents of each Loan Party are still in full force and effect and have not been amended, and (d) certificates from the appropriate state officials as to the continued existence and good standing of each Loan Party in each state where organized.

(d) Legal Opinion. The Administrative Agent and Lenders shall have received a written opinion of counsel to the Loan Parties, in form and substance satisfactory to the Administrative Agent, dated as of the Third Amendment Closing Date.

(e) Know-Your-Customer Diligence. At least five Business Days prior to the Third Amendment Closing Date, the Administrative Agent shall have received all documentation and other information requested by the Administrative Agent or any Lender that is required by U.S. regulatory authorities under applicable "know-your-customer" and anti-money laundering rules and regulations, including the Patriot Act.

(f) Approvals. The Administrative Agent shall have received evidence that all material regulatory approvals and licenses necessary for the consummation of the transactions under this Amendment have been completed, and there shall be an absence of any legal or regulatory prohibitions or restrictions upon the consummation of the transactions under this Amendment.

(g) Fees. The Borrower shall have paid to the Administrative Agent all fees due and owing pursuant to the fee letter dated as of April 4, 2019 by and among the Borrower, the Administrative Agent and PNC Capital Markets LLC.

(h) Miscellaneous. Such other documents, agreements, instruments, deliverables and items deemed necessary by the Administrative Agent.

11. Representations, Warranties and Covenants. The Borrower and each Guarantor covenants and agrees with and represents and warrants to the Administrative Agent and the Lenders as follows:

(a) the Borrower's and Guarantors' obligations under the Credit Agreement, as modified hereby, are and shall remain secured by the Collateral, pursuant to the terms of the Credit Agreement and the other Loan Documents;

(b) the Borrower and each of the Guarantors possesses all of the powers requisite for it to enter into and carry out the transactions of the Borrower and each Guarantor referred to herein and to execute, enter into and perform the terms and conditions of this Amendment, the Credit Agreement and the other Loan Documents and any other documents contemplated herein that are to be performed by the Borrower or such Guarantor; any and all actions required or necessary pursuant to the Borrower's or such Guarantor's organizational documents or otherwise have been taken to authorize the due execution, delivery and performance by the Borrower and such Guarantor of the terms and conditions of this Amendment; the officers of the Borrower and each Guarantor executing this Amendment are the duly elected, qualified, acting and incumbent officers of such Loan Party and hold the titles set forth below their names on the signature lines of this Amendment; and such execution, delivery and performance will not conflict with, constitute a default under or result in a breach of any applicable law or any agreement, instrument, order, writ, judgment, injunction or decree to which the Borrower or such Guarantor is a party or by which the Borrower or such Guarantor or any of its properties is bound, and that all consents, authorizations and/or approvals required or necessary from any third parties in connection with the entry into, delivery and performance by the Borrower and such Guarantor of the terms and conditions of this Amendment, the Credit Agreement, the other Loan Documents and the transactions contemplated hereby have been obtained by the Borrower and such Guarantor and are full force and effect;

(c) this Amendment, the Credit Agreement, and the other Loan Documents constitute the valid and legally binding obligations of the Borrower and each Guarantor, enforceable against the Borrower and each Guarantor in accordance with their respective terms, except as such enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or similar laws and by general equitable principles, whether enforcement is sought by proceedings at law or in equity;

(d) all representations and warranties made by the Borrower and each Guarantor in the Credit Agreement and the other Loan Documents are true and correct in all material respects (or in the case of any such representation and warranty that is qualified by materiality or reference to Material Adverse Change, in all respects) as of the date hereof, except to the extent that any such representation and warranty relates to a specific date, in which case such representation and warranty shall be true and correct in all material respects (or in the case of any such representation and warranty that is qualified by materiality or reference to Material Adverse Change, in all respects) as of such earlier date, with the same force and effect as if all such representations and warranties were fully set forth herein and made as of the date hereof and the Borrower and each Guarantor has complied with all covenants and undertakings in the Credit Agreement and the other Loan Documents;

(e) no Event of Default or Potential Default has occurred and is continuing under the Credit Agreement or the other Loan Documents; there exist no defenses, offsets, counterclaims or other claims with respect to the Borrower's or any Guarantor's obligations and liabilities under the Credit Agreement or any of the other Loan Documents; and

(f) the Borrower and each Guarantor hereby ratifies and confirms in full its duties and obligations under the Credit Agreement, the Guaranty Agreement, and the other Loan Documents applicable to it, each as modified hereby.

12. Incorporation into Credit Agreement and other Loan Documents. This Amendment shall be incorporated into the Credit Agreement by this reference and each reference to the Credit Agreement that is made in the Credit Agreement or any other document executed or to be executed in connection therewith shall hereafter be construed as a reference to the Credit Agreement as amended hereby. The term "Loan Documents" as defined in the Credit Agreement shall include this Amendment.

13. Severability. If any one or more of the provisions contained in this Amendment, the Credit Agreement, or the other Loan Documents shall be held invalid, illegal or unenforceable in any respect, the validity, legality or enforceability of the remaining provisions contained in this Amendment, the Credit Agreement or the other Loan Documents shall not in any way be affected or impaired thereby, and this Amendment shall otherwise remain in full force and effect.

14. Successors and Assigns. This Amendment shall apply to and be binding upon the Borrower and each Guarantor in all respects and shall inure to the benefit of each of the Administrative Agent and the Lenders and their respective successors and assigns, provided that neither the Borrower nor any Guarantor may assign, transfer or delegate its duties and obligations hereunder. Nothing expressed or referred to in this Amendment is intended or shall be construed to give any person or entity other than the parties hereto a legal or equitable right, remedy or claim under or with respect to this Amendment, the Credit Agreement or any of the other Loan Documents, it being the intention of the parties hereto that this Amendment and all of its provisions and conditions are for the sole and exclusive benefit of the Borrower, the Guarantors, the Administrative Agent and the Lenders.

15. Reimbursement of Expenses. The Borrower unconditionally agrees to pay and reimburse the Administrative Agent and save the Administrative Agent harmless against liability for the payment of reasonable out-of-pocket costs, expenses and disbursements, including without limitation, fees and expenses of counsel incurred by the Administrative Agent in connection with the development, preparation, execution, administration, interpretation or performance of this Amendment and all other documents or instruments to be delivered in connection herewith.

16. Counterparts. This Amendment may be executed by different parties hereto in any number of separate counterparts, each of which, when so executed and delivered shall be an original and all such counterparts shall together constitute one and the same instrument.

17. Entire Agreement. This Amendment sets forth the entire agreement and understanding of the parties with respect to the transactions contemplated hereby and supersedes all prior understandings and agreements, whether written or oral, between the parties hereto relating to the subject matter hereof. No representation, promise, inducement or statement of intention has been made by any party which is not embodied in this Amendment, and no party shall be bound by or liable for any alleged representation, promise, inducement or statement of intention not set forth herein.

18. Headings. The various headings of this Amendment are inserted for convenience only and shall not affect the meaning or interpretation of this Amendment or any provisions hereof.

19. Construction. The rules of construction set forth in Section 1.2 [Construction] of the Credit Agreement shall apply to this Amendment.

20. Governing Law. This Amendment shall be deemed to be a contract under the laws of the State of New York and for all purposes shall be governed by and construed and enforced in accordance with the internal laws of the State of New York without regard to its conflict of laws principles.

21. Amendment/Novation. This Amendment amends, among other things, the Credit Agreement. All references to the "Credit Agreement" contained in the other Loan Documents delivered in connection with the Credit Agreement or this Amendment shall, and shall be deemed to refer to the Credit Agreement as amended by this Amendment. Notwithstanding the

foregoing, the Obligations of the Borrower and the other Loan Parties outstanding under the Credit Agreement and the Loan Documents as of the Third Amendment Closing Date shall remain outstanding and shall constitute continuing Obligations without novation and shall continue as such to be secured by the Collateral. Such Obligations shall in all respects be continuing and this Amendment shall not be deemed to evidence or result in a novation or repayment and reborrowing of such Obligations. The Liens securing payment of the Obligations under the Credit Agreement, as amended in the form attached to this this Amendment, shall in all respects be continuing, securing the payment of all Obligations.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]
[SIGNATURE PAGES FOLLOW]

IN WITNESS WHEREOF, the parties hereto, by their officers thereunto duly authorized, have executed this Amendment as of the day and year first above written.

BORROWER:

KOPPERS INC.,
a Pennsylvania corporation

By: /s/ Michael J. Zugay
Name: Michael J. Zugay
Title: Treasurer

GUARANTORS:

KOPPERS HOLDINGS INC.,
a Pennsylvania corporation
KOPPERS DELAWARE, INC.,
a Delaware corporation
KOPPERS ASIA LLC,
a Delaware limited liability company
KOPPERS PERFORMANCE CHEMICALS INC.,
a New York corporation
KOPPERS RAILROAD STRUCTURES INC.,
a Delaware corporation

By: /s/ StevenR. Lacy
Name: Steven R. Lacy
Title:Secretary

KOPPERS WORLD-WIDE VENTURES CORPORATION,
a Delaware corporation

By: /s/ StevenR. Lacy
Name: Steven R. Lacy
Title:Secretary

BORROWER:

KOPPERS RECOVERY RESOURCES LLC
a Kansas limited liability company
KOPPERS VENTURES INC.,
a Delaware corporation

By: /s/ StevenR. Lacy
Name: Steven R. Lacy
Title:Secretary

KOPPERS-NEVADA LIMITED-LIABILITY COMPANY,
a Nevada limited liability company
KOPPERS NZ LLC,
a New York limited liability company
WOOD PROTECTION MANAGEMENT LLC,
a Nevada limited liability company

By: /s/ StevenR. Lacy
Name: Steven R. Lacy
Title:Manager

WOOD PROTECTION LP,
a Texas limited partnership
By:**WOOD PROTECTION MANAGEMENT LLC**,
as General Partner

By: /s/ StevenR. Lacy
Name:Steven R. Lacy
Title:Manager

BORROWER:

KOPPERS UTILITY AND INDUSTRIAL PRODUCTS INC.,
a South Carolina corporation
COX WOOD PRESERVING COMPANY,
a South Carolina corporation
NATIONAL WOOD SOURCING, LLC,
a South Carolina limited liability company
SUSTAINABLE MANAGEMENT SYSTEMS, LLC,
a South Carolina limited liability company
ATLANTIC POLE- GEORGIA, LLC,
a South Carolina limited liability company
ATLANTIC POLE- VIRGINIA, LLC,
a South Carolina limited liability company
COX RECOVERY SERVICES, LLC,
a South Carolina limited liability company
RUBY'S CORNER, LLC,
a South Carolina limited liability company
SWEETWATER WOOD HOLDINGS, LLC,
a South Carolina limited liability company
CAROLINA POLE, INC.,
a South Carolina corporation
NORTH-SOUTH WOOD PRESERVING COMPANY, INC.,
a South Carolina Corporation
STRUCTURAL WOODS PRESERVING CO.,
a North Carolina corporation
COVE CITY WOOD PRESERVING, INC.,
a North Carolina corporation
CAROLINA POLE LELAND, INC.,
a North Carolina corporation
LELAND LAND LLC,
a North Carolina limited liability company
COX WOOD OF ALABAMA, LLC,
an Alabama limited liability company
COX WOOD OF VIRGINIA, LLC,
a Virginia limited liability company

By: /s/ StevenR. Lacy
Name: Steven R. Lacy
Title:Secretary

ADMINISTRATIVE AGENT AND LENDERS:

PNC BANK, NATIONAL ASSOCIATION,
as a Lender and as Administrative Agent

By: /s/ Gregory E. Truitt
Name:Gregory E. Truitt
Title:Vice President

WELLS FARGO BANK, NATIONAL ASSOCIATION,
as a Lender

By: /s/ J. Barrett Donovan
Name:J. Barrett Donovan
Title:Senior Vice President

BANK OF AMERICA, N.A.,
as a Lender

By: /s/ Katherine Osele
Name:Katherine Osele
Title:Senior Vice President

FIFTH THIRD BANK,
as a Lender

By: /s/ Michael S. Barnett
Name:Michael S. Barnett
Title:Senior Vice President

BANK OF MONTREAL,
as a Lender

By: /s/ Matthew Gerber
Name:Matthew Gerber
Title:Managing Director

MUFG BANK, LTD.,
as a Lender

By: /s/ Liwei Liu
Name:Liwei Liu
Title:Vice President

CITIZENS BANK, N.A., as successor by merger to Citizens Bank of Pennsylvania, as a Lender

By: /s/ Carl S. Tabacjar, Jr.
Name:Carl S. Tabacjar, Jr.
Title:Senior Vice President

KEYBANK NATIONAL ASSOCIATION,
as a Lender

By: /s/ Bruce A. Sharp
Name:Bruce A. Sharp
Title:Senior Banker

NORTHWEST BANK,
as a Lender

By: /s/ C. Forrest Tefft
Name:C. Forrest Tefft
Title:Senior Vice President

THE HUNTINGTON NATIONAL BANK,
as a Lender

By: /s/ Michael Kiss
Name:Michael Kiss
Title:Vice President

FIRST NATIONAL BANK OF PENNSYLVANIA,
as a Lender

By: /s/ Dennis F. Lennon
Name:Dennis F. Lennon
Title:Vice President

TRISTATE CAPITAL BANK,
as a Lender

By: /s/ Ellen Frank
Name:Ellen Frank
Title:Senior Vice President

WASHINGTON FINANCIAL BANK,
as a Lender

By: /s/ Anthony M. Cardone
Name:Anthony M. Cardone
Title:Vice President

SUNTRUST BANK,
as a Lender

By: /s/ Lisa Garling
Name:Lisa Garling
Title: Director

The undersigned Lender is executing this Amendment solely for the purpose of acknowledging the termination of its Revolving Credit Commitment and the repayment of its Term Loan.

FIRST COMMONWEALTH BANK,
as a Non-Extending Lender

By: /s/ David H. McGowan
Name: David H. McGowan
Title: Senior Corporate Banker, SVP

SCHEDULE 1.1(B)

COMMITMENTS OF LENDERS AND ADDRESSES FOR NOTICES

Part 1 - Commitments of Lenders and Addresses for Notices to Lenders

Lender	Amount of Commitment for Revolving Credit Loans	Amount of Commitment for Term Loans	Commitment	Ratable Share
Name:PNC Bank, National Association Address:The Tower at PNC 300 Fifth Avenue Pittsburgh, Pennsylvania 15222 Attention: Tracy J. DeCock, Senior Vice President Email:tracy.decock@pnc.com Telephone:412-762-9999 Telecopy:412-762-4718 with a copy to: Name:PNC Agency Services Address:PNC Bank, National Association PNC Firstside Center 500 First Avenue Pittsburgh, Pennsylvania 15219 Attention:Steven Franceschi Email:steven.franceschi@pnc.com Telephone:412-762-7691	$89,018,181.82	$12,981,818.18	$102,000,000.00	14.836363636%
Name: Wells Fargo Bank, National Association Address:11 Stanwix Street Suite 2300 Pittsburgh, PA 15222 Attention: J. Barrett Donovan Email:barrett.donovan@wellsfargo.com Telephone:412-209-3006	$73,309,090.91	$10,690,909.09	$84,000,000.00	12.218181818%
Name: Bank of America, N.A. Address: US Steel Tower 600 Grant Street, 53rd Floor Pittsburgh, PA 15219 Attention: Katie Osele Email:katherine.osele@baml.com Telephone:412-338-8742 Telecopy:212-909-8548	$61,090,909.08	$8,909,090.92	$70,000,000.00	10.181818182%

Lender	Amount of Commitment for Revolving Credit Loans	Amount of Commitment for Term Loans	Commitment	Ratable Share
Name: Fifth Third Bank Address: Gulf Tower 707 Grant Street, 21st Floor MD AGTB21 Pittsburgh, PA 15219 Attention: Michael S. Barnett Email:michael.barnett@53.com Telephone:412-291-5457 Telecopy:412-291-5411	$57,857,142.86	$8,437,499.99	$66,294,642.85	9.642857142%
Name: Bank of Montreal Address: 115 S. LaSalle Street 25th Floor West Chicago, IL 60603 Attention: Joshua Hovermale Email:joshua.hovermale@bmo.com Telephone:312-461-7120 Telecopy:312-293-4327	$45,381,818.18	$6,618,181.82	$52,000,000.00	7.563636364%
Name: MUFG Bank, Ltd. Address: 1221 Avenue of the Americas New York, NY 10020-1104 Attention: Mustafa Khan Email:mukhan@us.mufg.jp Telephone:212-782-4458	$42,857,142.86	$6,249,999.99	$49,107,142.85	7.142857142%
Name: Citizens Bank Address: 525 William Penn Place PW 2625 Pittsburgh, PA 15219 Attention: Carl Tabacjar Email:carl.s.tabacjar@citizensbank.com Telephone:412-867-2432	$42,857,142.86	$6,249,999.99	$49,107,142.85	7.142857142%
Name: KeyBank National Association Address: 11 Stanwix Street, 15th Floor Pittsburgh, PA 15222 Attention: Bruce Sharp Email:bruce_a_sharp@keybank.com Telephone:412-222-1491	$42,857,142.86	$6,249,999.99	$49,107,142.85	7.142857142%
Name: SunTrust Bank Address: 500 West Monroe Street Chicago, Illinois 60661 Attention: Lisa Garling Email:Lisa.Garling@suntrust.com Telephone:312-356-3295	$36,654,545.45	$5,345,454.55	$42,000,000.00	6.109090909%

Lender	Amount of Commitment for Revolving Credit Loans	Amount of Commitment for Term Loans	Commitment	Ratable Share
Name: Northwest Bank Address: 535 Smithfield Street, Suite 501 Pittsburgh, PA 15222 Attention: C. Forrest Tefft Email:ftefft@nwbcorp.com Telephone:412-325-6216 ext 3	$30,545,454.55	$4,454,545.45	$35,000,000.00	5.090909091%
Name: The Huntington National Bank Address: 222 North LaSalle Suite 1200 Chicago, IL 60601 Attention: Michael Kiss Email:Michael.Kiss@huntington.com Telephone:312-762-2163 Telecopy:877-860-4154	$30,000,000.00	$4,375,000.00	$34,375,000.00	5.000000000%
Name: First National Bank of Pennsylvania Address: 12 Federal Street Pittsburgh, PA 15212 Attention: Dennis F. Lennon Email:Lennon@fnb-corp.com Telephone:412-395-2042 Telecopy:412-231-3584	$30,000,000.00	$4,375,000.00	$34,375,000.00	5.000000000%
Name: Tristate Capital Bank Address: 789 E. Lancaster Avenue, Suite 240 Villanova, PA 19085 Attention: Ellen Frank Email:EFrank@tscbank.com Telephone:610-526-6771	$11,142,857.14	$1,625,000.01	$12,767,857.15	1.857142858%
Name: Washington Financial Bank Address: 77 South Main Street Washington, PA 15301 Attention: Anthony M. Cardone Email:acardone@mywashingtonfinancial.com Telephone:724-206-1113 Telecopy:724-225-8642	$6,428,571.43	$937,500.02	$7,366,071.45	1.071428575%
TOTAL	**$600,000,000**	**$87,500,000**	**$687,500,000**	**100.0000000%**

SCHEDULE 1.1(B)

COMMITMENTS OF LENDERS AND ADDRESSES FOR NOTICES

Part 2 - Addresses for Notices to Borrower and Guarantors:

ADMINISTRATIVE AGENT

Name: PNC Bank, National Association
Address: The Tower at PNC
300 Fifth Avenue, 13th Floor
Pittsburgh, Pennsylvania 15222
Attention: Tracy J. DeCock, Senior Vice President
Email: tracy.decock@pnc.com
Telephone: 412-762-9999
Telecopy: 412-762-4718

with a copy to:

Name: PNC Agency Services
Address: PNC Bank, National Association
PNC Firstside Center
500 First Avenue
Pittsburgh, Pennsylvania 15219
Attention: Steven Franceschi
Email: steven.franceschi@pnc.com
Telephone: 412-762-7691
Telecopy: 412-___-____

BORROWER:
Name: Koppers Inc.
Address: 436 Seventh Avenue
Pittsburgh, Pennsylvania 15219
Attention: Michael J. Zugay
Email: ZugayMJ@koppers.com
Telephone: 412-227-2231
Telecopy: 412-227-2444

GUARANTORS:

Name: [Name]
c/o Koppers Inc.
Address: 436 Seventh Avenue
Pittsburgh, Pennsylvania 15219
Attention: Michael J. Zugay
Email: ZugayMJ@koppers.com
Telephone: 412-227-2231
Telecopy: 412-227-2444

SCHEDULE 6.1.1

QUALIFICATIONS TO DO BUSINESS

Entity	Jurisdiction of Incorporation/Organization	Jurisdictions of Qualification
Koppers Inc.	Pennsylvania	Alabama, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oklahoma, Oregon, South Carolina, Tennessee, Texas, Virginia, Washington, West Virginia, Wisconsin
Koppers World-Wide Ventures Corporation	Delaware	
Koppers Delaware, Inc.	Delaware	
Koppers Assurance, Inc.	South Carolina	
Koppers Asia LLC	Delaware	
Koppers Holdings Inc.	Pennsylvania	
Koppers Ventures Inc.	Delaware	
Koppers Recovery Resources LLC (formerly known as M.A. Energy Resources, LLC)	Kansas	Michigan, Tennessee, Texas
Koppers Utility and Industrial Products Inc. (formerly known as Cox Industries, Inc.)	South Carolina	Texas, New Hampshire, Washington, New Jersey
Atlantic Pole - Georgia, LLC	South Carolina	Georgia
Atlantic Pole - Virginia, LLC	South Carolina	Virginia
Carolina Pole Leland, Inc.	North Carolina	Alabama, Florida, Georgia, Massachusetts, North Carolina, New Jersey, Pennsylvania
Carolina Pole, Inc.	South Carolina	Kansas
Cove City Wood Preserving, Inc.	North Carolina	
Cox Recovery Services, LLC	South Carolina	
Cox Wood of Alabama, LLC	Alabama	
Cox Wood of Virginia, LLC	Virginia	

Cox Wood Preserving Company	South Carolina	
Leland Land LLC	North Carolina	
National Wood Sourcing, LLC	South Carolina	
North - South Wood Preserving Company, Inc.	South Carolina	
Ruby’s Corner, LLC	South Carolina	
Structural Woods Preserving Co.	North Carolina	
Sustainable Management Systems LLC	South Carolina	
Sweetwater Wood Holdings, LLC	South Carolina	Tennessee, Georgia
Koppers Australia Holding Company Pty Ltd	Australia (Victoria)	

Entity	**Jurisdiction of Incorporation/Organization**	**Jurisdictions of Qualification**
Koppers Australia Pty Limited	Australia (NSW)	
Koppers Wood Products Pty. Ltd.	Australia (NSW)	Philippines
Koppers Carbon Materials & Chemicals Pty Ltd.	Australia (NSW)	
Continental Carbon Australia Pty Ltd.	Australia (NSW)	
Koppers Ashcroft Inc.	British Columbia (Canada)	
Koppers Europe ApS	Denmark	
Koppers Denmark ApS	Denmark	
Koppers Tar Tech International ApS	Denmark	
Koppers European Holdings ApS	Denmark	
Koppers Poland Sp. z.o.o	Poland	
Koppers UK Holding Ltd.	England	
Koppers UK Limited	England	
Koppers UK Transport Limited	England	
Koppers International B.V.	The Netherlands	
Koppers Netherlands B.V.	The Netherlands	
Koppers World-Wide Holdings C.V.	The Netherlands	
Koppers Global Investments C.V.	The Netherlands	
Koppers Australasian Investments C.V.	The Netherlands	
Koppers Australasian B.V.	The Netherlands	
Koppers UK Investments Ltd.	England	
Tankrederij J.A. van Seumeren B.V.	The Netherlands	
Koppers	New York	Georgia, Michigan, South Carolina, Tennessee, Washington

Performance Chemicals Inc.		
Koppers Railroad Structures Inc.	Delaware	Alabama, Arizona, Arkansas, California, Colorado, Connecticut, District of Columbia, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming
Koppers Railroad Structures Canada Inc.	British Columbia, Canada	Alberta, Manitoba, Ontario, Saskatchewan
Koppers-Nevada Limited-Liability Company	Nevada	
Wood Protection Management LLC	Nevada	Texas
Koppers Performance Chemicals Denmark ApS	Denmark	
Koppers Performance Chemicals Australia Pty Ltd.	Australia	

Entity	**Jurisdiction of Incorporation/Organization**	**Jurisdictions of Qualification**
Koppers (Thailand) Ltd.	Thailand	
Protim Solignum Sdn Bhd	Malaysia	
Comercial KPC Chile Limitada (formerly known as Comercial Osmose Chile Limitada)	Chile	
Protim Solignum Ltd.	England	
Koppers NZ LLC	New York	
Timber Specialties Limited (formerly known as Timber Specialties Co.)	Nova Scotia, Canada	Registered agents in Ontario, Alberta, British Columbia, Manitoba, Newfoundland, Quebec and Saskatchewan
Wood Protection LP	Texas	
Oy Koppers Finland Ab	Finland	
Koppers Sweden AB	Sweden	
Koppers Norway AS	Norway	
Koppers Deutschland GmbH	Germany	
Koppers Latvia SIA	Latvia	
Protim Solignum South Africa Pty Ltd.	South Africa	
Koppers Performance Chemicals New Zealand	New Zealand	
Koppers NZ Holdings	New Zealand	
Protim Ltd.	Ireland	
Koppers Performance Chemicals Brasil Comercio de Preservantes Ltda.	Brazil	
Retratar Espana S.L.	Spain	

SCHEDULE 6.1.2

SUBSIDIARIES[1]

Subsidiary Name	Jurisdiction of Incorporation/ Organization	Authorized Capital Stock	Issued and Outstanding Shares of Capital Stock	Holders of Issued and Outstanding Shares of Capital Stock

Borrower’s United States Subsidiaries:

Subsidiary Name	Jurisdiction of Incorporation/ Organization	Authorized Capital Stock	Issued and Outstanding Shares of Capital Stock	Holders of Issued and Outstanding Shares of Capital Stock
Koppers Asia LLC	Delaware limited liability company	None.	None.	Koppers Inc. owns 100% of the membership interest in Koppers Asia LLC
Koppers Assurance, Inc.	South Carolina corporation	100,000 shares of common stock are currently authorized.	50,000 shares of common stock are currently issued and outstanding.	Koppers Inc. owns 100% of the issued and outstanding common stock of Koppers Assurance, Inc.
Koppers Delaware, Inc.	Delaware corporation	1,000 shares of common stock are currently authorized.	1,000 shares of common stock are currently issued and outstanding.	Koppers Inc. owns 100% of the issued and outstanding common stock of Koppers Delaware, Inc.
Koppers Ventures Inc.	Delaware corporation	100 shares of common stock are currently authorized.	100 shares of common stock are currently issued and outstanding.	Koppers World-Wide Ventures Corporation owns 100% of the issued and outstanding common stock of Koppers Ventures Inc.
Koppers World-Wide Ventures Corporation	Delaware corporation	1,000 shares of common stock are currently authorized.	1,000 shares of common stock are currently issued and outstanding.	Koppers Inc. owns 100% of the issued and outstanding common stock of Koppers World-Wide Ventures Corporation
Koppers Recovery Resources LLC (formerly known as M.A. Energy Resources, LLC)	Kansas limited liability company	None.	None.	Koppers Inc. owns 100% of the membership interest in Koppers Recovery Resources LLC

[1] There are no options, warrants or other rights outstanding to purchase any of the Subsidiary Shares set forth on this Schedule 6.1.3.

Subsidiary Name	**Jurisdiction of Incorporation/ Organization**	**Authorized Capital Stock**	**Issued and Outstanding Shares of Capital Stock**	**Holders of Issued and Outstanding Shares of Capital Stock**
Koppers Utility and Industrial Products Inc. (formerly known as Cox Industries, Inc.)	South Carolina corporation	1 share of common stock is currently authorized.	1 share of common stock is currently issued and outstanding.	Koppers Inc. owns 100% of the issued and outstanding common stock of Koppers Utility and Industrial Products Inc.
Atlantic Pole - Georgia, LLC	South Carolina limited liability company	None.	None.	Koppers Utility and Industrial Products Inc. owns 100% of the membership interest in Atlantic Pole - Georgia, LLC
Atlantic Pole - Virginia, LLC	South Carolina limited liability company	None.	None.	Koppers Utility and Industrial Products Inc. owns 100% of the membership interest in Atlantic Pole - Virginia, LLC
Carolina Pole Leland, Inc.	North Carolina corporation	100,000 shares of common stock are currently authorized.	100,000 shares of common stock are currently issued and outstanding.	Koppers Utility and Industrial Products Inc. owns 100% of the issued and outstanding common stock of Carolina Pole Leland, Inc.
Carolina Pole, Inc.	South Carolina corporation	1,000,000 shares of common stock are currently authorized.	260,000 shares of common stock are currently issued and outstanding.	Koppers Utility and Industrial Products Inc. owns 100% of the issued and outstanding common stock of Carolina Pole, Inc.
Cove City Wood Preserving, Inc.	North Carolina corporation	1,000,000 shares of common stock are currently authorized.	260,000 shares of common stock are currently issued and outstanding.	Koppers Utility and Industrial Products Inc. owns 100% of the issued and outstanding common stock of Cove City Wood Preserving, Inc.
Cox Recovery Services, LLC	South Carolina limited liability company	None.	None.	Koppers Utility and Industrial Products Inc. owns 100% of the membership interest in Cox Recovery Services, LLC

Subsidiary Name	Jurisdiction of Incorporation/ Organization	Authorized Capital Stock	Issued and Outstanding Shares of Capital Stock	Holders of Issued and Outstanding Shares of Capital Stock
Cox Wood of Alabama, LLC	Alabama limited liability company	None.	None.	Koppers Utility and Industrial Products Inc. owns 100% of the membership interest in Cox Wood of Alabama, LLC
Cox Wood of Virginia, LLC	Virginia limited liability company	None.	None.	Koppers Utility and Industrial Products Inc. owns 100% of the membership interest in Cox Wood of Virginia, LLC
Cox Wood Preserving Company	South Carolina corporation	1,000,000 shares of common stock are currently authorized.	260,000 shares of common stock are currently issued and outstanding.	Koppers Utility and Industrial Products Inc. owns 100% of the issued and outstanding common stock of Cox Wood Preserving Company
Leland Land LLC	North Carolina limited liability company	None.	None.	Carolina Pole, Inc. owns 100% of the membership interest in Leland Land LLC
National Wood Sourcing, LLC	South Carolina limited liability company	None.	None.	Koppers Utility and Industrial Products Inc. owns 100% of the membership interest in National Wood Sourcing, LLC
North - South Wood Preserving Company, Inc.	South Carolina corporation	100,000 shares of common stock are currently authorized.	2,000 shares of common stock are currently issued and outstanding.	Koppers Utility and Industrial Products Inc. owns 100% of the issued and outstanding common stock of North - South Wood Preserving Company, Inc.
Ruby’s Corner, LLC	South Carolina limited liability company	None.	None.	Koppers Utility and Industrial Products Inc. owns 100% of the membership interest in Ruby’s Corner, LLC

Subsidiary Name	**Jurisdiction of Incorporation/ Organization**	**Authorized Capital Stock**	**Issued and Outstanding Shares of Capital Stock**	**Holders of Issued and Outstanding Shares of Capital Stock**
Structural Woods Preserving Co.	North Carolina corporation	100,000 shares of common stock are currently authorized.	95,000 shares of common stock are currently issued and outstanding.	Koppers Utility and Industrial Products Inc. owns 100% of the issued and outstanding common stock of Structural Woods Preserving Co.
Sustainable Management Systems LLC	South Carolina limited liability company	None.	None.	Koppers Utility and Industrial Products Inc. owns 100% of the membership interest in Sustainable Management Systems LLC
Sweetwater Wood Holdings, LLC	South Carolina limited liability company	None.	None.	Koppers Utility and Industrial Products Inc. owns 100% of the membership interest in Sweetwater Wood Holdings, LLC

Borrower’s Australian Subsidiaries:

Koppers Australia Holding Company Pty Ltd.	Australian corporation (Victoria)	Ordinary, “A” class, “B” class, “C” class, “D” class, “E” class, “F” class, “G” class, “H” class and Redeemable Preference Shares are currently authorized.	12 Ordinary Shares fully paid are currently issued and outstanding.	Koppers Australasian B.V. owns 100% of the issued and outstanding common stock of Koppers Australia Holding Co. Pty Ltd.
Koppers Australia Pty Ltd.	Australian corporation (NSW)	Ordinary, Shares and “C” Shares are currently authorized.	12,375,000 ordinary shares fully paid are currently issued and outstanding and 2,183,824 non- voting C shares are currently issued and outstanding.	Koppers Australia Holding Company Pty Ltd. currently owns 100% of the issued and outstanding ordinary shares of common stock of Koppers Australia Pty. Ltd and 100% of the issued and outstanding non-voting C shares.

Subsidiary Name	**Jurisdiction of Incorporation/ Organization**	**Authorized Capital Stock**	**Issued and Outstanding Shares of Capital Stock**	**Holders of Issued and Outstanding Shares of Capital Stock**
Koppers Wood Products Pty Ltd.	Australian corporation (NSW)	Directors are currently authorized to control issuance of shares.	3,500,000 ordinary shares fully paid are currently issued and outstanding.	Koppers Australia Pty. Limited currently owns 100% of the issued and outstanding shares of nominal common stock of Koppers Wood Products Pty Ltd.
Koppers Carbon Materials & Chemicals Pty Ltd.	Australian corporation (NSW)	Directors are currently authorized to control issuance of shares.	2,000,000 ordinary shares fully paid are currently issued and outstanding.	Koppers Australia Pty. Limited currently owns 100% of the issued and outstanding shares of nominal common stock of Koppers Carbon Materials & Chemicals Pty Ltd.
Continental Carbon Australia Pty Ltd.	Australian corporation (NSW)	Directors are currently authorized to control issuance of shares.	8,000,000 ordinary shares fully paid are currently issued and outstanding.	Koppers Australia Pty Limited currently owns 100% of the issued and outstanding shares of nominal common stock of Continental Carbon Australia Pty Ltd.
Borrower’s Canadian Subsidiaries:				
Koppers Ashcroft Inc.	British Columbia, Canada corporation	Unlimited shares of capital stock without par are currently authorized.	100 shares of common stock are currently issued and outstanding.	Koppers World-Wide Ventures Corporation currently owns 100% of the issued and outstanding shares of common stock of Koppers Ashcroft Inc.
Borrower’s European Subsidiaries:				
Koppers Global Investments C.V.	The Netherlands – limited partnership	None.	None.	Koppers Ventures Inc. owns <1% of the interests and Koppers World-Wide Ventures Corporation owns >99% of the interests of Koppers Global Investments C.V.

Subsidiary Name	Jurisdiction of Incorporation/ Organization	Authorized Capital Stock	Issued and Outstanding Shares of Capital Stock	Holders of Issued and Outstanding Shares of Capital Stock
Koppers UK Investments Ltd.	English limited corporation	Shares of ordinary A shares and shares of ordinary B shares are currently authorized.	198 ordinary A shares and 2 ordinary B shares of registered capital stock are currently issued and outstanding.	Koppers UK Ltd. owns 100% of the issued and outstanding shares of ordinary A stock and 100% of the issued and outstanding shares of ordinary B stock of Koppers UK Investments Ltd.
Koppers Australasian Investments C.V.	The Netherlands – limited partnership	None.	None.	Koppers Ventures Inc. owns <1% of the interests and Koppers World-Wide Holdings C.V. owns >99% of the interests of Koppers Australasian Investments C.V.
Koppers Australasian B.V.	The Netherlands – private limited liability company	One or more shares may be issued with a nominal value of EUR 1 per share.	1 share is currently issued and outstanding.	Koppers International B.V. (Represented by its General Partner, Koppers Ventures Inc.) owns 100% of the issued and outstanding shares of Koppers Australasian B.V.
Koppers Europe ApS	Danish corporation	DKK 8,375,000 shares of registered capital stock are currently authorized.	DKK 8,375,000 shares of registered capital stock are currently issued and outstanding.	Koppers International B.V. currently owns 100% of the issued and outstanding shares of registered capital stock of Koppers Europe ApS.
Koppers Denmark ApS	Danish corporation	DKK 70,000,000 shares of registered capital stock are currently authorized.	DKK 70,000,000 shares of registered capital stock are currently issued and outstanding.	Koppers Europe ApS currently owns 100% of the issued and outstanding shares of registered capital stock of Koppers Denmark ApS.

Subsidiary Name	**Jurisdiction of Incorporation/ Organization**	**Authorized Capital Stock**	**Issued and Outstanding Shares of Capital Stock**	**Holders of Issued and Outstanding Shares of Capital Stock**
Koppers Tar Tech International ApS	Danish corporation	DKK 2,000,000 shares of registered capital stock are currently authorized.	DKK 2,000,000 shares of registered capital stock are currently issued and outstanding.	Koppers Denmark ApS currently owns 100% of the issued and outstanding shares of registered capital stock of Koppers Tar Tech International ApS.
Koppers European Holdings ApS	Danish corporation	DKK 500,000 shares of registered capital stock are currently authorized.	DKK 500,000 shares of registered capital stock are currently issued and outstanding.	Koppers Denmark ApS owns 100% of the issued and outstanding shares of registered capital stock of Koppers European Holdings ApS.
Koppers Poland Sp. z.o.o.	Polish corporation (limited liability company)	PLN 1.700.000 divided into 3,400 shares with a value of PLN 500 each are currently authorized.	3,400 shares are currently issued and outstanding.	Koppers European Holdings ApS currently owns 100% of the issued and outstanding capital stock of Koppers Poland Sp. z.o.o.
Koppers UK Holding Ltd.	English limited corporation	3,900,000 shares of registered capital stock are currently authorized.	3,900,000 shares of registered capital stock are currently issued and outstanding.	Koppers European Holdings ApS currently owns 100% of the issued and outstanding capital stock of Koppers UK Holding Ltd.
Koppers UK Limited	English limited corporation	3,000,000 shares of registered capital stock are currently authorized.	1,560,000 shares of registered capital stock are currently issued and outstanding.	Koppers UK Holding Ltd. currently owns 100% of the issued and outstanding capital stock of Koppers UK Limited.
Koppers UK Transport Limited	English limited corporation	20,000 ordinary shares are currently authorized.	16,150 ordinary shares are currently issued and outstanding.	Koppers UK Investments Ltd currently owns 100% of the issued and outstanding capital stock of Koppers UK Transport Limited

Subsidiary Name	**Jurisdiction of Incorporation/ Organization**	**Authorized Capital Stock**	**Issued and Outstanding Shares of Capital Stock**	**Holders of Issued and Outstanding Shares of Capital Stock**
Koppers International B.V.	The Netherlands – private limited liability company	90,000 shares may be issued with a nominal value of EUR 1 per share.	18,000 shares are issued and outstanding with a nominal value of EUR 1 per share.	Koppers Australasian Investments C.V. (Represented by its General Partner, Koppers Ventures Inc.) owns 100% of the issued and outstanding shares of Koppers International B.V.
Koppers Netherlands B.V.	The Netherlands – private limited liability company	EUR 6,750,000.00 divided into 15,000 shares with a par value of EUR 450 each are authorized.	EUR 3,150,000.00 divided into 7,000 shares with a par value of EUR 450 each are issued and outstanding.	Koppers International B.V. owns 100% of the issued and outstanding shares of Koppers Netherlands B.V.
Koppers World-Wide Holdings C.V.	The Netherlands – limited partnership	None.	None.	Koppers Ventures Inc. owns <1% of the interests and Koppers Global Investments C.V. owns >99% of the interests of Koppers World-Wide Holdings C.V.
Tankrederij J.A. van Seumeren B.V.	The Netherlands – private limited liability company	NLG 75,000 (Dutch guilders) divided into 75 shares of NLG at 1,000 each are authorized.	NLG 15,000 shares are issued and outstanding.	Koppers Netherlands B.V. owns 100% of the issued and outstanding shares of Tankrederij J.A. van Seumeren B.V.

Borrower's Subsidiaries acquired from Osmose Holdings, Inc.:

Koppers Performance Chemicals Inc.	New York corporation	2,250,000 shares of common stock are currently authorized. 52,600 shares of Preferred, Series A stock are currently authorized.	774,254 shares of common stock are currently issued and outstanding. 52,600 shares of Preferred Series A stock are currently issued and outstanding.	Koppers Inc. owns 100% of the issued and outstanding common stock of Koppers Performance Chemicals Inc. Koppers UK Limited owns 100% of the issued and outstanding Preferred, Series A stock of Koppers Performance Chemicals Inc.

Subsidiary Name	Jurisdiction of Incorporation/ Organization	Authorized Capital Stock	Issued and Outstanding Shares of Capital Stock	Holders of Issued and Outstanding Shares of Capital Stock
Koppers Railroad Structures Inc.	Delaware corporation	3,000 shares of common stock are currently authorized.	100 shares of common stock are currently issued and outstanding.	Koppers Inc. owns 100% of the issued and outstanding common stock of Koppers Railroad Structures Inc.
Koppers Railroad Structures Canada Inc.	British Columbia, Canada corporation	Common shares of no maximum amount are currently authorized.	100 shares of common stock are currently issued and outstanding.	Koppers Railroad Structures Inc. owns 100% of the issued and outstanding common stock of Koppers Railroad Structures Canada Inc.
Koppers-Nevada Limited-Liability Company	Nevada limited liability company	None.	None.	Koppers Performance Chemicals Inc. owns 100% of the interests of Koppers-Nevada Limited-Liability Company.
Wood Protection Management LLC	Nevada limited liability company	None.	None.	Koppers Performance Chemicals Inc. owns 100% percent of the interests of Wood Protection Management LLC
Koppers Performance Chemicals Denmark ApS	Danish corporation	DKK 4,001,000 shares of registered capital stock are currently authorized.	10 shares of capital stock are currently issued and outstanding.	Koppers Europe ApS owns 100% of the issued and outstanding shares of registered capital stock of Koppers Performance Chemicals Denmark ApS
Koppers Performance Chemicals Australia Pty Ltd.	Australian corporation (NSW)	4 ordinary shares are currently authorized.	4 ordinary shares are currently issued and outstanding.	Koppers Australia Holding Company Pty. Ltd. owns 100% of the issued and outstanding ordinary shares of Koppers Performance Chemicals Australia Pty. Ltd.

Subsidiary Name	Jurisdiction of Incorporation/ Organization	Authorized Capital Stock	Issued and Outstanding Shares of Capital Stock	Holders of Issued and Outstanding Shares of Capital Stock
Koppers (Thailand) Ltd.	Thailand corporation	Registered capital is fixed at Baht 2,000,000 divided into 20,000 shares at 100 Baht per share.	20,000 shares of capital stock are currently issued and outstanding.	Koppers Performance Chemicals Inc. owns 74.995% of the issued and outstanding shares, Protim Solignum Ltd. owns 25% of the issued and outstanding shares, and Stuart Jepson owns 1 of the issued and outstanding shares of Koppers (Thailand) Ltd.
Protim Solignum Sdn Bhd	Malaysian corporation	RM 50,000 of ordinary share capital divided into 50,000 ordinary shares is currently authorized.	2 ordinary shares are currently issued and outstanding.	Koppers Performance Chemicals Inc. and Protim Solignum Ltd. each own 50% of the issued and outstanding ordinary shares of Protim Solignum Sdn Bhd.
Comercial KPC Chile Limitada (formerly known as Comercial Osmose Chile Limitada)	Chilean corporation	CLP 5,000,000 of formal capital.	100% of the rights are currently issued and outstanding.	Koppers Performance Chemicals Inc. owns 99.9% of the issued and outstanding rights and Michael Grosty Cousino owns 0.1% of the issued and outstanding rights as nominee of Comercial KPC Chile Limitada.
Protim Solignum Ltd.	English limited corporation	2,020,001 ordinary shares are currently authorized.	2,020,001 ordinary shares are currently issued and outstanding.	Koppers UK Holding Ltd. owns 100% of the issued and outstanding ordinary shares of Protim Solignum Ltd.
Koppers NZ LLC	New York limited liability company	None.	None.	Koppers Performance Chemicals Inc. owns 100% of the interests of Koppers NZ LLC.

Subsidiary Name	**Jurisdiction of Incorporation/ Organization**	**Authorized Capital Stock**	**Issued and Outstanding Shares of Capital Stock**	**Holders of Issued and Outstanding Shares of Capital Stock**
Timber Specialties Limited (formerly known as Timber Specialties Co.)	Nova Scotia, Canada corporation	Shares of common shares with the power to divide such shares into classes are currently authorized	2 shares of common stock are currently issued and outstanding.	Koppers International B.V. owns 100% of the issued and outstanding shares of Timber Specialties Limited
Wood Protection LP	Texas limited partnership	None.	None.	Koppers-Nevada Limited-Liability Company owns 99% of the interests and Wood Protection Management LLC owns 1% of the interests of Wood Protection LP.
Oy Koppers Finland Ab	Finnish corporation	EUR 10,000 capital stock is currently authorized.	234 shares of capital stock are currently issued and outstanding.	Koppers Performance Chemicals Denmark ApS owns 100% of the issued and outstanding capital stock of Oy Koppers Finland AB.
Koppers Sweden AB	Swedish corporation	SEK 1,000,000 of capital stock with a minimum of 50,000 shares and a maximum of 100,000 shares is currently authorized.	50,000 shares of capital stock are currently issued and outstanding.	Koppers Performance Chemicals Denmark ApS owns 100% of the issued and outstanding capital stock of Koppers Sweden AB.
Koppers Norway AS	Norwegian corporation	NOK 166,000 of share capital divided into 83 shares, each with a par value of NOK 2,000 is currently authorized.	83 shares are currently issued and outstanding.	Koppers Performance Chemicals Denmark ApS owns 100% of the issued and outstanding capital stock of Koppers Norway AS.
Koppers Deutschland GmbH	German corporation	EUR 25,000 of share capital is currently authorized.	EUR 25,000 of share capital is currently issued and outstanding.	Koppers Performance Chemicals Denmark ApS owns 100% of the issued and outstanding capital stock of Koppers Deutschland GmbH

Subsidiary Name	Jurisdiction of Incorporation/ Organization	Authorized Capital Stock	Issued and Outstanding Shares of Capital Stock	Holders of Issued and Outstanding Shares of Capital Stock
Koppers Latvia SIA	Latvian corporation	EUR 2828 of capital stock divided into 101 shares is currently authorized.	101 shares of capital stock are currently issued and outstanding.	Koppers Performance Chemicals Denmark ApS owns 100% of the issued and outstanding capital stock of Koppers Latvia SIA.
Protim Solignum South Africa Pty Ltd.	South African corporation	1,000 shares are currently authorized.	120 shares are currently issued and outstanding.	Protim Solignum Ltd. owns 100% of the issued and outstanding shares of Protim Solignum South Africa Pty Ltd.
Koppers Performance Chemicals New Zealand	New Zealand corporation	5,071,900 shares are currently authorized.	5,071,900 shares are currently issued and outstanding.	Koppers NZ Holdings owns 100% of the issued and outstanding shares of Koppers Performance Chemicals New Zealand.
Koppers NZ Holdings	New Zealand corporation	2 shares of capital stock are currently authorized.	2 shares are currently issued and outstanding.	Koppers Australasian B.V. owns 100% of the issued and outstanding shares of Koppers NZ Holdings.
Protim Ltd.	Irish corporation	EUR 100,000 of capital stock divided into 100,000 shares is currently authorized.	100 shares of capital stock are currently issued and outstanding.	Protim Solignum Ltd. owns 100% of the issued and outstanding shares of capital stock of Protim Ltd.
Koppers Performance Chemicals Brasil Comercio de Preservantes Ltda.	Brazilian corporation	N/A	8,909,218 quotas are currently issued and outstanding.	Koppers Performance Chemicals Inc. owns 99.99% and Koppers-Nevada Limited-Liability Company owns 0.01% of the issued and outstanding quotas of Koppers Performance Chemicals Brasil Comerico de Preservantes Ltda.

Schedule 6.1.7

US REAL PROPERTY

FACILITY	CITY	STATE	OWNED OR LEASED
Auburn	Auburn	Me	Leased
Dubuque (Track)	Dubuque	IA	Leased
Dubuque (Mileston 183.5)	Dubuque	IA	Leased
Follansbee	Follansbee	WV	Owned
Garrison	Garrison	KY	Leased
Stickney	Cicero	IL	Owned and Leased
Woodward Tar	Dolomite	AL	Owned
Griffin - Vacant Lot	Griffin	GA	Owned
1016 Everee Inn Road	Griffin	GA	Owned
Everee Inn Road (Vacant Lot)	Griffin	GA	Owned
1121 Anne Street	Griffin	GA	Owned
1142 Anne Street	Griffin	GA	Owned
1141 Anne Street	Griffin	GA	Owned
1143 Anne Street	Griffin	GA	Owned
1145 Anne Street	Griffin	GA	Owned
Hope Hull	Hope Hull	AL	Leased
Millington	Millington	TN	Owned
Rock Hill	Rock Hill	SC	Owned
52430 Duncan Avenue	Hubbell	MI	Leased
Hubbell	Hubbell (Tamarack City)	MI	Leased
3691 Tulane Road	Memphis	TN	Leased
372 Titan St.	Memphis	TN	Leased
3183 Tranquility Dr.	Memphis	TN	Leased
3333 Asteroid Rd.	Memphis	TN	Leased
Koppers Global Technology Center	Pittsburgh	PA	Leased
Koppers Headquarters	Pittsburgh	PA	Leased
4518 Tompkins Drive	Madison	WI	Owned
4546 Tompkins Drive	Madison	WI	Owned

FACILITY	CITY	STATE	OWNED OR LEASED
4602 Tompkins Drive	Madison	WI	Owned
6405 Metcalf Ave., Ste.106	Overland Park	KS	Leased
100 New Hermitage Drive, Office 2B	Hermitage	MO	Leased
184 A&B, West Independence Blvd	Mount Airy	NC	Leased
Houston	Houston	TX	Owned
6801 School Street	Valley City	OH	Leased
Denver	Denver	CO	Owned
Florence	Florence	SC	Owned
Grenada	Grenada	MS	Owned
Green Spring	Green Spring	WV	Owned
Guthrie	Guthrie	KY	Owned
North Little Rock	North Little Rock	AR	Owned
Roanoke	Salem	VA	Owned
Somerville	Somerville	TX	Owned
Susquehanna	Susquehanna	PA	Owned
Beaver Dam	Beaver Dam	KY	Leased
Corinth	Corinth	MS	Leased
Crewe	Crewe	VA	Leased
Dillwyn	Dillwyn	VA	Leased
Fordyce	Fordyce	AR	Owned
Galesburg	Galesburg	IL	Leased
Garrison	Garrison	KY	Leased
Holly Springs	Holly Springs	MS	Owned and Leased
Huntington	Huntington	WV	Leased
Jackson	Jackson	TN	Leased
Lordstown	Lordstown	OH	Leased
Mitchell	Mitchell	IN	Leased
Morrison	McMinnville	TN	Leased
Orange	Orange	VA	Leased
Paducah	Paducah	KY	Leased
Poplar Bluff	Poplar Bluff	MO	Leased
Sedalia	Sedalia	MO	Leased
West Plains	West Plains	MO	Leased

FACILITY	CITY	STATE	OWNED OR LEASED
9401 Indian Creek Parkway	Overland Park	KS	Leased
12911 Highway 59 North	Queen City	TX	Leased
1999 North Teal Road	Orange	TX	Leased
11700 Fm 3129	Queen City	TX	Leased
17691 U.S. Hwy 41	L'Anse	MI	Leased
1901 Wood Treatment Road	Leland	NC	Owned
237 Forestry Road	Eutawville	SC	Owned
HWY 453/Eutaw Rd.	Holly Hill	SC	Owned
2960 Cox Road	Blackstone	VA	Owned
704 Atlantic Avenue	Vidalia	GA	Owned
21366 General Thomas Highway	Newsoms	VA	Owned
160 Preserver Rd	North	SC	Owned
2364 Savannah Highway	Sylvania	GA	Owned
917/945 Two Church Road	Bowman	SC	Owned
555 S. Main Street	Sweetwater	TN	Owned
Milport at Butler Road 128 Millport Circle (Office Space 202 and 233)	Greenville	SC	Leased
Milport at Butler Road 128 Millport Circle (Office Space 240)	Greenville	SC	Leased
707 Grant Street	Pittsburgh	PA	Leased
8 acre parcel located at 7085 Eddy Road	Arbuckle	CA	Leased
Three-acre parcel at the Northeastern Industrial Park	Guilderland Center	NY	Leased
Yard and Storage Space	South Windham	CT	Leased

FACILITY	CITY	STATE	OWNED OR LEASED
Yard and Storage Space	New Haven	CT	Leased
Corner of 12th Street and Avenue E	Council Bluffs	IA	Leased
1248 Buchanan Street	Green Bay	WI	Leased
Two parcels of land located at Main Line Mile Post 4.0	Rochester	NY	Leased
1517 Route 38	Hainesport	NJ	Leased
225 feet of Lessor's Track No. 011	Ivory, St Louis	MO	Leased
219 E. Hoffmeister Ave.	St. Louis	MO	Leased
Premises in Oklahoma City, OK described in Exhibit to Lease	Oklahoma City	OK	Leased
18719 Highway 11	Vance	AL	Leased
310 Hendley St.	Fulton	AL	Leased
3223 Sunset Blvd	West Columbia	SC	Leased
N. Railroad Avenue	Chauncey	GA	Leased
61 Union Street	Westfield	MA	Leased
1958 Broadway	Raynham	MA	Leased
860 Cannon Bridge Road	Orangeburg	SC	Leased

Australian/Asian Real Property

FACILITY	COUNTRY	OWNED OR LEASED
Cafpirco Road Cambier, SA 5290 Mount Gambier South Australia	AU	Owned
25 Buckley Grove, Moolap, Victoria Moolap Victoria	AU	Owned
PO Box 9100 Bunbury Western Australia	AU	Owned/ Leased

FACILITY	COUNTRY	OWNED OR LEASED
PO Box 335 38 Red Lane Grafton New South Wales	AU	Owned
PO Box 29 24 Tannery Road Longford Tasmania	AU	Owned
PO Box 23 Woodstock Street port cl Mayfield New Castle New South Wales	AU	Owned
Unit 12/ 49 Jijaws St., Sumner Park, QLD	AU	Leased
Biovista No. 25-1 Jl. Damai Niaga Alam Damai Cheras 5600 Kuala Lumpur	Malaysia	Leased
6, Jalan 5, Kawasan Perusahaan, Bandar Sultan Sulaiman, Pelabuhan Klang, Selangor, 42000, Malaysia	Malaysia	Leased
19 Lebuh Sultan Mohamed 2, Bandar Sultan Sulaiman, Pelabuhan Klang, Selangor, 42000, Malaysia	Malaysia	Leased
152 Unit 1607, 16th Floor Chartered Square Building North Sathorn Road Silom Bangkok 10500, Thailand	Thailand	Leased
PO Box 162 Hervey Bay 225 Torbanlea Pialba Road Takura Queensland	AU	Leased
Unit 1214 Medical Plaza Makati Amorsolo St. Cor. De la Rosa Street Legaspi Village Manilla Philippines	Philippines	Leased

Canadian Real Property

FACILITY	COUNTRY	OWNED OR LEASED
1425 Evans Road, P.O. Box 1510 Ashcroft, British Columbia V0K 1A0	Canada	Owned
35 Crawford Street, Campbellville ON L0P 1B0	Canada	Leased
304 Concession 11 Hagersville	Canada	Leased

China Real Property

FACILITY	COUNTRY	OWNED OR LEASED
Jingtan Port Balizhuangnan, Fengrunqu Tangshan 063039 Hebei Provence	China	Owned
Tangshan Plant Balizhuangnan, Fengrunqu Hebei Province, Tangshan 063039	China	Owned

New Zealand Real Property

FACILITY	COUNTY	OWNED OR LEASED
14 Mayo Road Wiri, Manukau Auckland	New Zealand	Owned
8 Mayo Road Wiri, Manukau Auckland	New Zealand	Owned
23 Yukon Place Hornby, Christchurch	New Zealand	Owned

European Real Property

FACILITY	COUNTRY	OWNED OR LEASED
Lingfield Way	United Kingdom	Owned
Marlow	United Kingdom	Owned

FACILITY	COUNTRY	OWNED OR LEASED
Plot 8 (Fieldhouse Lane) Marlow, Bucks, United Kingdom SL7 1LS	United Kingdom	Protim Solignum Limited / the Urban District Council of Marlow / Wycombe District Council
Stan Robinson (Stafford) Limited Darlington Road, Darlington, County Durham Postal Code: DL1 4PT	United Kingdom	Owned
Unit 1214 Medical Plaza Makati Amorsolo St. Cor. De la Rosa Street Legaspi Village	Denmark	Owned/Leased
Avernakke	Nyborg	Lease
Ansgarsvej 7	Nyborg	Owned
11 Jamestown Rd. Inchicore Dublin 8	Ireland	Leased
Lundinkatu 10 B 35, FI-061000 Porvoo	Finland	Leased
Premises No 30-11-2011/001 Sampetera Str. 2 1046 Riga, Latvia cadastral No. 0100 076 0184	Latvia	Leased
Lilla Garnisonsgatan 36 25467 Helsingborg	Sweden	Leased
Lilla Garnisonsgatan 33 25467 Helsingborg	Sweden	Leased
Ekvandan 6 N. Vala Helsingborg	Sweden	Leased
St. Petri.g. 7 NO-3003 Drammen	Norway	Leased
Myklerudveien NO-1454 Fagerstrand	Norway	Leased
Espa Heidtun 2 NO-2338 Espa	Norway	Leased

FACILITY	COUNTRY	OWNED OR LEASED
Am Sagewerk 26 D-D-68526 Ladenburg	Germany	Leased
PL Rodla 8 70-419 Szezecin	Poland	Leased
Waibrzyskie Wharf	Poland	Leased
Molenlaan 55 1422 XN Uithoorn	The Netherlands	Leased

Latin American Real Property

FACILITY	COUNTY	OWNED OR LEASED
Rua Alexandre Schlemm 531, Sala 02 Barrio Anita Garibaldi, CEP 89202-181 Joinville Estado do Santa Catarina	Brazil	Tecnologias De Madeiras Brasileiras Comercio de Preservantes Ltda. / Ironildo Osellame
Americo Vespucio Norte 2680 Oficina “62” complejo El Cortijo Comuna de Conchali Código postal 8551378 Santiago – Region Metropolitanta	Chile	Comercial Osmose Chile Limitada / Patagonica Immobiliaria S.A. (sublessor) / Banco Santander-Chile

SCHEDULE 6.1.16

PARTNERSHIP AGREEMENTS; LLC AGREEMENTS

Koppers Asia LLC Operating Agreement

Amended and Restated Operating Agreement of Koppers-Nevada Limited-Liability Company

Amended and Restated Operating Agreement of Wood Protection Management LLC

Amended and Restated Operating Agreement of Koppers NZ LLC

Amended and Restated Agreement of Limited Partnership of Wood Protection LP

Amended and Restated Limited Partnership Agreement of Koppers Australasian Investments C.V.

Amended and Restated Limited Partnership Agreement of Koppers Global Investments C.V.

Amended and Restated Limited Partnership Agreement of Koppers World-Wide Holdings C.V.

Third Amended and Restated Operating Agreement of Koppers Recovery Resources LLC (formerly known as M.A. Energy Resources, LLC)

Amended and Restated Operating Agreement of Atlantic - Pole Georgia, LLC

Amended and Restated Operating Agreement of Atlantic - Pole Virginia, LLC

Amended and Restated Operating Agreement of Cox Recovery Services, LLC

Amended and Restated Operating Agreement of Cox Wood of Alabama, LLC

Amended and Restated Operating Agreement of Cox Wood of Virginia, LLC

Amended and Restated Operating Agreement of Leland Land LLC

Amended and Restated Operating Agreement of National Wood Sourcing, LLC

Amended and Restated Operating Agreement of Ruby's Corner, LLC

Amended and Restated Operating Agreement of Sustainable Management Systems LLC

Amended and Restated Operating Agreement of Sweetwater Wood Holdings, LLC

SCHEDULE 6.1.23

<u>ENVIRONMENTAL DISCLOSURES</u>

Section 6.1.23(1), (2), (3):

1) In February 2007, the United States Environmental Protection Agency ("USEPA") Region IV issued an Information Request to both Koppers Inc. (the "Company") and Beazer East, Inc. ("Beazer East") regarding the investigation and remediation of the Grenada, MI facility. Subsequent meetings resolved the issues related to the owned property, but issues were raised concerning the possible migration of contaminants off the property. The Company, in cooperation with Beazer East, conducted a series of investigations of off-site properties and an onsite stormwater pond and have conducted remediation activities in certain areas. USEPA completed additional offsite sampling downgradient and upgradient of the site in September 2018. The results of this work are being reviewed.

2) In July 2008, the Illinois EPA ("IEPA") issued two Notices of Violation to the Company alleging improper management of hazardous materials at the Company's Stickney, IL facility and demanding an investigation of the site. One Notice was for the owned portion of the site (38 acres) and one Notice was for the leased terminal. The Company, in cooperation with Beazer East, investigated both parcels. Remediation of the leased parcel is complete and IEPA issued a Return to Compliance Letter on the Notice related to the leased parcel. Investigation continues on the owned parcel which is under IEPA review.

3) In 2008, the Company was identified that it may be a potentially responsible party ("PRP") at the LWD, Calvert City, KY CERCLA site. In 2009, USEPA accepted completion of remedial activities at the site. Subsequently, the Kentucky Department of Environmental Protection ("KYDEP") identified additional potential work areas. In 2015, KYDEP approved the PRPs statement of work (capping and monitoring) and operation & maintenance ("O&M") plan to address the identified areas, issued the Record of Decision ("ROD"), and executed the Agreed Order with the PRPs and the landowner to complete the incinerator remedy and O&M estimated at $6M. An Environmental Covenant was also filed on the property as required by the ROD and the Agreed Order. The work at the incinerator area was completed in 3Q and 4Q 2016. The construction completion report was submitted. Long-term O&M continues. The PRP Group's and USEPA's tolling agreements with non-settling parties expired on 12/31/2012 and the PRPs filed suit against non-settling parties at that time. The PRP Group has obtained funds from these previously non-settling parties.

4) In September 2009, the Company received a general notice letter notifying it that it may be a PRP at the Newark Bay, NJ CERCLA site. In January 2010, the Company submitted a response to the general notice letter asserting that the Company is a *de minimus* party at this site. The Company has not received a response to this letter.

5) Groundwater sampling conducted in 2012 and 2013 at the Osmose, Inc. facility in Mt. Gambier, Australia indicated the presence of dissolved chromium at levels above applicable guidelines. Pursuant to a letter directive (2013) by the South Australia EPA (the "SAEPA"), the Company conducted further investigation at the site to assess the possible sources and extent of chromium in groundwater at the site. Following agency review, a groundwater extraction test program was conducted in 2017 to assess control of migration of chromium through pumping. The SAEPA requested a Voluntary Site Remedial Plan ("VSRP") to implement the proposed pumping / gradient control program; final approval of the provided VSRP is pending.

6) Following the acquisition of Osmose, Inc., the Company, following up on the Company's Millington, TN facility's voluntary entry into the Tennessee Site Remediation Program ("SRP"), met with the Tennessee Department of Environment and Conservation ("TDEC") to discuss the site's status within the SRP and the scope of any possible additional work. In September 2015, TDEC approved a Work Plan for additional soil and groundwater characterization to better assess potential remedial actions. The investigation report and recommendations for further actions including treatment through subsurface injection was approved by TDEC in August 2016. The remedial implementation including installation of additional wells and subsurface injection of a remediation reagent was conducted in the 4th quarter of 2016. Success of the subsurface injection continues to be evaluated through ongoing groundwater monitoring.

7) In July 2015 the USEPA conducted a SPCC inspection at the Company's Follansbee, WV facility. The facility was aware of and correcting all deficiencies noted during the inspection. In November 2015 the facility received a Consent Order from the Agency.

8) The Company has been named as one of the PRPs at the Portland Harbor, OR CERCLA site located on the Willamette River in Oregon. The Company formerly operated a coal tar pitch terminal near the site. The Company has responded to a USEPA 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. The Company believes that it is a *de minimus* contributor at the site. USEPA issued the Record of Decision ("ROD") on the site on January 13, 2017. The PRP group reviewed the ROD and certain PRPs are completing additional field sampling and data collection suggested in the ROD for use in subsequent design of the remedy. Additionally, a separate natural resources damages assessment ("NRDA") is being conducted by a local trustee group. The NRDA is intended to identify further information necessary to estimate liabilities for remediation-based settlements of national resource damages ("NRD") claims. The Company entered into a separate process to develop an allocation of NRD cost and has negotiated a cash-out settlement amount with the Trustee Group. A consent order is being developed to document the settlement between the Trustee Group and those parties engaged in early settlement. On February 6, 2017, the Yakama Nation, which had earlier dropped out of the Trustee coalition, filed suit against certain PRPs to seek recovery for response costs to releases at/from Portland Harbor site, and future response, assessment, and loss of natural resources in waterways downstream of the Portland Harbor site. The

Company tendered the claim to Beazer East. At present the District federal court has recommended a stay of the case; a final ruling is pending.

9) On June 4, 2018, the Company received a letter from the USEPA concerning potential violations of the Clean Water Act observed during inspections and review of SPCC and Facility Response Plans at the Company's facilities in Follansbee, WV; Green Spring, WV; and Clairton, PA. In addition, USEPA reviewed one facility's compliance with an earlier consent order regarding above ground storage tank integrity testing. The Company continues to meet and correspond with USEPA to discuss and present relevant information related to the allegations.

10) By letter dated August 18, 2018, Alpine Waste & Recycling, Inc. ("Alpine") notified the Company that Alpine has detected the presence of pentachlorophenol on its property adjacent to the Company's Denver, CO facility, the presence of which Alpine claims was released from the Denver facility. Alpine also claimed it has incurred and will continue to incur damages in responding to this release. A similar letter was sent to Beazer East. Both the Company and Beazer East signed a tolling agreement with Alpine to facilitate continued discussions on the subject. The Company determined it did not use pentachlorophenol at the Denver plant and tendered the claim to Beazer East.

11) On September 4, 2018, the Company received a letter from NW Natural, as landlord, related to the Company's formerly leased terminal site in Portland, OR alleging that the Company has certain remedial obligations at the site. The Company has advised NW Natural that the obligations related to remediation likely are the responsibility of Beazer East as a result of its former tenancy at the site pre-dating the Company's tenancy at the site. The Company has tendered the claim to Beazer East.

12) On March 20, 2019, the Company received a letter from USEPA concerning a section 114 request under the Clean Air Act for the Company's Galesburg, IL facility. The Company is sharing responsive documents to UESPA's requests related to the site's historical emissions and preparing to conduct emissions testing.

13) The disclosures in the other subparts of this Section 6.1.23 are incorporated by reference.

Section 6.1.23(7):
There may be structures, improvements, equipment, fixtures, impoundments, pits, lagoons, or aboveground or underground storage tanks which are owned by a Loan Party (by virtue of the acquisition of a Property), but that are not currently operated by a Loan Party may contain Regulated Substances other than conforming to the description contained in Section 6.1.23(7).

Section 6.1.23(9):
The Company has been notified that it is a PRP at the following sites:
1) LWD, Calvert City, KY
2) Newark Bay, NJ
3) Portland Harbor, OR

4) SBA Shipyard, Jennings, LA – On October 13, 2016, the Company notified USEPA that the documentation provided on the site indicated that the relevant activities occurred prior to December 28, 1988 and therefore, were the responsibility of Beazer East. The Company also tendered the claim to Beazer East. The Company awaits further correspondence from USEPA.
5) Tank Car Corporation of America, Oreland, PA – In May 2011, the Company received a request for information from USEPA Region III for “Koppers Company” in connection with the Tank Car Corporation of America Inc. Site. In May 2011, the Company responded that supporting documents referenced in USEPA’s letter predated the sale from Beazer East and therefore the Company was not liable. The Company also tendered the claim to Beazer East. USEPA has not responded to date.
6) J&W Pallet and Drum, Atlanta, GA – In December 2007, USEPA Region IV issued an Information Request to Osmose, Inc. regarding the J&W Pallet and Drum Superfund Site. In its January 2008 response, Osmose, Inc. stated that it has no record of sending waste to J&W Pallet and Drum Company. The Company has had no further contact with USEPA regarding this matter.
7) Kentucky Wood Preserving Site, Winchester, KY - In October 2007, USEPA Region 4 issued an Information Request to Osmose, Inc. regarding the Kentucky Wood Preserving Site. In its response, Osmose, Inc. stated that, according to its records, it sold a product to Kentucky Wood Preserving between 1964 and sometime after 1980. The Company has had no further contact with USEPA regarding this matter.
8) Alternate Energy Resources, Augusta, GA - In November 2009, the Company received a request for information from USEPA Region IV in connection with the Alternate Energy Resources Superfund Site. In January 2010, the Company responded that supporting documents provided with the USEPA’s letter predated the sale from Beazer East and therefore the Company was not liable. The Company also tendered the claim to Beazer East. USEPA has not responded to date.

Section 6.1.23(10):

1) Properties owned or operated that are on the NPL: Galesburg, IL (125 acres of leased property); Hubbell, MI is a leased property that is located within a CERCLA site. This operation was acquired from Osmose, Inc in 2014. Neither Osmose, Inc. nor the Company is identified as a PRP in the CERCLA site.

2) Properties owned or operated at which a RCRA Facility Investigation, Corrective Action Study and/or Corrective Action is underway: Denver, CO (64 acres of owned property); Follansbee, WV (32 acres of owned property); Florence, SC (200 acres of owned property); Green Spring, WV (98 acres of owned property); Grenada, MI (154 acres of owned property); Guthrie, KY (122 acres of owned property); Montgomery, AL (84 acres of owned property); North Little Rock, AR (148 acres of owned property); Roanoke, VA (91 acres of owned property); Somerville, TX (244 acres of owned property); Susquehanna, PA (109 acres of owned property); Sweetwater, TN (25 acres of owned property) – post closure and corrective action conducted by former owner/operator; Woodward, AL (23 acres of owned property); Houston, TX (5 acres of owned property).

3) Properties owned or operated that are being investigated under Environmental Laws other than CERCLA or RCRA: Stickney, IL (38 acres of owned property) – voluntary site investigation at the request of the IEPA; Millington, TN – voluntary site investigation and remediation pursuant to the Tennessee voluntary Site Remediation Program; Leland, NC (128 acres of owned property) - site monitoring and maintenance provisions pursuant to Brownfields Agreement with NC Department of Environmental and Natural Resources; Vidalia, GA (140 acres of owned property) – site investigation and cleanup pursuant to Georgia Environmental Protection Department Prospective Purchaser Corrective Action Program; Kurnell, New South Wales, Australia – pursuant to a lease agreement and in coordination with the local environmental agency; Mayfield, New South Wales, Australia – pursuant to a sales agreement and in coordination with the New South Wales Environment Agency; Mt Gambier, South Australia – pursuant to a letter demand from the SA Environment Agency; Hubbell, MI – groundwater investigation by prior owner/operator under direction of MI Department of Environmental Quality; Superior, WI – investigation of drip pad closure requirements under 40 CFR Part 265 Subpart W and NR 665.

4) Properties owned or operated which are adjoining or in the proximity of properties identified or proposed to be identified on any such list or subject to Remedial Action: Denver, CO – Broderick wood treating site (CERCLA); Denver, CO – Dewey Lake (to the knowledge of any Loan Party, Dewey Lake has not yet been identified or proposed to be identified on any such list, but some investigatory work has been done); Woodward, AL – Beazer Coke Plant (RCRA); Grenada, MI – Heatcraft (RCRA); Eutawville, SC – Eutawville Farm Site within 1 mile is on the Hazardous Waste Sites list; Fulton, AL – Scotch Lumber Company is 0.069 mile to southeast of site and is on the voluntary cleanup program list; Leland, NC – four sites within 1 mile on the State Hazardous Substance Disposal Site or Inactive Hazardous Waste Site lists.

Note: All Properties subject to a Remedial Action either have a land use restriction filed, recorded or imposed, or can be expected to have a land use restriction filed, recorded or imposed, effectively restricting the use of the land to industrial use.

Section 6.1.23(11):
The Green Spring, WV, Roanoke, VA, and Montgomery, AL facilities are each located partially or wholly in a floodplain. The Ashcroft, BC facility is located largely within the boundary of archaeological site EeRh-0061 (also known as the Rattlesnake Hill Site) and is protected under the Heritage Conservation Act.

SCHEDULE 8.2.9

PERMITTED PARTNERSHIPS, LLCS, JOINT VENTURES

Koppers (China) Carbon & Chemical Co Ltd

Koppers (Jiangsu) Carbon Chemical Co. Ltd

Wood Protection LP

Koppers (Thailand) Limited

Comercial KPC Chile Limitada

Koppers Performance Chemicals Brasil Comerico De Preservantes Ltda.

SCHEDULE A
TO
PLEDGE AGREEMENT

Description of Pledged Collateral

Pledgor and Pledgor's Jurisdiction of Formation	Pledged Shares	Type and Amount of Ownership
Koppers Inc. — Pennsylvania, U.S.A.	1,000 shares of common stock	100% of the issued and outstanding common stock of Koppers World-Wide Ventures Corporation
	1,000 shares of common stock	100% of the issued and outstanding common stock of Koppers Delaware, Inc.
	All membership interests (not certificated)	100% of the membership interests of Koppers Asia LLC
	774,254 shares of common stock	100% of the issued and outstanding common stock of Koppers Performance Chemicals Inc.
	100 shares of common stock	100% of the issued and outstanding common stock of Koppers Railroad Structures Inc.
	All membership interests (not certificated)	100% of the membership interests of Koppers Recovery Resources LLC (formerly known as M.A. Energy Resources, LLC)
	1 share of common stock	100% of the issued and outstanding common stock of Koppers Utility and Industrial Products Inc. (formerly known as Cox Industries, Inc.)
Koppers Holdings Inc. — Pennsylvania, U.S.A.	1 share of common stock	100% of the issued and outstanding common stock of Koppers Inc.
Koppers World-Wide Ventures Corporation — Delaware, U.S.A.	100 shares of common stock	100% of the issued and outstanding common stock of Koppers Ventures Inc.
	65% of >99% partnership interest (not certificated)	65% of the >99% partnership interest in Koppers Global Investments C.V. Koppers World-Wide Ventures Corporation is the limited partner in this partnership
	65 shares of common stock	65% of the issued common stock of Koppers Ashcroft Inc.
Koppers Railroad Structures Inc. — Delaware, U.S.A.	65% shares of common stock	65% of the issued common stock of Koppers Railroad Structures Canada Inc.
Koppers Ventures Inc. — Delaware, U.S.A.	65% of <1% partnership interest (not certificated)	65% of the <1% partnership interest in Koppers World-Wide Holdings C.V. Koppers Ventures Inc. is the general partner in this partnership

Pledgor and Pledgor's Jurisdiction of Formation	**Pledged Shares**	**Type and Amount of Ownership**
	65% of <1% partnership interest (not certificated)	65% of the <1% partnership interest in Koppers Global Investments C.V. Koppers Ventures Inc. is the general partner in this partnership
	65% of <1% partnership interest (not certificated)	65% of the <1% partnership interest in Koppers Australasian Investments C.V. Koppers Ventures Inc. is the general partner in this partnership
Koppers Performance Chemicals Inc. — New York, U.S.A.	100% of limited liability company interest (not certificated)	100% of limited liability company interest in Koppers-Nevada Limited-Liability Company
	100% of limited liability company interest (not certificated)	100% of limited liability company interest in Wood Protection Management LLC
	100% of limited liability company interest (not certificated)	100% of limited liability company interest in Koppers NZ LLC
	65% of equity (not certificated)	65% of equity of Koppers Performance Chemicals Brasil Comercio De Preservantes Ltda. (an entity existing under the laws of Brazil)
	65% of equity	65% of equity of Koppers (Thailand) Ltd. (an entity existing under the laws of Thailand)
	65% of equity (not certificated)	50% of equity of Protim Solignum Sdn Bhd (an entity existing under the laws of Malaysia)
	65% of equity (not certificated)	65% of equity of Comercial KPC Chile Limitada (an entity existing under the laws of Chile)
Wood Protection Management LLC — Nevada, U.S.A.	1% general partnership interest (not certificated)	1% general partnership interest in Wood Protection LP
Koppers-Nevada Limited-Liability Company — Nevada, U.S.A.	99% limited partnership interest (not certificated)	99% limited partnership interest in Wood Protection LP
Koppers Utility and Industrial Products Inc. (formerly known as Cox Industries, Inc.)	All membership interests (not certificated)	100% of the membership interests of Atlantic Pole - Georgia, LLC
	All membership interests (not certificated)	100% of the membership interests of Atlantic Pole - Virginia, LLC
	100,000 shares of common stock	Carolina Pole Leland, Inc.
	260,000 shares of common stock	Carolina Pole, Inc.
	260,000 shares of common stock	Cove City Wood Preserving, Inc.
	All membership interests (not certificated)	100% of the membership interests of Cox Recovery Services, LLC
	All membership interests (not certificated)	100% of the membership interests of Cox Wood of Alabama, LLC
	All membership interests (not certificated)	100% of the membership interests of Cox Wood of Virginia, LLC
	260,000 shares of common stock	Cox Wood Preserving Company

Pledgor and Pledgor's Jurisdiction of Formation	**Pledged Shares**	**Type and Amount of Ownership**
	All membership interests (not certificated)	100% of the membership interests of National Wood Sourcing, LLC
	2,000 shares of common stock	North - South Wood Preserving Company, Inc.
	All membership interests (not certificated)	100% of the membership interests of Ruby's Corner, LLC
	95,000 shares of common stock	Structural Woods Preserving Co.
	All membership interests (not certificated)	100% of the membership interests of Sustainable Management Systems LLC
	All membership interests (not certificated)	100% of the membership interests of Sweetwater Wood Holdings, LLC
Carolina Pole, Inc.	All membership interests (not certificated)	100% of the membership interests of Leland Land LLC

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of Koppers Inc. (a "**Debtor**") is located at:

436 Seventh Avenue
Pittsburgh, PA 15219
Allegheny County

2. Such Debtor's true and full name is as follows: Koppers Inc. Such Debtor uses no trade names or fictitious names, except for the following trade name: Koppers.

3. Such Debtor's form of organization is as follows: Corporation

4. Such Debtor's state of organization is as follows: Pennsylvania

5. Such Debtor's EIN # is as follows: 25-1588399

6. Such Debtor's organization ID # is (if any exists) is as follows: 1049518

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

See Appendix 1 to Schedule A attached

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

Certain historical books and records may be maintained in an off-site storage facility at

Access
923 Bidwell Street
Pittsburgh, PA 15233

9. All of such Debtor's real property is located in the following counties:

See Item 7 above

APPENDIX 1

KOPPERS INC. REAL PROPERTY

FACILITY	CITY	STATE	OWNED OR LEASED	DIVISION	COLLATERAL
Koppers Global Technology Center	Pittsburgh	PA	Leased	Admin	Equipment, Inventory, Office Furniture
Koppers Headquarters	Pittsburgh	PA	Leased	Admin	Equipment, Inventory, Office Furniture
Follansbee	Follansbee	WV	Owned	CMC	Equipment, Inventory, Office Furniture
Fordyce	Fordyce	AR	Owned	RUPS	Equipment, Inventory, Office Furniture
Stickney	Stickney	IL	Leased/ Owned	CMC	Equipment, Inventory, Office Furniture
Denver	Denver	CO	Owned	RUPS	Equipment, Inventory, Office Furniture
Woodward Tar	Dolomite	Al	Owned	CMC	N/A
Florence	Florence	SC	Owned	RUPS	Equipment, Inventory, Office Furniture
Green Spring	Green Spring	WV	Owned	RUPS	Equipment, Inventory, Office Furniture
Grenada	Grenada	MS	Owned	RUPS	
Guthrie	Guthrie	KY	Owned	RUPS	Equipment, Inventory, Office Furniture
Lordstown	Lordstown	OH	Leased	RUPS	Equipment, Inventory, Office Furniture
Morrison	McMinnville	TN	Leased	RUPS	Equipment, Inventory, Office Furniture
North Little Rock	North Little Rock	AR	Owned	RUPS	Equipment, Inventory, Office Furniture

FACILITY	CITY	STATE	OWNED OR LEASED	DIVISION	COLLATERAL
Poplar Bluff	Poplar Bluff	MO	Leased	RUPS	Equipment, Inventory, Office Furniture
Roanoke	Roanoke	VA	Owned	RUPS	Equipment, Inventory, Office Furniture
Sedalia	Sedalia	MO	Leased	RUPS	Equipment, Inventory, Office Furniture
Somerville	Somerville	TX	Owned	RUPS	Equipment, Inventory, Office Furniture
Susquehanna	Susquehanna	PA	Owned	RUPS	Equipment, Inventory, Office Furniture
Beaver Dam	Beaver Dam	KY	Leased	RUPS	Equipment and Inventory
Corinth	Corinth	MS	Leased	RUPS	Equipment and Inventory
Crewe	Crewe	VA	Leased	RUPS	Equipment and Inventory
Dillwyn	Dillwyn	VA	Leased	RUPS	Equipment and Inventory
Galesburg	Galesburg	IL	Leased	RUPS	Equipment, Inventory, Office Furniture
Garrison	Garrison	KY	Leased	RUPS	Equipment, Inventory, Office Furniture
Holly Springs	Holly Springs	MS	Leased	RUPS	Equipment and Inventory
Hope Hull	Hope Hull	AL	Leased	RUPS	Equipment and Inventory
Huntington	Huntington	WV	Leased	RUPS	Equipment, Inventory, Office Furniture
Jackson	Jackson	TN	Leased	RUPS	Equipment and Inventory
Mitchell	Mitchell	IN	Leased	RUPS	Equipment and Inventory
Orange	Orange	VA	Leased	RUPS	Equipment and Inventory

FACILITY	CITY	STATE	OWNED OR LEASED	DIVISION	COLLATERAL
Paducah	Paducah	KY	Leased	RUPS	Equipment and Inventory
West Plains	West Plains	MO	Leased	RUPS	Equipment and Inventory

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of Koppers Holdings Inc. (a "**Debtor**") is located at:

   436 Seventh Avenue
   Pittsburgh, PA 15219
   Allegheny County

2. Such Debtor's true and full name is as follows: Koppers Holdings Inc. Such Debtor uses no trade names or fictitious names.

3. Such Debtor's form of organization is as follows: Corporation

4. Such Debtor's state of organization is as follows: Pennsylvania

5. Such Debtor's EIN # is as follows: 20-1878963

6. Such Debtor's organization ID # is (if any exists) is as follows: 3261656

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   None

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   None

9. All of such Debtor's real property is located in the following counties:

   None

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of Koppers World-Wide Ventures Corporation (a "**Debtor**") is located at:

501 Silverside Road
Suite 67
Wilmington, DE 19809
New Castle County

2. Such Debtor's true and full name is as follows: Koppers World-Wide Ventures Corporation. Such Debtor uses no trade names or fictitious names, except for the following trade name: Koppers.

3. Such Debtor's form of organization is as follows: Corporation

4. Such Debtor's state of organization is as follows: Delaware

5. Such Debtor's EIN # is as follows: 51-0340346

6. Such Debtor's organization ID # is (if any exists) is as follows: 2294776

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

None

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

None

9. All of such Debtor's real property is located in the following counties:

None

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of Koppers Delaware, Inc. (a "**Debtor**") is located at:

501 Silverside Road
Suite 67
Wilmington, DE 19809
New Castle County

2. Such Debtor's true and full name is as follows: Koppers Delaware, Inc. Such Debtor uses no trade names or fictitious names, except for the following trade name: Koppers.

3. Such Debtor's form of organization is as follows: Corporation

4. Such Debtor's state of organization is as follows: Delaware

5. Such Debtor's EIN # is as follows: 51-0370974

6. Such Debtor's organization ID # is (if any exists) is as follows: 2389748

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

None

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

None

9. All of such Debtor's real property is located in the following counties:

None

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of Koppers Asia LLC (a "**Debtor**") is located at:

   2711 Centerville Road
   Suite 400
   Wilmington, DE 19808
   New Castle County

2. Such Debtor's true and full name is as follows: Koppers Asia LLC. Such Debtor uses no trade names or fictitious names, except for the following trade name: Koppers.

3. Such Debtor's form of organization is as follows: Limited Liability Company

4. Such Debtor's state of organization is as follows: Delaware

5. Such Debtor's EIN # is as follows: 25-1588399

6. Such Debtor's organization ID # is (if any exists) is as follows: 4452716

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   None

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   None

9. All of such Debtor's real property is located in the following counties:

   None

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of Koppers Ventures Inc. (a "**Debtor**") is located at:

 436 Seventh Avenue
 Pittsburgh, PA 15219
 Allegheny County

2. Such Debtor's true and full name is as follows: Koppers Ventures Inc. Such Debtor uses no trade names or fictitious names.

3. Such Debtor's form of organization is as follows: Corporation

4. Such Debtor's state of organization is as follows: Delaware

5. Such Debtor's EIN # is as follows: 81-5309213

6. Such Debtor's organization ID # is (if any exists) is as follows: 4784301

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

 None

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

 None

9. All of such Debtor's real property is located in the following counties:

 None

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of Koppers Performance Chemicals Inc. (a "**Debtor**") is located at:

1016 Everee Inn Road
Griffin, GA 30224
Spalding County

2. Such Debtor's true and full name is as follows: Koppers Performance Chemicals Inc. Such Debtor uses no trade names or fictitious names.

3. Such Debtor's form of organization is as follows: Corporation

4. Such Debtor's state of organization is as follows: New York

5. Such Debtor's EIN # is as follows: 16-0579500

6. Such Debtor's organization ID # is (if any exists) is as follows: 47984

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

See Appendix 1 to Schedule A attached

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

Certain historical books and records may be maintained in an off-site storage facility at

Access
923 Bidwell Street
Pittsburgh, PA 15233

9. All of such Debtor's real property is located in the following counties:

See item 7 above

APPENDIX 1

FACILITY	CITY	STATE	COUNTY	OWNED OR LEASED
1016 Everee Inn Road	Griffin	GA	Spalding	Owned
1141 Anne Street	Griffin	GA	Spalding	Owned
1121 Anne Street	Griffin	GA	Spalding	Owned
1143 Anne Street	Griffin	GA	Spalding	Owned
1145 Anne Street	Griffin	GA	Spalding	Owned
Millington	Millington	TN	Shelby	Owned
Rock Hill	Rock Hill	SC	York	Owned
Hubbell	Hubbell	MI	Houghton	Leased
Tamarack Warehouse	Memphis	TN	Shelby	Leased
6801 School Street Ste. 106	Valley City	OH	Medina	Leased
3691 Tulane Road	Memphis	TN	Shelby	Leased
372 Titan St.	Memphis	TN	Shelby	Leased
3183 Tranquility Dr.	Memphis	TN	Shelby	Leased
3333 Asteroid Rd.	Memphis	TN	Shelby	Leased

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of Koppers Railroad Structures, Inc. (a "**Debtor**") is located at:

4546 Tompkins Drive
Madison, WI 53716
Dane County

2. Such Debtor's true and full name is as follows: Koppers Railroad Structures, Inc. Such Debtor uses no trade names or fictitious names.

3. Such Debtor's form of organization is as follows: Corporation

4. Such Debtor's state of organization is as follows: Delaware

5. Such Debtor's EIN # is as follows: 36-4502347

6. Such Debtor's organization ID # is (if any exists) is as follows: 3550373

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

See Appendix 1 to Schedule A attached

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

Certain historical books and records may be maintained in an off-site storage facility at

Access
923 Bidwell Street
Pittsburgh, PA 15233

9. All of such Debtor's real property is located in the following counties:

See item 7 above

APPENDIX 1

FACILITY	CITY	STATE	COUNTY	OWNED OR LEASED
Madison	Madison (4518 Tompkins Drive)	WI	Dane	Owned
Madison	Madison (4546 Tompkins Drive)	WI	Dane	Owned
Madison	Madison (4602 Tompkins Drive)	WI	Dane	Owned
Overland Park	Overland Park	KS	Johnson	Leased
Hermitage	Hermitage	MO	Hickory	Leased
Mount Airy	Mount Airy	NC	Surry	Leased

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of Koppers-Nevada Limited-Liability Company (a "**Debtor**") is located at:

 436 Seventh Avenue
 Pittsburgh, PA 15219
 Allegheny County

2. Such Debtor's true and full name is as follows: Koppers-Nevada Limited-Liability Company. Such Debtor uses no trade names or fictitious names.

3. Such Debtor's form of organization is as follows: Limited Liability Company

4. Such Debtor's state of organization is as follows: Nevada

5. Such Debtor's EIN # is as follows: 88-0449990

6. Such Debtor's organization ID # is (if any exists) is as follows: NV19991066464

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

 None

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

 None

9. All of such Debtor's real property is located in the following counties:

 None

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of Wood Protection Management LLC (a "**Debtor**") is located at:

436 Seventh Avenue
Pittsburgh, PA 15219
Allegheny County

2. Such Debtor's true and full name is as follows: Wood Protection Management LLC. Such Debtor uses no trade names or fictitious names.

3. Such Debtor's form of organization is as follows: Limited Liability Company

4. Such Debtor's state of organization is as follows: Nevada

5. Such Debtor's EIN # is as follows: 88-0443315

6. Such Debtor's organization ID # is (if any exists) is as follows: NV19991066472

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

None

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

None

9. All of such Debtor's real property is located in the following counties:

None

**SCHEDULE A
TO
SECURITY AGREEMENT**

Security Interest Data Summary

1. The chief executive office of Koppers NZ LLC (a "**Debtor**") is located at:

   436 Seventh Avenue
   Pittsburgh, PA 15219
   Allegheny County

2. Such Debtor's true and full name is as follows: Koppers NZ LLC. Such Debtor uses no trade names or fictitious names.

3. Such Debtor's form of organization is as follows: Limited Liability Company

4. Such Debtor's state of organization is as follows: New York

5. Such Debtor's EIN # is as follows: 16-0579500

6. Such Debtor's organization ID # is (if any exists) is as follows: 2578589

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   None

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   None

9. All of such Debtor's real property is located in the following counties:

   None

**SCHEDULE A
TO
SECURITY AGREEMENT**

Security Interest Data Summary

1. The chief executive office of Wood Protection LP (a "**Debtor**") is located at:

   211 E. 7th Street
   Austin, TX 78701

2. Such Debtor's true and full name is as follows: Wood Protection LP. Such Debtor uses no trade names or fictitious names.

3. Such Debtor's form of organization is as follows: Limited Partnership

4. Such Debtor's state of organization is as follows: Texas

5. Such Debtor's EIN # is as follows: 74-1333892

6. Such Debtor's organization ID # is (if any exists) is as follows: 0012976210

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   See Appendix 1 to Schedule A attached

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   None

9. All of such Debtor's real property is located in the following counties:

   See item 7 above

APPENDIX 1

FACILITY	CITY	COUNTY	STATE	OWNED OR LEASED
Houston	Austin	Harris	TX	Owned

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of Koppers Recovery Resources LLC (formerly known as M.A. Energy Resources, LLC) (a "**Debtor**") is located at:

   9401 Indian Creek Parkway, Suite 450
   Overland Park, KS 66210

2. Such Debtor's true and full name is as follows: Koppers Recovery Resources LLC. Such Debtor uses no trade names or fictitious names.

3. Such Debtor's form of organization is as follows: Limited Liability Company

4. Such Debtor's state of organization is as follows: Kansas

5. Such Debtor's EIN # is as follows: 80-0436804

6. Such Debtor's organization ID # is (if any exists) is as follows: 6346951

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   See Appendix 1 to Schedule A attached

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   None

9. All of such Debtor's real property is located in the following counties:

   See item 7 above

APPENDIX 1

FACILITY[2]	CITY	STATE	COUNTY	OWNED OR LEASED
Corporate HQ	Overland Park (9401 Indian Creek Parkway)	KS	Johnson	Leased
Queen City	Queen City (12911 Highway 59 North)	TX	Cass	Leased
Queen City - International Paper	Queen City (11700 Fm 3129)	TX	Cass	Leased

2 Certain customers allow Debtor to store equipment and other personal property on their properties to enable Debtor to provide services to those customers. These arrangements are not subject to any written lease or agreement, and addresses have not been provided for these locations.

SCHEDULE A
TO
SECURITY AGREEMENT

<u>Security Interest Data Summary</u>

1. The chief executive office of Koppers Utility and Industrial Products Inc. (formerly known as Cox Industries, Inc.) (a "**Debtor**") is located at:

    1705 Village Park Drive, Orangeburg, South Carolina 29118

2. Such Debtor's true and full name is as follows: Koppers Utility and Industrial Products Inc. Such Debtor uses no trade names or fictitious names.

3. Such Debtor's form of organization is as follows: Corporation

4. Such Debtor's state of organization is as follows: South Carolina

5. Such Debtor's EIN # is as follows: 57-1066065

6. Such Debtor's organization ID # is (if any exists) is as follows: N/A

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

    See Appendix 1 to Schedule A attached.

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

    None.

9. All of such Debtor's real property is located in the following counties:

    See Appendix 2 to Schedule A attached

APPENDIX 1[3]

FACILITY	CITY	STATE	COUNTY	OWNED OR LEASED
Blackstone Facility	Blackstone	VA	Nottoway	Owned
Bowman Facility	Bowman	SC	Orangeburg	Owned
Fulton Pole Peeling Facility	Fulton	AL	Clarke	Leased
Holly Hill	Holly Hill	SC	Orangeburg	Owned
Leland Facility	Leland	NC	Brunswick	Owned
Newsoms Facility	Newsoms	VA	Southampton	Owned
Eutawville Facility	Eutawville	SC	Orangeburg	Owned
Orangeburg Facility	Orangeburg	SC	Orangeburg	Leased
Sweetwater Facility	Sweetwater	TN	Monroe	Owned
Vance Facility	Vance	AL	Tuscaloosa	Leased
North, SC Facility	North	SC	Orangeburg	Owned
Vidalia Facility	Vidalia	GA	Toombs	Owned
Greenville	Greenville	SC	Greenville	Leased

[3] Certain vendors allow Debtor to store small amounts of inventory on their properties to enable Debtor to provide services. These arrangements are not subject to any written lease or agreement, and addresses have not been provided for these locations.

FACILITY	CITY	STATE	COUNTY	OWNED OR LEASED
Pittsburgh Office Space	Pittsburgh	PA	Allegheny	Leased
Arbuckle Office Space	Arbuckle	CA	Colusa	Leased
Guilderland Reload Yard	Guilderland	NY	Albany	Subleased
Auburn Reload Yard	Auburn	ME	Androscoggin	Leased (Verbal Agreement)
South Windham Reload Yard	South Windham	CT	Windham	Leased (Verbal Agreement)
New Haven Reload Yard	New Haven	CT	New Haven	Leased
Council Bluffs Reload Yard	Council Bluffs	IA	Pottawattamie	Leased
Green Bay Reload Yard	Green Bay	WI	Brown County	Leased
Rochester Reload Yard	Rochester	NY	Monroe	Leased
Dubuque (Track)	Dubuque	IA	Dubuque	Leased
Dubuque Reload Yard	Dubuque	IA	Dubuque	Leased
St. Louis Track	St. Louis	MO	St. Louis	Leased
St. Louis Land	St. Louis	MO	St. Louis	Leased
Oklahoma City Reload Yard	Oklahoma City	OK	Oklahoma	Leased
Columbia Office Space	West Columbia	SC	Lexington	Leased
Eastwood Carriers Reload Yard	Westfield	MA	Hampden	Leased
Alkat Reload Yard	Raynham	MA	Bristol	Leased

APPENDIX 2

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of Atlantic Pole - Georgia, LLC (a "**Debtor**") is located at:

   1705 Village Park Drive, Orangeburg, South Carolina 29118

2. Such Debtor's true and full name is as follows: Atlantic Pole - Georgia, LLC. Such Debtor uses no trade names or fictitious names.

3. Such Debtor's form of organization is as follows: Limited Liability Company

4. Such Debtor's state of organization is as follows: South Carolina

5. Such Debtor's EIN # is as follows: 46-0613658

6. Such Debtor's organization ID # is (if any exists) is as follows: N/A

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   See Appendix 1 to Schedule A attached.

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   None.

9. All of such Debtor's real property is located in the following counties:

   See Appendix 2 to Schedule A attached

APPENDIX 1

FACILITY	CITY	STATE	COUNTY	OWNED OR LEASED
Vidalia Facility	Vidalia	GA	Toombs	Owned

APPENDIX 2

FACILITY	CITY	STATE	COUNTY	OWNED OR LEASED
Vidalia Location	Vidalia	GA	Toombs	Owned

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of Atlantic Pole - Virginia, LLC (a "**Debtor**") is located at:

    1705 Village Park Drive, Orangeburg, South Carolina 29118

2. Such Debtor's true and full name is as follows: Atlantic Pole - Virginia, LLC. Such Debtor uses no trade names or fictitious names.

3. Such Debtor's form of organization is as follows: Limited Liability Company

4. Such Debtor's state of organization is as follows: South Carolina

5. Such Debtor's EIN # is as follows: 46-0613100

6. Such Debtor's organization ID # is (if any exists) is as follows: N/A

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

    See Appendix 1 to Schedule A attached.

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

    None.

9. All of such Debtor's real property is located in the following counties:

    See Appendix 2 to Schedule A attached

APPENDIX 1

APPENDIX 2

FACILITY	CITY	STATE	COUNTY	OWNED OR LEASED
Newsoms Facility	Newsoms	VA	Southampton	Owned
Hainesport Reload Yard	Hainesport	NJ	Burlington	Leased

FACILITY	CITY	STATE	COUNTY	OWNED OR LEASED
Hainesport Reload Yard	Hainesport	NJ	Burlington	Leased
Newsoms Location	Newsoms	VA	Southampton	Owned

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of Carolina Pole Leland, Inc. (a "**Debtor**") is located at:

   1705 Village Park Drive, Oranageburg, South Carolina 29118

2. Such Debtor's true and full name is as follows: Carolina Pole Leland, Inc. Such Debtor uses no trade names or fictitious names.

3. Such Debtor's form of organization is as follows: Corporation

4. Such Debtor's state of organization is as follows: North Carolina

5. Such Debtor's EIN # is as follows: 20-4717288

6. Such Debtor's organization ID # is (if any exists) is as follows: 841054

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   See Appendix 1 to Schedule A attached.

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   None.

9. All of such Debtor's real property is located in the following counties:

   None.

APPENDIX 1

FACILITY	CITY	STATE	COUNTY	OWNED OR LEASED
Leland Wood Treatment Facility	Leland	NC	Brunswick	Owned

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of Carolina Pole, Inc. (a "**Debtor**") is located at:

 1705 Village Park Drive, Orangeburg, South Carolina 2918

2. Such Debtor's true and full name is as follows: Carolina Pole, Inc. Such Debtor uses no trade names or fictitious names.

3. Such Debtor's form of organization is as follows: Corporation

4. Such Debtor's state of organization is as follows: South Carolina

5. Such Debtor's EIN # is as follows: 57-6165977

6. Such Debtor's organization ID # is (if any exists) is as follows: N/A

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

 See Appendix 1 to Schedule A attached.

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

 None.

9. All of such Debtor's real property is located in the following counties:

 See Appendix 2 to Schedule A attached

APPENDIX 1

FACILITY	CITY	STATE	COUNTY	OWNED OR LEASED
Eutawville Driveway	Eutawville	SC	Orangeburg	Leased

FACILITY	CITY	STATE	COUNTY	OWNED OR LEASED
Eutawville Driveway	Eutawville	SC	Orangeburg	Leased

APPENDIX 2

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of Cove City Wood Preserving, Inc. (a “**Debtor**”) is located at:

   1705 Village Park Drive, Orangeburg, South Carolina 29118

2. Such Debtor’s true and full name is as follows: Cove City Wood Preserving, Inc. Such Debtor uses no trade names or fictitious names.

3. Such Debtor’s form of organization is as follows: Corporation

4. Such Debtor’s state of organization is as follows: North Carolina

5. Such Debtor’s EIN # is as follows: 56-1604649

6. Such Debtor’s organization ID # is (if any exists) is as follows: 0226044

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   None.

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   None.

9. All of such Debtor’s real property is located in the following counties:

   None.

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of Cox Recovery Services, LLC (a “**Debtor**”) is located at:

   1705 Village Park Drive, Orangeburg, South Carolina 29118

2. Such Debtor’s true and full name is as follows: Cox Recovery Services, LLC. Such Debtor uses no trade names or fictitious names.

3. Such Debtor’s form of organization is as follows: Limited Liability Company

4. Such Debtor’s state of organization is as follows: South Carolina

5. Such Debtor’s EIN # is as follows: 47-1305390

6. Such Debtor’s organization ID # is (if any exists) is as follows: N/A

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   None.

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   None.

9. All of such Debtor’s real property is located in the following counties:

   None.

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of Cox Wood of Alabama, LLC (a "**Debtor**") is located at:

   1705 Village Park Drive, Orangeburg, South Carolina 29118

2. Such Debtor's true and full name is as follows: Cox Wood of Alabama, LLC. Such Debtor uses no trade names or fictitious names.

3. Such Debtor's form of organization is as follows: Limited Liability Company

4. Such Debtor's state of organization is as follows: Alabama

5. Such Debtor's EIN # is as follows: 20-5479681

6. Such Debtor's organization ID # is (if any exists) is as follows: 483-535

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   See Appendix 1 to Schedule A attached.

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   None.

9. All of such Debtor's real property is located in the following counties:

   None.

APPENDIX 1

FACILITY	CITY	STATE	COUNTY	OWNED OR LEASED
Vance Facility	Vance	AL	Tuscaloosa	Leased

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of Cox Wood of Virginia, LLC (a "**Debtor**") is located at:

 1705 Village Park Drive, Orangeburg, South Carolina 29118

2. Such Debtor's true and full name is as follows: Cox Wood of Virginia, LLC. Such Debtor uses no trade names or fictitious names.

3. Such Debtor's form of organization is as follows: Limited Liability Company

4. Such Debtor's state of organization is as follows: Virginia

5. Such Debtor's EIN # is as follows: 26-2725859

6. Such Debtor's organization ID # is (if any exists) is as follows: S2606152

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

 See Appendix 1 to Schedule A attached.

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

 None.

9. All of such Debtor's real property is located in the following counties:

 See Appendix 2 to Schedule A attached

APPENDIX 1

FACILITY	CITY	STATE	COUNTY	OWNED OR LEASED
Blackstone Facility	Blackstone	VA	Nottoway	Owned

APPENDIX 2

FACILITY	CITY	STATE	COUNTY	OWNED OR LEASED
Blackstone Facility	Blackstone	VA	Nottoway	Owned

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of Cox Wood Preserving Company (a "**Debtor**") is located at:

   1705 Village Park Drive, Orangeburg, South Carolina 29118

2. Such Debtor's true and full name is as follows: Cox Wood Preserving Company. Such Debtor uses no trade names or fictitious names.

3. Such Debtor's form of organization is as follows: Corporation

4. Such Debtor's state of organization is as follows: South Carolina

5. Such Debtor's EIN # is as follows: 57-0340323

6. Such Debtor's organization ID # is (if any exists) is as follows: N/A

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   None.

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   None.

9. All of such Debtor's real property is located in the following counties:

   See Appendix 1 to Schedule A attached.

APPENDIX 1

FACILITY	CITY	STATE	COUNTY	OWNED OR LEASED
Greenville	Greenville	SC	Greenville	Leased

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of Leland Land, LLC (a "**Debtor**") is located at:

 1705 Village Park Drive, Orangeburg, South Carolina 29118

2. Such Debtor's true and full name is as follows: Leland Land, LLC. Such Debtor uses no trade names or fictitious names.

3. Such Debtor's form of organization is as follows: Limited Liability Company

4. Such Debtor's state of organization is as follows: North Carolina

5. Such Debtor's EIN # is as follows: 01-0730777

6. Such Debtor's organization ID # is (if any exists) is as follows: 618641

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

 See Appendix 1 to Schedule A attached.

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

 None.

9. All of such Debtor's real property is located in the following counties:

 See Appendix 2 to Schedule A attached.

APPENDIX 1

FACILITY	CITY	STATE	COUNTY	OWNED OR LEASED
Leland Facility	Leland	NC	Brunswick	Owned

FACILITY	CITY	STATE	COUNTY	OWNED OR LEASED
Leland Facility	Leland	NC	Brunswick	Owned

APPENDIX 2

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of National Wood Sourcing, LLC (a "**Debtor**") is located at:

   1705 Village Park Drive, Orangeburg, South Carolina 29118

2. Such Debtor's true and full name is as follows: National Wood Sourcing, LLC. Such Debtor uses no trade names or fictitious names.

3. Such Debtor's form of organization is as follows: Limited Liability Company

4. Such Debtor's state of organization is as follows: South Carolina

5. Such Debtor's EIN # is as follows: 26-3549117

6. Such Debtor's organization ID # is (if any exists) is as follows: N/A

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   None.

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   None.

9. All of such Debtor's real property is located in the following counties:

   None.

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of North - South Wood Preserving Company, Inc. (a "**Debtor**") is located at:

   1705 Village Park Drive, Orangeburg, South Carolina 29118

2. Such Debtor's true and full name is as follows: North - South Wood Preserving Company, Inc. Such Debtor uses no trade names or fictitious names.

3. Such Debtor's form of organization is as follows: Corporation

4. Such Debtor's state of organization is as follows: South Carolina

5. Such Debtor's EIN # is as follows: 57-0805844

6. Such Debtor's organization ID # is (if any exists) is as follows: N/A

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   See Appendix 1 to Schedule A attached.

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   None.

9. All of such Debtor's real property is located in the following counties:

   See Appendix 2 to Schedule A attached.

APPENDIX 1

FACILITY	CITY	STATE	COUNTY	OWNED OR LEASED
North, SC Facility	North	SC	Orangeburg	Owned

APPENDIX 2

FACILITY	CITY	STATE	COUNTY	OWNED OR LEASED
North, SC Facility	North	SC	Orangeburg	Owned

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of Ruby's Corner, LLC (a "**Debtor**") is located at:

   1705 Village Park Drive, Orangeburg, South Carolina 29118

2. Such Debtor's true and full name is as follows: Ruby's Corner, LLC. Such Debtor uses no trade names or fictitious names.

3. Such Debtor's form of organization is as follows: Limited Liability Company

4. Such Debtor's state of organization is as follows: South Carolina

5. Such Debtor's EIN # is as follows: 82-4680638

6. Such Debtor's organization ID # is (if any exists) is as follows: N/A

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   See Appendix 1 to Schedule A attached.

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   None.

9. All of such Debtor's real property is located in the following counties:

   See Appendix 2 to Schedule A attached.

APPENDIX 1

FACILITY	CITY	STATE	COUNTY	OWNED OR LEASED
Holly Hill Facility	Holly Hill	SC	Orangeburg	Owned

APPENDIX 2

FACILITY	CITY	STATE	COUNTY	OWNED OR LEASED
Holly Hill Facility	Holly Hill	SC	Orangeburg	Owned

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of Structural Woods Preserving Co. (a "**Debtor**") is located at:

   1705 Village Park Drive, Orangeburg, South Carolina 29118

2. Such Debtor's true and full name is as follows: Structural Woods Preserving Co. Such Debtor uses no trade names or fictitious names.

3. Such Debtor's form of organization is as follows: Corporation

4. Such Debtor's state of organization is as follows: North Carolina

5. Such Debtor's EIN # is as follows: 82-4471724

6. Such Debtor's organization ID # is (if any exists) is as follows: 0142009

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   None.

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   None.

9. All of such Debtor's real property is located in the following counties:

   None.

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of Sustainable Management Systems LLC (a "**Debtor**") is located at:

   1705 Village Park Drive, Orangeburg, South Carolina 29118

2. Such Debtor's true and full name is as follows: Sustainable Management Systems LLC. Such Debtor uses no trade names or fictitious names.

3. Such Debtor's form of organization is as follows: Limited Liability Company

4. Such Debtor's state of organization is as follows: South Carolina

5. Such Debtor's EIN # is as follows: 27-0562889

6. Such Debtor's organization ID # is (if any exists) is as follows: N/A

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   None.

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

   None.

9. All of such Debtor's real property is located in the following counties:

   None.

SCHEDULE A
TO
SECURITY AGREEMENT

Security Interest Data Summary

1. The chief executive office of Sweetwater Wood Holdings, LLC (a "**Debtor**") is located at:

1705 Village Park Drive, Orangeburg, South Carolina 29118

2. Such Debtor's true and full name is as follows: Sweetwater Wood Holdings, LLC. Such Debtor uses no trade names or fictitious names.

3. Such Debtor's form of organization is as follows: Limited Liability Company

4. Such Debtor's state of organization is as follows: South Carolina

5. Such Debtor's EIN # is as follows: 82-4410939

6. Such Debtor's organization ID # is (if any exists) is as follows: N/A

7. As of the Closing Date, all of such Debtor's personal property which has not been delivered to the Administrative Agent pursuant to the terms of this Agreement or the Credit Agreement is now, and will be at all future times, located at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

See Appendix 1 to Schedule A attached.

8. All of such Debtor's books and records, including those relating to accounts payable and accounts receivable, are kept at such Debtor's chief executive office as described in Paragraph 1 above, except as specified below:

None.

9. All of such Debtor's real property is located in the following counties:

See Appendix 2 to Schedule A attached

APPENDIX 1

FACILITY	CITY	STATE	COUNTY	OWNED OR LEASED
Chauncey Facility	Chauncey	GA	Dodge	Leased
Sweetwater Facility	Sweetwater	TN	Monroe	Owned

APPENDIX 2

FACILITY	CITY	STATE	COUNTY	OWNED OR LEASED
Chauncey Facility	Chauncey	GA	Dodge	Leased
Sweetwater Facility	Sweetwater	TN	Monroe	Owned

SCHEDULE B
TO
SECURITY AGREEMENT

Commercial Tort Claims

None.

Exhibit 31.1

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: May 3, 2019

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

Exhibit 31.2

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: May 3, 2019

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

Exhibit 32.1

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 March 31, 2019 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.
President and Chief Executive Officer

May 3, 2019

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

May 3, 2019