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 September 30, 2020

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)

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

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," "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 ☒

Common Stock, par value $0.01 per share, outstanding at October 31, 2020 amounted to 21,065,417 shares.

PART I—FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
(Dollars in millions, except per share amounts)	*(Unaudited)*	*(Unaudited)*	*(Unaudited)*	*(Unaudited)*
Net sales	$ 437.5	$ 434.2	$ 1,276.0	$ 1,254.9
Cost of sales	329.8	346.2	1,004.8	999.1
Depreciation and amortization	12.9	13.3	39.7	39.4
Impairment and restructuring charges	1.6	1.1	5.5	5.2
Selling, general and administrative expenses	34.6	37.1	104.1	112.3
Operating profit	58.6	36.6	121.9	98.9
Other income, net	0.9	0.0	1.9	0.4
Interest expense	11.8	15.4	38.6	47.3
Income from continuing operations before income taxes	47.7	21.2	85.2	51.9
Income tax provision	8.6	2.9	14.8	9.7
Income from continuing operations	39.1	18.3	70.4	42.2
(Loss) income from discontinued operations, net of tax benefit (expense) of $0.4, $(0.7), $1.4, and $(1.8)	0.6	2.2	(3.8)	5.0
Gain on sale of discontinued operations, net of tax expense of $8.3	35.8	0.0	35.8	0.0
Net income	75.5	20.5	102.4	47.2
Net (loss) income attributable to noncontrolling interests	(0.1)	0.6	(1.0)	1.2
Net income attributable to Koppers	$ 75.6	$ 19.9	$ 103.4	$ 46.0
Earnings per common share attributable to Koppers common shareholders:				
Basic -				
Continuing operations	$ 1.86	$ 0.88	$ 3.37	$ 2.05
Discontinued operations	1.73	0.08	1.56	0.18
Earnings per basic common share	$ 3.59	$ 0.96	$ 4.93	$ 2.23
Diluted -				
Continuing operations	$ 1.83	$ 0.86	$ 3.33	$ 2.02
Discontinued operations	1.70	0.08	1.55	0.18
Earnings per diluted common share	$ 3.53	$ 0.94	$ 4.88	$ 2.20
Comprehensive income	$ 103.3	$ 5.6	$ 125.9	$ 35.9
Comprehensive (loss) income attributable to noncontrolling interests	0.9	0.2	(0.1)	0.8
Comprehensive income attributable to Koppers	$ 102.4	$ 5.4	$ 126.0	$ 35.1
Weighted average shares outstanding (in thousands):				
Basic	21,047	20,684	20,968	20,641
Diluted	21,380	21,030	21,227	20,908

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)	September 30, 2020 (Unaudited)	December 31, 2019
Assets		
Cash and cash equivalents, including restricted cash (Note 4)	$ 39.5	$ 32.3
Accounts receivable, net of allowance of $2.3 and $2.6	195.1	161.7
Income tax receivable	1.3	1.1
Inventories, net	266.9	288.5
Assets of discontinued operations held for sale	0.0	17.1
Other current assets	36.2	18.8
Total current assets	539.0	519.5
Property, plant and equipment, net	380.1	358.8
Operating lease right-of-use assets	101.0	112.3
Goodwill	295.3	296.1
Intangible assets, net	153.5	168.4
Deferred tax assets	22.4	23.7
Non-current assets of discontinued operations held for sale	0.0	59.3
Other assets	43.1	26.5
Total assets	$ 1,534.4	$ 1,564.6
Liabilities		
Accounts payable	$ 127.6	$ 162.8
Accrued liabilities	109.2	89.3
Current operating lease liabilities	21.0	22.0
Current maturities of long-term debt	13.7	10.2
Liabilities of discontinued operations held for sale	0.0	11.9
Total current liabilities	271.5	296.2
Long-term debt	796.1	891.0
Accrued postretirement benefits	46.2	46.6
Deferred tax liabilities	7.0	6.8
Operating lease liabilities	80.5	91.5
Non-current liabilities of discontinued operations held for sale	0.0	25.1
Other long-term liabilities	47.6	48.7
Total liabilities	1,248.9	1,405.9
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; 23,640,818 and 23,321,087 shares issued	0.2	0.2
Additional paid-in capital	231.2	221.9
Retained earnings	197.2	93.8
Accumulated other comprehensive loss	(55.1)	(77.7)
Treasury stock, at cost, 2,575,401 and 2,515,925 shares	(92.1)	(90.9)
Total Koppers shareholders' equity	281.4	147.3
Noncontrolling interests	4.1	11.4
Total equity	285.5	158.7
Total liabilities and equity	$ 1,534.4	$ 1,564.6

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

KOPPERS HOLDINGS INC.
CONDENSED CONSOLIDATED STATEMENT OF CASH FLOWS

	Nine Months Ended September 30,	
	2020	2019
(Dollars in millions)	*(Unaudited)*	*(Unaudited)*
Cash provided by (used in) operating activities:		
Net income	$ 102.4	$ 47.2
Adjustments to reconcile net cash provided by (used in) operating activities:		
Depreciation and amortization	39.7	42.3
Stock-based compensation	8.5	9.0
Change in derivative liability	(4.2)	(0.1)
Non-cash interest expense	2.0	1.9
(Gain) on sale of discontinued operations and loss on disposal of assets and investment	(35.8)	0.6
Insurance proceeds	(0.7)	(3.0)
Deferred income taxes	(3.2)	(2.7)
Change in other liabilities	(0.5)	(7.5)
Other - net	1.8	(1.9)
Changes in working capital:		
Accounts receivable	(35.3)	3.4
Inventories	31.3	6.6
Accounts payable	(43.6)	(45.7)
Accrued liabilities	6.7	3.2
Other working capital	(3.6)	3.7
Net cash provided by operating activities	65.5	57.0
Cash provided by (used in) investing activities:		
Capital expenditures	(43.8)	(26.8)
Insurance proceeds received	0.7	3.0
Net cash provided by sale of discontinued operations and asset sales	78.1	0.3
Net cash provided by (used in) investing activities	35.0	(23.5)
Cash (used in) provided by financing activities:		
Net decrease in credit facility borrowings	(85.6)	(5.0)
Repayments of long-term debt	(7.5)	(27.2)
Issuances of Common Stock	0.8	1.0
Repurchases of Common Stock	(1.2)	(0.9)
Payment of debt issuance costs	(0.2)	(0.9)
Net cash used in financing activities	(93.7)	(33.0)
Effect of exchange rate changes on cash	(0.3)	(0.4)
Change in cash and cash equivalents of discontinued operations held for sale	0.7	(6.7)
Net increase in cash and cash equivalents	7.2	(6.6)
Cash and cash equivalents at beginning of period	32.3	37.4
Cash and cash equivalents at end of period	$ 39.5	$ 30.8
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash outflow from operating leases	$ 23.6	$ 23.0
Supplemental disclosure of non-cash investing and financing activities:		
Right-of-use assets obtained in exchange for new operating lease liabilities	$ 5.9	$ 26.7
Supplemental disclosure of cash flow information:		
Non-cash investing activities		
Accrued capital expenditures	$ 3.7	$ 0.3

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 as of December 31, 2019 has been summarized from the audited balance sheet contained in the Annual Report on Form 10-K as of and for the year ended December 31, 2019. Certain prior period amounts in the consolidated financial statements and notes to the consolidated financial statements have been reclassified to conform to the current period's presentation as a result of reporting discontinued operations. See Note 4 – "Discontinued Operations."

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, 2019.

COVID-19 Assessment

In March 2020, the World Health Organization categorized the current coronavirus disease ("COVID-19") as a pandemic. COVID-19 continues to impact the United States and other countries across the world, and the duration and ultimate severity of its effects are currently unknown. This current level of uncertainty over the economic and operational impacts of COVID-19 means the related future financial impact cannot be reasonably estimated at this time. Our condensed consolidated financial statements presented herein reflect certain estimates and assumptions made by management that affect the reported amounts of assets and liabilities and disclosure of such assets and liabilities at the date of the condensed consolidated financial statements and reported amounts of revenue and expenses during the reporting periods presented.

Such estimates and assumptions affect, among other things, our goodwill, long-lived asset and intangible asset valuation; inventory valuation; assessment of the annual effective tax rate; valuation of deferred income taxes; the allowance for doubtful accounts; and measurement of cash incentive plans. In consideration of COVID-19, we evaluated our financial position and determined that a goodwill impairment evaluation triggering event did not occur during the three months ended September 30, 2020 and, therefore, an interim review of impairment was not required. Events and changes in circumstances arising after September 30, 2020, including those resulting from the impacts of COVID-19, will be reflected in management's estimates for future periods.

2. New Accounting Pronouncements

In March 2020, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2020-04: Reference Rate Reform (Topic 848) Facilitation of the Effects of Reference Rate Reform on Financial Reporting. This update provides optional guidance for a limited period of time to ease potential accounting impacts associated with transitioning away from reference rates that are expected to be discontinued, such as the London Interbank Offered Rate ("LIBOR"). This ASU includes practical expedients for contract modifications due to reference rate reform. Generally, contract modifications related to reference rate reform may be considered an event that does not require remeasurement or reassessment of a previous accounting determination at the modification date. This ASU is effective March 12, 2020 through December 31, 2022. The Company's debt agreements include the use of alternate rates when LIBOR is not available. We do not expect the change from LIBOR to an alternate rate will have a material impact to our financial statements and, to the extent we enter into modifications of agreements that are impacted by the LIBOR phase-out, we will apply such guidance to those contract modifications.

In January 2020, the FASB issued ASU No. 2020-01, "Investments – Equity Securities (Topic 321), Investments – Equity Method and Joint Ventures (Topic 323), and Derivatives and Hedging (Topic 815) – Clarifying the Interactions between Topic 321, Topic 323, and Topic 815." This ASU is effective for fiscal years beginning after December 15, 2020, and interim periods within those fiscal years. Early adoption is permitted. The Company does not expect the adoption of ASU No. 2020-01 to have a material impact on its consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-14, “Disclosure Framework – Changes to the Disclosure Requirements for Defined Benefit Plans,” which amends ASC 715-20, Compensation – Retirement Benefits – Defined Benefit Plans. The ASU modifies the disclosure requirements for employers that sponsor defined benefit pension or other postretirement plans. The disclosure requirements to be removed include the amounts in accumulated other comprehensive income expected to be recognized in net periodic benefit costs over the next fiscal year and the effect of a one percentage point change in assumed health care cost trend rates on the aggregate service cost and benefit obligation for postretirement health care benefits. The new disclosure requirements include an explanation of significant gains and losses related to changes in benefit obligations. This guidance is effective for fiscal years ending after December 15, 2020 and is not expected to have a material impact on the Company’s financial statements and disclosures.

In August 2018, the FASB issued ASU No. 2018-13, Fair Value Measurement (Topic 820-10): Disclosure Framework-Changes to the Disclosure Requirements for Fair Value Measurement, which changes the fair value measurement disclosure requirements of ASC Topic 820, Fair Value Measurements and Disclosures. Under this ASU, certain disclosure requirements for fair value measurements are eliminated, amended or added. These changes aim to improve the overall usefulness of disclosures to financial statement users and reduce unnecessary costs to companies when preparing the disclosures. This guidance is effective for fiscal years ending after December 15, 2020 and is not expected to have a material impact on the Company’s financial statements and disclosures.

In June 2016, the FASB issued ASU No. 2016-13, “Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments,” which has subsequently been amended by ASU No. 2019-04 and ASU No. 2020-03. ASU No. 2016-13 replaces the incurred loss impairment methodology with a methodology that reflects expected credit losses. The update is intended to provide financial statement users with more decision-useful information about the expected credit losses on financial instruments and other commitments to extend credit held by a reporting entity at each reporting date. We adopted ASU No. 2016-13 as of January 1, 2020 and ASU No.’s 2019-04 and 2020-03 as of July 1, 2020 and there was no material impact on our financial statements.

3. Plant Closures and Divestitures

Over the past six 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:

- In September 2020, we sold Koppers (Jiangsu) Carbon Chemical Company Limited (“KJCC”) to Fangda Carbon New Material Co., Ltd and C-Chem Co., Ltd., a subsidiary of Nippon Steel Chemical & Material Co., Ltd. as discussed in “Note 4 – Discontinued Operations”.
- In the fourth quarter of 2018, we ceased naphthalene refining activities at our Follansbee, West Virginia coal tar distillation facility subsequent to the commissioning of a new naphthalene refining plant in Stickney, Illinois. In August 2019, we ceased remaining production activities at the Follansbee plant.
- 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 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 activities include:

- In June 2020, we announced the closure of a crosstie treating plant located in Denver, Colorado and in the third quarter of 2020 we discontinued production activities at this location.
- In August 2019, we sold our utility pole treatment plant located in Blackstone, Virginia.
- 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 (loss) income from discontinued operations on the Condensed 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	Asset Retirement	Other	Total
Reserve at December 31, 2018	$ 1.7	$ 3.6	$ 2.8	$ 8.1
Accrual	0.0	3.4	3.0	6.4
Cost charged against assets	0.0	0.0	(3.0)	(3.0)
Reversal of accrued charges	(0.3)	(0.1)	0.0	(0.4)
Cash paid	(0.5)	(6.2)	(0.3)	(7.0)
Currency translation	0.0	0.0	(0.1)	(0.1)
Reserve at December 31, 2019	$ 0.9	$ 0.7	$ 2.4	$ 4.0
Accrual	0.5	2.9	2.4	5.8
Cost charged against assets	0.0	0.0	(2.4)	(2.4)
Reversal of accrued charges	(0.3)	0.0	0.0	(0.3)
Cash paid	(0.1)	(0.3)	0.0	(0.4)
Reserve at September 30, 2020	$ 1.0	$ 3.3	$ 2.4	$ 6.7

4. Discontinued Operations

On September 30, 2020, we sold KJCC to Fangda Carbon New Material Co., Ltd and C-Chem Co., Ltd., a subsidiary of Nippon Steel Chemical & Material Co., Ltd. KJCC was located in Pizhou, Jiangsu Province, China and was a 75 percent-owned coal tar distillation company which was part of our CMC segment. The sales price was $107.0 million, subject to adjustments for cash, debt and working capital as defined in the sale and purchase agreement. The pre-tax gain on the sale of KJCC was $44.1 million and the after tax gain on the sale was $35.8 million. The net cash proceeds to Koppers was $65.2 million, after noncontrolling interest, Chinese capital gain taxes, transaction costs and estimated working capital adjustments. Included in the cash proceeds is restricted cash of $2.3 million which is being held in an escrow account to cover potential customary indemnity claims by the buyers for a period of 18 months. We have previously elected to include proceeds received from the sale of a subsidiary that is separately reported as a discontinued operation within cash flows from continuing operations on the Condensed Consolidated Statement of Cash Flows.

The sale of KJCC represents a strategic shift that has a major effect on our operations and financial results and was, therefore, classified as discontinued operations in our condensed consolidated financial statements and notes, which have been restated accordingly.

Net sales and operating (loss) profit from discontinued operations for the three and nine months ended September 30, 2020 and 2019 consist of the following amounts:

	Three Months Ended September 30,		Nine Months Ended September 30,	
(Dollars in millions)	2020	2019	2020	2019
Net sales	$ 8.8	$ 40.7	$ 31.6	$ 124.7
Operating (loss) profit	0.3	3.1	(5.0)	7.5

The cash flows related to KJCC have not been restated in the Condensed Consolidated Statement of Cash Flows. Net cash inflows and outflows from discontinued operations for the nine months ended September 30, 2020 and 2019 consist of the following amounts:

	Nine Months Ended September 30,	
(Dollars in millions)	2020	2019
Net cash provided by operating activities	$ 0.7	$ 30.6
Net cash used in investing activities	(0.9)	(3.8)
Net cash used in financing activities	0.0	(19.8)
Effect of exchange rate changes on cash	(0.5)	(0.3)
Net (decrease) increase in cash and cash equivalents	(0.7)	6.7

Assets of Discontinued Operations Held for Sale

Assets and liabilities (the “disposal group”) are classified as held for sale when, among other items, the sale of the asset is probable and the completed sale is expected to occur within one year. Upon classification as held for sale, such assets are no longer depreciated or depleted, and a measurement for impairment is performed to determine if there is any excess of carrying value over fair value less costs to sell. Subsequent changes to estimated fair value less the cost to sell will impact the measurement of assets held for sale if the fair value is determined to be less than the carrying value of the assets.

The agreement to sell KJCC met all of the criteria to classify its assets and liabilities as held for sale in the first quarter of 2020 and as part of the required evaluation under the held for sale guidance, we determined that the approximate fair value less costs to sell the operations exceeded the carrying value of the net assets and no impairment charge was recorded.

The below amounts are excluded from the respective balance sheet footnotes as of December 31, 2019. We have incurred aggregated transactions costs related to this divestiture of $3.7 million and $4.9 million during the three and nine months ended September 30, 2020, respectively, which are included in (loss) income from discontinued operations and gain on the sale of discontinued operations on the Condensed Consolidated Statement of Operations and Comprehensive Income.

The following represents the carrying amount of assets and liabilities, by major class, classified as held for sale on the Condensed Consolidated Balance Sheet as of December 31, 2019:

(Dollars in millions)	December 31, 2019
Assets	
Cash and cash equivalents	$ 0.7
Accounts receivable	2.2
Income tax receivable	0.8
Inventories, net	10.6
Other current assets	2.8
Total current assets held for sale	17.1
Property, plant and equipment, net	56.6
Operating lease right-of-use assets	1.2
Other assets	1.5
Total non-current assets held for sale	59.3
Total assets held for sale	$ 76.4
Liabilities	
Accounts payable	$ 7.1
Accrued liabilities	4.7
Current operating lease liabilities	0.1
Total current liabilities held for sale	11.9
Deferred tax liabilities	0.6
Operating lease liabilities	1.1
Other long-term liabilities	23.4
Total non-current liabilities held for sale	25.1
Total liabilities held for sale	$ 37.0

5. Fair Value Measurements

Carrying amounts and the related estimated fair values of our financial instruments as of September 30, 2020 and December 31, 2019 are as follows:

	September 30, 2020		December 31, 2019	
	Fair Value	Carrying Value	Fair Value	Carrying Value
(Dollars in millions)				
Financial assets:				
Cash and cash equivalents, including restricted cash	$ 39.5	$ 39.5	$ 32.3	$ 32.3
Investments and other assets[(a)]	1.2	1.2	1.2	1.2
Financial liabilities:				
Total debt	$ 823.0	$ 818.7	$ 896.2	$ 911.9

(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.

6. Comprehensive Income and Equity

Total comprehensive income for the three and nine months ended September 30, 2020 and 2019 is summarized in the table below:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
(Dollars in millions)				
Net income	$ 75.5	$ 20.5	$ 102.4	$ 47.2
Changes in other comprehensive income (loss):				
Currency translation adjustment	12.3	(11.4)	3.1	(10.6)
Unrealized gain (loss) on cash flow hedges, net of tax (expense) benefit of $(5.3), $1.7, $(6.9) and $0.6	15.3	(3.7)	19.8	(1.4)
Unrecognized pension net loss, net of tax expense of $0.1, $0.1, $0.2 and $0.3	0.2	0.2	0.6	0.7
Total comprehensive income	103.3	5.6	125.9	35.9
Comprehensive (loss) income attributable to noncontrolling interests	0.9	0.2	(0.1)	0.8
Comprehensive income attributable to Koppers	$ 102.4	$ 5.4	$ 126.0	$ 35.1

Amounts reclassified from accumulated other comprehensive loss to net income consist of amounts shown for changes in or amortization of unrecognized pension net loss. This component of accumulated other comprehensive loss 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 related to derivative financial instruments, net of tax, of $1.3 million and $2.1 million for the three and nine months ended September 30, 2020, respectively, and $1.8 million and $3.3 million for the three and nine months ended September 30, 2019, respectively. Additionally, $2.5 million was reclassified from cumulative translation adjustment to net income attributable to Koppers for the three and nine months ended September 30, 2020.

The following tables present the change in equity for the three months ended September 30, 2020 and 2019, respectively:

(Dollars in millions)	*Common Stock*	*Additional Paid-In Capital*	*Retained Earnings*	*Accumulated Other Comprehensive Loss*	*Treasury Stock*	*Noncontrolling Interests*	*Total Equity*
Balance at June 30, 2020	$ 0.2	$ 228.0	$ 121.6	$ (81.8)	$ (92.1)	$ 10.4	$ 186.3
Net income	0.0	0.0	75.6	0.0	0.0	(0.1)	75.5
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
Sale of discontinued operations	0.0	0.0	0.0	0.0	0.0	(7.2)	(7.2)
Other comprehensive income							
Currency translation adjustment	0.0	0.0	0.0	11.3	0.0	1.0	12.3
Unrealized gain on cash flow hedges	0.0	0.0	0.0	15.3	0.0	0.0	15.3
Unrecognized pension net loss	0.0	0.0	0.0	0.2	0.0	0.0	0.2
Balance at September 30, 2020	$ 0.2	$ 231.2	$ 197.2	$ (55.1)	$ (92.1)	$ 4.1	$ 285.5

(Dollars in millions)	*Common Stock*	*Additional Paid-In Capital*	*Retained Earnings*	*Accumulated Other Comprehensive Loss*	*Treasury Stock*	*Noncontrolling Interests*	*Total Equity*
Balance at June 30, 2019	$ 0.2	$ 212.4	$ 53.5	$ (83.7)	$ (90.8)	$ 11.4	$ 103.0
Net income	0.0	0.0	19.9	0.0	0.0	0.6	20.5
Issuance of common stock	0.0	0.3	0.0	0.0	0.0	0.0	0.3
Employee stock plans	0.0	3.1	0.0	0.0	0.0	0.0	3.1
Other comprehensive income							
Currency translation adjustment	0.0	0.1	0.0	(11.0)	(0.1)	(0.4)	(11.4)
Unrealized loss on cash flow hedges	0.0	0.0	0.0	(3.7)	0.0	0.0	(3.7)
Unrecognized pension net loss	0.0	0.0	0.0	0.2	0.0	0.0	0.2
Balance at September 30, 2019	$ 0.2	$ 215.9	$ 73.4	$ (98.1)	$ (90.9)	$ 11.6	$ 112.1

The following tables present the change in equity for the nine months ended September 30, 2020 and 2019, respectively:

(Dollars in millions)	Common Stock	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Treasury Stock	Noncontrolling Interests	Total Equity
Balance at December 31, 2019	$ 0.2	$ 221.9	$ 93.8	$ (77.7)	$ (90.9)	$ 11.4	$ 158.7
Net income	0.0	0.0	103.4	0.0	0.0	(1.0)	102.4
Issuance of common stock	0.0	0.8	0.0	0.0	0.0	0.0	0.8
Employee stock plans	0.0	8.5	0.0	0.0	0.0	0.0	8.5
Sale of discontinued operations	0.0	0.0	0.0	0.0	0.0	(7.2)	(7.2)
Other comprehensive income							
Currency translation adjustment	0.0	0.0	0.0	2.1	0.0	1.0	3.1
Unrealized gain on cash flow hedges	0.0	0.0	0.0	19.8	0.0	0.0	19.8
Unrecognized pension net loss	0.0	0.0	0.0	0.6	0.0	0.0	0.6
Repurchases of common stock	0.0	0.0	0.0	0.0	(1.2)	0.0	(1.2)
Balance at September 30, 2020	$ 0.2	$ 231.2	$ 197.2	$ (55.1)	$ (92.1)	$ 4.1	$ 285.5

(Dollars in millions)	Common Stock	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Loss	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	46.0	0.0	0.0	1.2	47.2
Issuance of common stock	0.0	1.0	0.0	0.0	0.0	0.0	1.0
Employee stock plans	0.0	9.0	0.0	0.0	0.0	0.0	9.0
Other comprehensive income							
Currency translation adjustment	0.0	(0.1)	0.2	(10.2)	0.0	(0.4)	(10.6)
Unrealized loss on cash flow hedges	0.0	0.0	0.0	(1.4)	0.0	0.0	(1.4)
Unrecognized pension net loss	0.0	0.0	0.0	0.7	0.0	0.0	0.7
Repurchases of common stock	0.0	0.0	0.0	0.0	(0.9)	0.0	(0.9)
Balance at September 30, 2019	$ 0.2	$ 215.9	$ 73.4	$ (98.1)	$ (90.9)	$ 11.6	$ 112.1

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 September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
(Dollars in millions, except share amounts, in thousands)				
Net income attributable to Koppers	$ 75.6	$ 19.9	$ 103.4	$ 46.0
Less: (Loss) income from discontinued operations	0.6	2.2	(3.8)	5.0
Gain on sale of discontinued operations	35.8	0.0	35.8	0.0
Plus: Non-controlling (loss) income	(0.1)	0.6	(1.0)	1.2
Income from continuing operations attributable to Koppers	$ 39.1	$ 18.3	$ 70.4	$ 42.2
Weighted average common shares outstanding:				
Basic	21,047	20,684	20,968	20,641
Effect of dilutive securities	333	346	259	267
Diluted	21,380	21,030	21,227	20,908
Earnings per common share – continuing operations:				
Basic earnings per common share	$ 1.86	$ 0.88	$ 3.37	$ 2.05
Diluted earnings per common share	1.83	0.86	3.33	2.02
Other data:				
Antidilutive securities excluded from computation of diluted earnings per common share	876	720	862	773

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”), the 2018 Long-Term Incentive Plan (the “2018 LTIP”) and the 2020 Long-Term Incentive Plan (the “2020 LTIP”). The 2005 LTIP, the 2018 LTIP and the 2020 LTIP are collectively referred to as the “LTIP”. On May 6, 2020, the 2020 LTIP was approved by our shareholders and the 2018 LTIP was frozen. Similar to the 2018 LTIP, the 2020 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 typically two years or less.

Performance stock units have vesting based upon a market condition. These performance stock units have multi-year performance objectives 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.

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

	March 2020 Grant	March 2019 Grant	May 2018 Grant	March 2018 Grant
Grant date price per share of performance award	$ 19.63	$ 26.63	$ 39.10	$ 41.60
Expected dividend yield per share	0.00%	0.00%	0.00%	0.00%
Expected volatility	45.60%	39.00%	39.40%	39.40%
Risk-free interest rate	0.72%	2.50%	2.35%	2.35%
Look-back period in years	2.83	2.82	2.84	2.84
Grant date fair value per share	$ 11.56	$ 40.30	$ 44.29	$ 47.12

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 September 30, 2020:

Performance Period	Minimum Shares	Target Shares	Maximum Shares
2018 – 2020	0	118,594	237,188
2019 – 2021	0	192,495	280,846
2020 – 2022	0	231,128	462,256

Performance stock units for the 2017 – 2019 performance period vested in March 2020 at 100 percent of the target share amount of 110,168.

The following table shows a summary of the status and activity of non-vested stock units for the nine months ended September 30, 2020:

	Restricted Stock Units	Performance Stock Units	Total Stock Units	Weighted Average Grant Date Fair Value per Unit
Non-vested at December 31, 2019	343,012	445,186	788,198	$ 40.18
Granted	362,161	232,481	594,642	$ 15.71
Vested	(134,374)	(110,168)	(244,542)	$ 44.68
Forfeited	(31,068)	(25,282)	(56,350)	$ 33.93
Non-vested at September 30, 2020	539,731	542,217	1,081,948	$ 26.04

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 2020 Grant	*March 2019 Grant*	*March 2018 Grant*	*March 2017 Grant*
Grant date price per share of stock option award	$ 19.63	$ 26.63	$ 41.60	$ 44.10
Expected dividend yield per share	0.00%	0.00%	0.00%	0.00%
Expected life in years	6.40	6.14	5.73	5.77
Expected volatility	42.85%	39.44%	37.05%	39.70%
Risk-free interest rate	0.87%	2.53%	2.67%	2.13%
Grant date fair value per share of option awards	$ 8.42	$ 11.29	$ 16.38	$ 17.90

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 nine months ended September 30, 2020:

	Options	*Weighted Average Exercise Price per Option*	*Weighted Average Remaining Contractual Term (in years)*	*Aggregate Intrinsic Value (in millions)*
Outstanding at December 31, 2019	966,849	$ 28.45		
Granted	187,701	$ 19.63		
Exercised	(2,500)	$ 20.00		
Expired	(5,129)	$ 31.28		
Forfeited	(15,637)	$ 33.44		
Outstanding at September 30, 2020	1,131,284	$ 26.93	5.84	$ 1.6
Exercisable at September 30, 2020	769,297	$ 27.32	4.50	$ 1.4

Stock Compensation Expense

Total stock-based compensation expense recognized under our LTIP and employee stock purchase plan for the three and nine months ended September 30, 2020 and 2019 is as follows:

	Three Months Ended September 30,		*Nine Months Ended September 30,*	
	2020	*2019*	*2020*	*2019*
(Dollars in millions)				
Stock-based compensation expense recognized:				
Selling, general and administrative expenses	$ 2.9	$ 3.0	$ 8.5	$ 9.0
Less related income tax benefit	0.7	0.9	2.2	2.8
Decrease in net income attributable to Koppers	$ 2.2	$ 2.1	$ 6.3	$ 6.2
Cash received from the exercise of stock options	$ 0.0	$ 0.1	$ 0.0	$ 0.1

As of September 30, 2020, total future compensation expense related to non-vested stock-based compensation arrangements totaled $17.7 million and the weighted-average period over which this expense is expected to be recognized is approximately 27 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 RUPS 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 manufactures treated wood utility transmission and distribution poles for utility and cooperative utility companies and treated wood pilings used for construction applications. In addition, RUPS operates a railroad services business that conducts engineering, design, repair and inspection services for railroad bridges as well as a business related to the recovery of used crossties.

Our PC 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 CMC 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, including operating profit or loss from operations and earnings before interest, taxes, depreciation and amortization (“EBITDA”). 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, 2019. Intersegment transactions are eliminated in consolidation.

Contract Balances

The timing of revenue recognition in accordance with ASC 606, “Revenue from Contracts with Customers”, results in both billed accounts receivable and unbilled receivables, both classified as accounts receivable, net of allowance within the Condensed Consolidated Balance Sheet. Contract assets of $4.2 million and $5.1 million are recorded within accounts receivable in our RUPS segment, net of allowance within the Condensed Consolidated Balance Sheet as of September 30, 2020 and December 31, 2019, respectively.

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

(Dollars in millions)	Three Months Ended September 30, 2020	Three Months Ended September 30, 2019	Nine Months Ended September 30, 2020	Nine Months Ended September 30, 2019
Revenues from external customers:				
Railroad and Utility Products and Services	$ 191.0	$ 198.8	$ 590.9	$ 564.0
Performance Chemicals	147.9	123.9	396.4	343.7
Carbon Materials and Chemicals(a)	98.6	111.5	288.7	347.2
Total	$ 437.5	$ 434.2	$ 1,276.0	$ 1,254.9
Intersegment revenues:				
Performance Chemicals	$ 3.4	$ 3.2	$ 10.3	$ 9.4
Carbon Materials and Chemicals	20.1	20.3	59.5	56.9
Total	$ 23.5	$ 23.5	$ 69.8	$ 66.3
Depreciation and amortization expense:				
Railroad and Utility Products and Services	$ 4.9	$ 4.8	$ 14.8	$ 14.4
Performance Chemicals	4.3	4.5	13.2	14.0
Carbon Materials and Chemicals(b)	3.7	4.0	11.7	11.0
Total	$ 12.9	$ 13.3	$ 39.7	$ 39.4
Operating profit (loss):				
Railroad and Utility Products and Services	$ 15.0	$ 11.3	$ 40.4	$ 31.8
Performance Chemicals	30.4	11.7	67.1	38.5
Carbon Materials and Chemicals(c)	13.7	14.0	15.9	30.3
Corporate	(0.5)	(0.4)	(1.5)	(1.7)
Total	$ 58.6	$ 36.6	$ 121.9	$ 98.9

(a) Revenue excludes KJCC discontinued operations of $8.8 million and $40.7 million for the three months ended September 30, 2020 and 2019, respectively, and $31.6 million and $124.7 million for the nine months ended September 30, 2020 and 2019, respectively.

(b) Depreciation and amortization expense excludes KJCC discontinued operations of $0.1 million and $1.0 million for the three months ended September 30, 2020 and 2019, respectively, and $0.6 million and $2.9 million for the nine months ended September 30, 2020 and 2019, respectively.

(c) Operating profit (loss) excludes KJCC discontinued operations of $0.3 million and $3.1 million for the three months ended September 30, 2020 and 2019, respectively, and $(5.0) million and $7.5 million for the nine months ended September 30, 2020 and 2019, respectively.

The following table sets forth revenues for significant product lines, net of all intersegment transactions, for our segments for the periods indicated:

(Dollars in millions)	Three Months Ended September 30, 2020	Three Months Ended September 30, 2019	Nine Months Ended September 30, 2020	Nine Months Ended September 30, 2019
Railroad and Utility Products and Services:				
Railroad treated products	$ 108.4	$ 117.6	$ 345.5	$ 321.3
Utility poles	63.6	61.2	191.4	175.8
Railroad infrastructure services	9.2	9.9	23.3	29.5
Rail joints	4.5	5.5	16.9	22.2
Other products	5.3	4.6	13.8	15.2
Total	191.0	198.8	590.9	564.0
Performance Chemicals:				
Wood preservative products	140.5	118.2	375.7	328.2
Other products	7.4	5.7	20.7	15.5
Total	147.9	123.9	396.4	343.7
Carbon Materials and Chemicals:				
Pitch and related products	62.9	68.3	171.4	205.4
Phthalic anhydride and other chemicals	14.5	17.7	49.7	58.7
Creosote and distillates	10.3	13.3	33.8	44.6
Naphthalene	3.8	5.2	12.7	17.3
Other products	7.2	7.0	21.2	21.2
Total	98.6	111.5	288.7	347.2
Total	$ 437.5	$ 434.2	$ 1,276.0	$ 1,254.9

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

(Dollars in millions)		September 30, 2020		December 31, 2019
Segment assets:				
Railroad and Utility Products and Services	$	571.0	$	562.2
Performance Chemicals		508.2		457.7
Carbon Materials and Chemicals(a)		404.6		502.1
All other		50.6		42.6
Total(a)	$	1,534.4	$	1,564.6
Goodwill:				
Railroad and Utility Products and Services	$	120.7	$	120.7
Performance Chemicals		174.6		175.4
Total	$	295.3	$	296.1

(a) The Carbon Materials and Chemicals segment includes $76.4 million of assets of discontinued operations held for sale related to our KJCC business at December 31, 2019.

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 liability 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 25.8 percent and 31.6 percent for the nine months ended September 30, 2020 and 2019, respectively. The estimated annual effective income tax rate differs from the U.S. federal statutory tax rate due to:

	September 30, 2020	September 30, 2019
Federal income tax rate	21.0%	21.0%
Foreign earnings taxed at different rates	2.7	(1.5)
Nondeductible expenses	1.3	1.7
State income taxes, net of federal tax benefit	0.5	0.7
GILTI inclusion, net of foreign tax credits	0.2	0.9
Change in tax contingency reserves	0.1	0.2
Interest expense deduction limitation	0.0	8.9
Other	0.0	(0.3)
Estimated annual effective income tax rate	25.8%	31.6%

In reaction to the economic effects of the COVID-19 pandemic, on March 27, 2020 the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) was signed into law. This legislation provides stimulus and relief for affected entities and individuals, broadly provides tax payment relief and significant business incentives, and makes certain technical corrections to the 2017 Tax Cuts and Jobs Act. Among its many provisions, the CARES Act modifies the limitation on the interest expense deduction for tax years beginning in 2019 and 2020. This modification increases the allowable business interest expense deduction from 30 percent of adjusted taxable income to 50 percent of adjusted taxable income.

To determine adjusted taxable income, taxpayers compute their taxable income and then add or subtract specified adjustments, including, for taxable years beginning before 2022, adding back depreciation and amortization. On July 28, 2020, the Internal Revenue Service released finalized regulations and proposed new regulations that modify the calculation of adjusted taxable income. The finalized regulations provide that any depreciation, amortization, or depletion capitalized to inventory and included in cost of goods sold may be added back in the year capitalized.

These modifications and finalized regulations impact both our 2019 and 2020 income tax provisions and we have included the net impact as discrete items in the nine months ended September 30, 2020. We have recorded a benefit of $4.0 million for changes to our 2019 tax provision and a benefit of $2.4 million for the release of a valuation allowance that was recorded for interest expense deduction limitations that were previously not expected to be realized.

Income taxes as a percentage of pretax income were 18.0 percent for the three months ended September 30, 2020. This is lower than the estimated annual effective income tax rate due to discrete items, which were a net benefit of $3.1 million for the three months ended September 30, 2020. Discrete items were primarily related to the legislative changes and finalized regulations regarding the limitation on the interest expense deduction and a benefit due to an amended tax return.

Income taxes as a percentage of pretax income were 13.7 percent for the three months ended September 30, 2019. This is lower than the estimated annual effective income tax rate due to discrete items, which were a net benefit of $3.0 million for the three months ended September 30, 2019. Discrete items were primarily related to favorable provision-to-return adjustments that were recorded as a result of filing the Company's 2018 U.S. tax return. These favorable adjustments were predominately due to various tax return positions which enabled us to increase our U.S. taxable income and therefore decrease the limitation on our interest expense deduction as originally estimated.

Income taxes as a percentage of pretax income were 17.4 percent for the nine months ended September 30, 2020. This is lower than the estimated annual effective income tax rate due to discrete items, which were a net benefit of $7.3 million for the nine months ended September 30, 2020. Discrete items were primarily related to the legislative changes and finalized regulations regarding the limitation on the interest expense deduction and a benefit due to an amended tax return. These discrete items were offset by a tax deduction reduction for vested stock awards.

Income taxes as a percentage of pretax income were 18.7 percent for the nine months ended September 30, 2019. This is lower than the estimated annual effective income tax rate due to discrete items, which were a net benefit of $6.7 million for the nine months ended September 30, 2019. Discrete items were primarily related to the reversal of various unrecognized tax benefits due to the closure of the Company's U.S. tax audit and favorable provision-to-return adjustments that were recorded as a result of filing the Company's 2018 U.S. tax return. These favorable adjustments were predominately due to various tax return positions which enabled us to increase our U.S. taxable income and therefore decrease the limitation on our interest expense deduction as originally estimated.

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 nine months ended September 30, 2020.

Unrecognized Tax Benefits

The Company files 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 2016.

Unrecognized tax benefits totaled $1.9 million and $2.1 million as of September 30, 2020 and December 31, 2019, respectively. The total amount of unrecognized tax benefits that, if recognized, would affect the effective tax rate, was approximately $1.9 million and $2.0 million as of September 30, 2020 and December 31, 2019, respectively. We recognize interest expense and any related penalties from unrecognized tax benefits in income tax expense. As of September 30, 2020 and December 31, 2019, we had accrued approximately $0.8 million and $0.8 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 September 30, 2020 and December 31, 2019 are summarized in the table below:

		September 30, 2020		*December 31, 2019*
(Dollars in millions)				
Raw materials	$	221.8	$	232.0
Work in process		13.1		12.0
Finished goods		86.5		107.8
	$	321.4	$	351.8
Less revaluation to LIFO		54.5		63.3
Net(a)	$	266.9	$	288.5

(a) Net inventories excludes $10.6 million of assets of discontinued operations held for sale related to our KJCC business as of December 31, 2019.

12. Property, Plant and Equipment

Property, plant and equipment as of September 30, 2020 and December 31, 2019 are summarized in the table below:

		September 30, 2020		December 31, 2019
(Dollars in millions)				
Land	$	16.3	$	15.0
Buildings		71.0		70.5
Machinery and equipment		777.7		732.4
	$	865.0	$	817.9
Less accumulated depreciation		484.9		459.1
Net(a)	$	380.1	$	358.8

(a) Net property, plant, and equipment excludes $56.6 million of assets of discontinued operations held for sale related to our KJCC business as of December 31, 2019.

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 United States, as well as employees outside the United States. 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 United States, 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 and nine months ended September 30, 2020 and 2019:

	Three Months Ended September 30,				Nine Months Ended September 30,			
		2020		2019		2020		2019
(Dollars in millions)								
Service cost	$	0.3	$	0.4	$	1.0	$	1.1
Interest cost		1.6		1.9		4.7		5.9
Expected return on plan assets		(2.0)		(1.9)		(5.8)		(5.9)
Amortization of net loss		0.4		0.4		1.1		1.2
Net periodic benefit cost	$	0.3	$	0.8	$	1.0	$	2.3
Defined contribution plan expense	$	1.6	$	2.2	$	5.6	$	6.3

14. Debt

Debt as of September 30, 2020 and December 31, 2019 was as follows:

	Weighted Average Interest Rate	Maturity		September 30, 2020		December 31, 2019
(Dollars in millions)						
Term Loan	3.35%	2024	$	75.0	$	82.5
Revolving Credit Facility and other	3.35%	2024		243.7		329.4
Senior Notes due 2025	6.00%	2025		500.0		500.0
Debt				818.7		911.9
Less short-term debt and current maturities of long-term debt				13.7		10.2
Less unamortized debt issuance costs				8.9		10.7
Long-term debt			$	796.1	$	891.0

Credit Facility

The Company maintains a $600.0 million senior secured revolving credit facility and a $100.0 million secured term loan facility (collectively, the Credit Facility"), as amended. The secured term loan has a quarterly amortization of $2.5 million and the interest rate on the 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 September 30, 2020, we had $307.3 million of unused revolving credit availability for working capital purposes after restrictions from certain letter of credit commitments and other covenants. As of September 30, 2020, $7.0 million of commitments were utilized by outstanding letters of credit.

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.

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 railcars; cleaning costs for leased railcars 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)	*September 30, 2020*	*December 31, 2019*
Asset retirement obligation at beginning of year	$ 20.7	$ 27.0
Accruals	2.9	2.3
Accretion expense	0.8	1.5
Revision in estimated cash flows	0.1	2.4
Cash expenditures	(4.6)	(12.5)
Balance at end of period	$ 19.9	$ 20.7

16. Leases

We adopted the provisions of ASU 2016-02 and ASU 2018-10 on January 1, 2019 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. Upon adoption, we elected other practical expedients as well, including retaining our current classification of existing leases upon adoption and excluding leases expiring within twelve months.

Many of our leases include one or more options to renew. 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 $8.1 million and $23.2 million during the three and nine months ended September 30, 2020, respectively, and $7.1 million and $23.0 million during the three and nine months ended September 30, 2019, respectively. Variable lease costs were $0.8 million and $2.7 million during the three and nine months ended September 30, 2020, respectively, and $0.8 million and $2.5 million during the three and nine months ended September 30, 2019, respectively.

The following table presents information about the amount and timing of cash flows arising from our operating leases as of September 30, 2020:

(Dollars in millions)		
2020	$	7.6
2021		26.7
2022		22.5
2023		17.1
2024		14.8
Thereafter		44.8
Total lease payments	$	133.5
Less: Interest		(32.0)
Present value of lease liabilities	$	101.5

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

		September 30, 2020		*December 31, 2019*
(Dollars in millions)				
Operating leases:				
Operating lease right-of-use assets	$	101.0	$	112.3
Current operating lease liabilities	$	21.0	$	22.0
Operating lease liabilities		80.5		91.5
Total operating lease liabilities	$	101.5	$	113.5
Weighted average remaining lease term, in years		6.6		7.1
Weighted average discount rate		7.6%		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 36 months and we have hedged certain volumes of copper through 2022. 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 (loss) 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 September 30, 2020 and December 31, 2019, we had outstanding copper swap contracts of the following amounts:

	Units Outstanding (in Pounds)		*Net Fair Value - Asset (Liability)*	
	September 30, 2020	*December 31, 2019*	*September 30, 2020*	*December 31, 2019*
(Amounts in millions)				
Cash flow hedges	69.2	56.5	$ 30.3	$ 4.5
Not designated as hedges	13.4	16.6	5.7	1.7
Total	82.6	73.1	$ 36.0	$ 6.2

As of September 30, 2020 and December 31, 2019, the fair value of the outstanding copper swap contracts is recorded in the balance sheet as follows:

	September 30, 2020	*December 31, 2019*
(Dollars in millions)		
Other current assets	$ 15.5	$ 2.1
Other assets	20.5	4.1
Asset on balance sheet	$ 36.0	$ 6.2
Accumulated other comprehensive gain, net of tax	$ 23.0	$ 3.3

Based upon contracts outstanding at September 30, 2020, in the next twelve months we estimate that $9.7 million of unrealized gains, net of tax, related to commodity price hedging will be reclassified from comprehensive income into earnings.

See "Note 6 – Comprehensive Income and Equity", for amounts recorded in comprehensive income and for amounts reclassified from accumulated other comprehensive loss to net income for the periods specified below. For the three and nine months ended September 30, 2020 and 2019, the gain (loss) from contracts not designated as hedges is as follows:

	Three Months Ended September 30,		*Nine Months Ended September 30,*	
	2020	*2019*	*2020*	*2019*
(Dollars in millions)				
Gain (loss) from contracts not designated as hedges	$ 3.9	$ (1.2)	$ 4.2	$ 0.1

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 September 30, 2020 and December 31, 2019, the fair value of outstanding foreign currency forward contracts is recorded in the balance sheet as follows:

	September 30, 2020	December 31, 2019
(Dollars in millions)		
Other current assets	$ 0.6	$ 0.3
Accrued liabilities	(0.4)	(0.5)
Net asset (liability) on balance sheet	$ 0.2	$ (0.2)

As of September 30, 2020 and December 31, 2019, the net currency units outstanding for these contracts were:

	September 30, 2020	December 31, 2019
(In millions)		
British Pounds	GBP 2.5	GBP 3.7
New Zealand Dollars	NZD 12.6	NZD 16.0
United States Dollars	USD 3.3	USD 6.2
Euro	EUR 0.0	EUR 1.2

18. Commitments and Contingent Liabilities

We 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 fail to prevail in any of these legal matters or should several of these legal matters be resolved against us 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 64 plaintiffs in 34 cases pending as of September 30, 2020. This is the same number of plaintiffs and cases pending as of December 31, 2019. As of September 30, 2020, there were 33 cases pending in the Court of Common Pleas of Allegheny County, Pennsylvania, and one case pending in the Circuit Court of Knox County, Tennessee.

The plaintiffs in all 34 pending cases seek to recover compensatory damages. Plaintiffs in 29 of those cases also seek to recover punitive damages. The plaintiffs in the 33 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 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.

We have not provided a reserve for the coal tar pitch 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, subject to the following paragraph, and agreed to share toxic tort litigation defense arising from any sites acquired from Beazer East.

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. The indemnification period ended July 14, 2019 (the "Claim Deadline") and Beazer East may now tender certain third-party claims described in sections (i) and (ii) above to Koppers Inc. However, to the extent the third-party claims described in sections (i) and (ii) above were tendered to Beazer East by the Claim Deadline, Beazer East will continue to be required to pay the costs arising from such claims under the Indemnity. Furthermore, the Claim Deadline 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 tendered by Koppers Inc. to Beazer East.

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, 2019, amounts paid by Beazer East as a result of its environmental remediation obligations under the Indemnity have averaged, in total, approximately $10.5 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 are held liable for or otherwise required to pay all or part of such liabilities without reimbursement, the imposition of such liabilities on us 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. In December 2019, the EPA presented Koppers Inc. with a proposed penalty of $2.8 million regarding the alleged violations. In October 2020, we signed a consent decree with the EPA and agreed to a total penalty of $1.0 million. We expect the consent decree order will be entered and be declared effective by December 1, 2020. Accordingly we have accrued our estimated liability of the probable penalty as of September 30, 2020.

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. Following the most recent court rulings, the Yakama Nation case has been stayed pending completion of the private allocation process for the Portland Harbor CERCLA site.

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 $2.1 million at September 30, 2020. 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 September 30, 2020, our estimated environmental remediation liability for these acquired sites totals $4.3 million.

***Foreign Environmental Matters*. **On October 10, 2019, the New South Wales Environment Protection Authority ("NSW EPA") filed a proceeding against one of our Australian subsidiaries, Koppers Carbon Materials & Chemicals Pty. Ltd. ("KCMC"), in relation to an incident which occurred at our Mayfield, Australia plant on October 20, 2018. The NSW EPA alleged that KCMC committed an offense under Australian law by failing to maintain its plant and equipment in a proper and efficient working condition. The NSW EPA alleged that KCMC did not properly maintain a valve which failed and released heated coal tar pitch into a bunded area on our site and released fumes into the atmosphere. The first hearing on the proceeding was held on November 22, 2019 in the Land and Environment Court of New South Wales and we entered a guilty plea with respect to the allegations. The maximum fine for the proceeding is $1.0 million AUD (approximately $0.7 million) plus legal costs incurred by the NSW EPA. The Land and Environment Court also has the authority to order KCMC to make certain improvements to its operations at the site of the incident.

In May 2020, the NSW EPA brought additional proceedings against KCMC related to a series of May 2019 incidents involving alleged air pollution and odor complaints. The Company agreed to plead guilty to two of the charges and the remaining charges were dropped by the NSW EPA. Both the October 2019 and May 2020 proceedings were procedurally joined and The Land and Environment Court is expected to enter a final order and assess a fine by the end of the year. We have accrued our estimated liability associated with the matters as of September 30, 2020.

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 September 30, 2020, our estimated environmental remediation liability for this acquired site totals $1.4 million.

Environmental Reserves Rollforward. The following table reflects changes in the accrued liability for environmental matters, excluding files and penalties of which $2.7 million and $2.8 million are classified as current liabilities at September 30, 2020 and December 31, 2019, respectively:

	Period ended	
(Dollars in millions)	*September 30, 2020*	*December 31, 2019*
Balance at beginning of year	$ 9.5	$ 10.1
Expense	0.2	0.5
Reversal of reserves	0.0	(0.8)
Cash expenditures	(0.3)	(0.3)
Balance at end of period	$ 9.4	$ 9.5

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, 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; existing and future adverse effects as a result of the coronavirus (COVID-19) pandemic; disruption in the U.S. and global financial markets; 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, 2019.

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, 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 wood crossties to the Class I railroads in North America. Our other treated wood products include utility poles for the electric and telephone utility industries in the United States and Australia and construction pilings. We also provide rail joint bar products as well as various services to the railroad industry.

Through our PC business, we believe that we are the global leader in developing, manufacturing and marketing wood preservation chemicals and wood treatment technologies for use in the pressure treating of lumber for residential, industrial and agricultural applications.

Our CMC business processes coal tar into a variety of products, including creosote, carbon pitch, carbon black feedstock, naphthalene and phthalic anhydride, which are intermediate materials necessary in the pressure treatment of wood, the production of aluminum, the production of carbon black, the production of high-strength concrete, and the production of plasticizers and specialty chemicals, respectively.

Outlook

Trend Overview

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

Effects of COVID-19 on our operations

Our quarterly operating results may fluctuate due to a variety of factors that are outside of our control, including from the effects of the current pandemic. The COVID-19 outbreak began to have a global effect in the first quarter of 2020 and continues to have a significant impact on global markets driven by supply chain and production disruptions, workforce restrictions, reduced spending and other factors. During the COVID-19 pandemic, substantially all of our global businesses have continued to operate within a critical infrastructure sector (as established by the Cybersecurity & Infrastructure Security Agency of the U.S. Department of Homeland Security, as well as other governments worldwide), and as a result, we have been able to meet the demand of our customers in the various markets we serve.

Our operations were temporarily curtailed in New Zealand after government restrictions required the temporary closure of operations during the first half of the year. Our remaining 31 facilities, principally in the United States, Canada, the United Kingdom, Australia and Denmark, were permitted to continue to operate. As of September 30, 2020, all facilities in our manufacturing network are fully operational.

Another impact of the pandemic is that more individuals are spending more time in their homes, and as a result, big-box retailers are continuing to report strong demand for home improvement projects. Consequently, we are benefiting from higher sales volumes of our water-borne treatment solutions used in residential treated wood products. In the U.S., we expect that lumber treaters will continue working to fill the demand backlog and retailers will continue replenishing their inventory levels for the remainder of 2020.

Our focus during this period has been on the following key priorities:

- Protecting the health and safety of employees, customers and supply chain partners through rapid deployment of new safety measures, including frequent communication and guidance to all employees on effective hygiene and disinfection, social distancing, limited and remote access and use of face masks.
- Providing critical products and ongoing support to customers by communicating frequently, understanding their changing business needs and ensuring key raw materials are multi-sourced when possible.
- Maintaining adequate liquidity and financial flexibility by launching several cost-reduction initiatives and contingency plans to raise and conserve cash in all aspects of our operations and utilizing available federal relief such as the Coronavirus Aid, Relief, and Economic Security ("CARES") Act, which we continue to evaluate.

The full extent to which COVID-19 will adversely impact our business depends on future developments, which are highly uncertain and unpredictable, including new information concerning the ultimate severity of the outbreak and the effectiveness of actions globally to contain or mitigate its effects. Our condensed consolidated financial statements and discussion and analysis of financial condition and results of operations reflect estimates and assumptions made by us as of September 30, 2020. Events and changes in circumstances arising after September 30, 2020, including those resulting from the impacts of COVID-19, will be reflected in our estimates for future periods.

Refer to the *Liquidity* section of Management's Discussion and Analysis for the impact of the global pandemic on our liquidity.

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. 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. 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 crossties annually. However, the crosstie replacement market has been significantly lower in recent years. According to the Railway Tie Association ("RTA"), the estimated total crosstie installations in 2019 were approximately 20 million, of which 15 million were for Class I railroads. For 2020, the RTA has projected that approximately 17 million crossties will be installed, given the uncertainties related to COVID-19. Throughout 2020, freight-rail traffic continued to decline, and passenger railroads and transit systems suspended or canceled operations due to lower ridership from stay-at-home restrictions. The reduced activity prompted larger track maintenance windows to be available and, as a result, the railroad industry is managing to offset lower volumes with increased productivity as certain railroads are taking advantage of reduced track time to increase maintenance on their infrastructure.

For distribution poles, nearly half of the installed base is over 40 years old and demand has historically been in the range of two to three million poles 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. As a whole, the key factors that drive growth in the utility poles market include growing global energy consumption as well as expansion of the global telecommunication industry. Now more than ever, utilities need to maintain their infrastructure to avoid interruptions in service as large sections of the population continue to work remotely due to the COVID-19 pandemic. As such, we anticipate that 2020 demand will be relatively stable to slightly higher, although certain utilities are having issues securing line hardware and transformers which could continue into 2021. Longer term, we are evaluating opportunities to potentially expand our market presence in the U.S. as well as certain overseas markets. Regarding the supply chain, we expect that the availability of raw materials will remain consistent even with lumber in high demand.

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 and spring months on our crosstie business depending on weather conditions for harvesting lumber and crosstie 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 American Association of Railroads ("AAR"), even though rail traffic in 2020 lags significantly from the prior year, Class I railroad activities began improving in May and that has continued, particularly in intermodal units. Through September 30, 2020, total U.S. carload traffic decreased 15.3 percent from the same period last year, while intermodal units were lower by 5.9 percent. The combined U.S. traffic for carloads and intermodal units declined by 10.4 percent. According to the AAR, coal and other energy-related rail commodities remain challenged. However, intermodal traffic is closer than any other rail traffic category to pre-pandemic levels and continues to improve as retailers and others are restocking inventories to prepare for the upcoming holiday season.

In terms of raw material, while forestry has generally been deemed essential during the COVID-19 outbreak and tie demand has remained consistent, sawmills are being hampered by low demand in other key markets such as wood fibers used in palettes or shipping containers or mats for the oil and gas industry. So far to date, we have not experienced a noticeable impact as sawmills are continuing to produce poles and crossties to maintain their operations and cash flow. The RTA reports that the availability of logs is near the ideal rate, as is the outlook for log availability over the next six to 12 months. We are reducing crosstie purchases to be more in line with prior year levels for the remainder of 2020 in order to stabilize inventory levels. In addition, we are receiving more dry ties from third parties for certain Class I customers and that should help maintain year-over-year treating levels in the second half of 2020.

To date, all but one of our Class I customers have indicated that they expect to maintain their tie replacement programs for 2020; however these plans may change in future months due to a highly uncertain and unpredictable economic environment. From a long-term perspective, we believe 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 16 North American RUPS treating facilities operating at less than full utilization, our goal is to either capture more volume through the existing facilities or consolidate our operating footprint. In June 2020, we announced the closure of our Denver, Colorado facility and, as such, in the second quarter of 2020 we recorded charges of $5.8 million for asset retirement obligations, fixed asset write-offs and severance. As of September 30, 2020, we have discontinued treating activities at this location. As a result of this closure, we expect additional restructuring and related charges to earnings of approximately $4 to $9 million through 2021.

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 that 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 36 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 have rebounded and are showing strong demand during the past several months. According to the National Association of Realtors® ("NAR"), total existing-home sales grew in September for the fourth consecutive month. According to the NAR, total existing home sales increased 9.4 percent from August, and up 20.9 percent from a year ago. The increased buying activity is attributed to record-low interest rates and higher demand for existing homes, which includes buyers of vacation homes given the flexibility to work remotely.

According to the Leading Indicator of Remodeling Activity ("LIRA") reported by the Joint Center for Housing Studies of Harvard University, moderate gains in homeowner spending for improvements and repairs are expected through much of 2021 as initial concerns of a possible pandemic-induced downturn have largely dissipated. The Remodeling Futures Program is no longer providing a downside range for its home remodeling outlook, given the resilience of housing markets. The LIRA projects annual growth in renovation and repair spending of 4.1 percent by the first quarter of 2021 with gains softening to 1.7 percent by the third quarter of 2021.

The Conference Board Consumer Confidence Index® increased in September, after declining in August. The Index now stands at 101.8, up from 86.3 in August. While the Index increased substantially in September, after back-to-back monthly declines, it remains below pre-pandemic levels. Consumers have a more favorable view of current business and labor market conditions, along with renewed optimism about the short-term outlook.

Although the market data and projections for home improvements are continually changing, we are anticipating continued strong demand for residential treated wood in North America, primarily in the U.S. In looking at residential renovation markets, businesses are indicating a more positive outlook for 2020 than at the beginning of pandemic. In addition, the housing industry reported an increase in the number of buyers who are actively pursuing the purchase of a new or existing home, which supports a continued favorable outlook. As homeowners are focusing on the importance of their homes in a work-life environment and with interest rates at historically low levels, we expect the pace to continue at least through 2020 and potentially into 2021.

Regarding our supply chain, we continue to evaluate copper hedges for the 2021-2022 timeframe, which on average are at lower average costs compared with 2020. For 2020, we do not expect to see any additional benefits related to lower copper prices, since we are already fully hedged. However, we are expecting slightly higher costs in the second half of 2020, as we need to source higher cost intermediate raw material to fill the demand backlog.

Carbon Materials and Chemicals

The primary products produced by CMC are creosote, which is a registered pesticide in the United States 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. The CMC business currently supplies our North American RUPS business with its creosote requirements.

On September 30, 2020, we sold KJCC to Fangda Carbon New Material Co., Ltd and C-Chem Co., Ltd., a subsidiary of Nippon Steel Chemical & Material Co., Ltd. KJCC was located in Pizhou, Jiangsu Province, China and was a 75 percent-owned coal tar distillation company which was part of our CMC segment. The sales price was $107.0 million, subject to adjustments for cash, debt and working capital as defined in the sale and purchase agreement. The pre-tax gain on the sale of KJCC was $44.1 million and the after tax gain on the sale was $35.8 million. The net cash proceeds to Koppers was $65.2 million, after noncontrolling interest, Chinese capital gain taxes, transaction costs and estimated working capital adjustments. Included in the cash proceeds is restricted cash of $2.3 million which is being held in an escrow account to cover potential customary indemnity claims by the buyers for a period of 18 months.

In the third quarter of 2019, we ceased remaining production activities at our Follansbee, West Virginia facility. As a result of this action and other previously disclosed initiatives to reduce capacity in our CMC business, we expect additional restructuring and related charges to earnings of approximately $2 million to $5 million through 2021. The overall remaining future cash requirements for CMC plant closures still in progress are estimated to be approximately $13 million through 2021.

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 United States increased to some extent as tariffs have been 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 five 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 United States more efficiently. As a result, our raw material needs in North America have been significantly less than historically required. In addition, we entered into several new long-term supply agreements starting in 2017 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 and Europe will continue to be significantly impacted by the COVID-19 pandemic. We have seen significant declines in auto manufacturing capacity and other industrial production markets, and consequently, that has resulted in lower demand for our products. Carbon pitch and phthalic anhydride markets have softened due to declines in demand as manufacturing activity in North America and Europe significantly slowed. In addition, end market pricing for some products has been under pressure in certain regions due to the significant fall in worldwide oil prices.

Globally, coal tar raw material supply remains constrained due to reductions in blast furnace steel capacity. In North America, the pullback in steel production had led to lower domestic coal tar availability and an increase in raw material imports to North America at higher prices, while markets in Europe and Australia remain relatively steady. Although automakers had shut down in recent months, the demand for new cars has been improving and therefore, production has resumed for certain models in the second half of 2020. Overall, the cost of coal tar is decreasing in line with end markets, but lagging by approximately three months.

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 September 30, 2020 and 2019

Consolidated Results

Net sales for the three months ended September 30, 2020 and 2019 are summarized by segment in the following table:

	Three Months Ended September 30,		
	2020	*2019*	*Net Change*
(Dollars in millions)			
Railroad and Utility Products and Services	$ 191.0	$ 198.8	-4%
Performance Chemicals	147.9	123.9	19%
Carbon Materials and Chemicals	98.6	111.5	-12%
	$ 437.5	$ 434.2	1%

RUPS net sales decreased by $7.8 million or four percent compared to the prior year period. The sales decrease was primarily due to modest volume decreases in the commercial crosstie market as well as the domestic utility pole market, along with a slight unfavorable pricing impact of customer discounts in the Class I crosstie market in the current year period. Sales of crossties decreased by $9.2 million in the current year period. These decreases were offset, in part, by volume increases in our Australian utility pole market and our crosstie disposal business and pricing increases in our domestic utility pole market.

PC net sales increased by $24.0 million or 19 percent compared to the prior year period. The sales increase was due primarily to higher demand for copper-based preservatives in North America due to new customer additions and higher organic volumes driven by increased home repair and remodeling activities during the pandemic, along with an increase in sales volumes in our international markets resulting from pent-up demand due to several months of restrictions associated with the pandemic.

CMC net sales decreased by $12.9 million or 12 percent compared to the prior year period due mainly to lower sales prices for carbon pitch, carbon black feedstock and phthalic anhydride as a result of depressed oil prices in the current year period. These decreases were offset, in part, by volume increases of carbon pitch in Australia and phthalic anhydride in North America. Foreign currency translation also had a favorable impact on sales in the current year period of $3.3 million.

Cost of sales as a percentage of net sales was 75 percent for the quarter ended September 30, 2020 compared to 80 percent in the prior year quarter. Gross margin at PC was favorably impacted by higher sales volumes, a favorable sales mix and better absorption on higher production volumes. Improved margins at RUPS were due to a favorable sales mix in our Class I crosstie market and higher margins in our domestic utility pole and maintenance-of-way markets.

Depreciation and amortization charges for the quarter ended September 30, 2020 were consistent with the prior year period.

Impairment and restructuring charges for the quarter ended September 30, 2020 were consistent with the prior year period. The current year period included accelerated depreciation, demolition and other plant closure period costs related to the closure of our Denver, Colorado facility. The prior year period included accelerated depreciation related to the closure of our Follansbee, West Virginia facility.

Selling, general and administrative expenses for the quarter ended September 30, 2020 were $2.5 million lower when compared to the prior year period due mainly to a decrease in consulting and professional service expenses as well as travel and facility related costs.

Interest expense for the quarter ended September 30, 2020 was $3.6 million lower when compared to the prior year period primarily due to our lower average debt level and lower interest rates due to the recent decrease in LIBOR rates.

Income tax expense for the quarter ended September 30, 2020 was $8.6 million, an increase of $5.7 million when compared to the prior year quarter. The increase is primarily due to income before income taxes being $26.5 million higher in the quarter ended September 30, 2020 when compared to the prior year quarter. The increase is partially offset by a lower estimated annual effective income tax rate in the quarter ended September 30, 2020 when compared to the prior year quarter. Income tax expense as a percentage of pre-tax profit for the quarters ended September 30, 2020 and 2019 were 18.0 percent and 13.7 percent, respectively. Discrete items for the quarter ended September 30, 2020 and the quarter ended September 30, 2020 were approximately the same. See Note 10 – “Income Taxes” for further detail about the estimated annual effective income tax rate and about the specific discrete items.

Discontinued operations for the quarter ended September 30, 2020 resulted in income of $0.6 million compared to $2.2 million in the prior year period due primarily to a year-over-year reduction in net sales of $31.9 million attributable to the economic effects of COVID-19 on our KJCC operations and lower end market demand.

Gain on sale of discontinued operations for the quarter ended September 30, 2020 is related to the sale of our KJCC business in China in September 2020. See Note 4 – “Discontinued Operations” for further detail.

Segment Results.

Segment operating profit for the three months ended September 30, 2020 and 2019 is summarized by segment in the following table:

	Three Months Ended September 30,		
	2020	2019	% Change
(Dollars in millions)			
Operating profit (loss):			
Railroad and Utility Products and Services	$ 15.0	$ 11.3	33%
Performance Chemicals	30.4	11.7	160%
Carbon Materials and Chemicals	13.7	14.0	-2%
Corporate	(0.5)	(0.4)	-25%
	$ 58.6	$ 36.6	60%
Operating profit as a percentage of net sales:			
Railroad and Utility Products and Services	7.9%	5.7%	2.2%
Performance Chemicals	20.6%	9.4%	11.2%
Carbon Materials and Chemicals	13.9%	12.6%	1.3%
	13.4%	8.4%	5.0%

RUPS operating profit increased by $3.7 million compared to the prior year period. Operating profit as a percentage of net sales increased to 7.9 percent from an operating profit of 5.7 percent in the prior year period. Operating profit as a percentage of net sales for the quarter ended September 30, 2020 was favorably impacted by higher margins in our domestic utility pole and maintenance-of-way markets, a favorable sales mix in our Class I crosstie market and lower selling, general and administrative costs in the current year period.

PC operating profit increased by $18.7 million compared to the prior year period. Operating profit as a percentage of net sales increased to 20.6 percent from 9.4 percent in the prior year period. The current year period was favorably impacted by higher sales volumes in North America driven by increased home repair and remodeling activities during the pandemic, a favorable sales mix, better absorption on higher production volumes during the pandemic and lower selling, general and administrative costs.

CMC operating profit decreased by $0.3 million compared to the prior year period. Operating profit as a percentage of net sales increased to 13.9 percent from an operating profit of 12.6 percent in the prior year period. Operating profit for the quarter ended September 30, 2020 was favorably impacted by volume increases of carbon pitch in Australia and phthalic anhydride in North America and lower selling, general and administrative costs in the current year period. These favorable factors were offset, in part, by lower sales prices for carbon pitch and carbon black feedstock globally and lower sales prices for phthalic anhydride in North America as a result of depressed oil prices in the current year period.

Results of Operations – Comparison of Nine Months Ended September 30, 2020 and 2019

Consolidated Results

Net sales for the nine months ended September 30, 2020 and 2019 are summarized by segment in the following table:

	Nine Months Ended September 30,		
	2020	2019	Net Change
(Dollars in millions)			
Railroad and Utility Products and Services	$ 590.9	$ 564.0	5%
Performance Chemicals	396.4	343.7	15%
Carbon Materials and Chemicals	288.7	347.2	-17%
	$ 1,276.0	$ 1,254.9	2%

RUPS net sales increased by $26.9 million or five percent compared to the prior year period. The sales increase was primarily due to volume increases in the Class I and commercial crosstie markets as well as the domestic and Australian utility pole markets, along with price increases in the domestic utility pole market in the current year period. Sales of crossties increased by $24.2 million in the current year period. These increases were offset, in part, by volume decreases in our maintenance-of-way businesses and certain pricing discounts in the Class I crosstie market in the current year period.

PC net sales increased by $52.7 million or 15 percent compared to the prior year period. The sales increase was due primarily to higher demand for copper-based preservatives in North America due to new customer additions and higher organic volumes driven by increased home repair and remodeling activities during the pandemic, along with an increase in sales volumes in our international markets resulting from pent-up demand due to several months of restrictions associated with the pandemic. These increases were partially offset by an unfavorable impact from foreign currency translation in the current year period of $4.3 million.

CMC net sales decreased by $58.5 million or 17 percent compared to the prior year period due mainly to lower sales prices for carbon pitch, carbon black feedstock, phthalic anhydride and naphthalene as a result of depressed oil prices in the current year period. Other contributing factors include lower sales volumes of carbon pitch and carbon black feedstock as a result of the pandemic. These decreases were offset, in part, by volume increases of carbon pitch in Australia.

Cost of sales as a percentage of net sales was 79 percent for the nine months ended September 30, 2020 compared to 80 percent in the prior year period. Gross margin at PC was favorably impacted by higher sales volumes, a favorable sales mix and better absorption on higher production volumes. Improved margins at RUPS were due to a favorable sales mix in our Class I crosstie market and higher margins in our domestic utility pole and maintenance-of-way markets. Lower gross margins for CMC in the current year period were a result of lower sales prices for carbon pitch, carbon black feedstock and phthalic anhydride.

Depreciation and amortization charges for the nine months ended September 30, 2020 were consistent with the prior year period.

Impairment and restructuring charges for the nine months ended September 30, 2020 were consistent with the prior year period. The current year period primarily consists of charges for asset retirement obligations, fixed asset write-offs, severance, accelerated depreciation, demolition and other plant closure period costs related to the closure of our Denver, Colorado facility. The prior year period primarily consisted of asset retirement obligation charges, accelerated depreciation and inventory and fixed asset write-offs related to the closure of our Follansbee, West Virginia facility.

Selling, general and administrative expenses for the nine months ended September 30, 2020 were $8.2 million lower when compared to the prior year period due mainly to a decrease in consulting and professional service expenses, travel and facility related costs and employee related benefits.

Interest expense for the nine months ended September 30, 2020 was $8.7 million lower when compared to the prior year period primarily due to our lower average debt level and lower interest rates due to the significant decrease in LIBOR rates.

Income tax expense for the nine months ended September 30, 2020 was $14.8 million, an increase of $5.1 million when compared to the prior year period. The increase is primarily due to income before income taxes being $33.3 million higher in the period ended September 30, 2020 when compared to the prior year period. The increase is partially offset by a lower estimated annual effective income tax rate in the nine months ended September 30, 2020 when compared to the prior year period. Income tax expense as a percentage of pre-tax profit for the nine months ended September 30, 2020 and 2019 were 17.4 percent and 18.7 percent, respectively. Discrete items for the nine months ended September 30, 2020 and the nine months ended September 30, 2019 were approximately the same. See Note 10 – “Income Taxes” for further detail about the estimated annual effective income tax rate and about the specific discrete items.

Discontinued operations for the nine months ended September 30, 2020 resulted in a loss of $3.8 million compared to income of $5.0 million in the prior year period due primarily to a year-over-year reduction in net sales of $93.1 million attributable to the economic effects of COVID-19 on our KJCC operations and lower end market demand.

Gain on sale of discontinued operations for the nine months ended September 30, 2020 is related to the sale of our KJCC business in China in September 2020. See Note 4 – “Discontinued Operations” for further detail.

Segment Results.

Segment operating profit for the nine months ended September 30, 2020 and 2019 is summarized by segment in the following table:

	Nine Months Ended September 30, 2020	Nine Months Ended September 30, 2019	% Change
(Dollars in millions)			
Operating profit (loss):			
Railroad and Utility Products and Services	$ 40.4	$ 31.8	27%
Performance Chemicals	67.1	38.5	74%
Carbon Materials and Chemicals	15.9	30.3	-48%
Corporate	(1.5)	(1.7)	12%
	$ 121.9	$ 98.9	23%
Operating profit as a percentage of net sales:			
Railroad and Utility Products and Services	6.8%	5.6%	1.2%
Performance Chemicals	16.9%	11.2%	5.7%
Carbon Materials and Chemicals	5.5%	8.7%	-3.2%
	9.6%	7.9%	1.7%

RUPS operating profit increased by $8.6 million compared to the prior year period. Operating profit as a percentage of net sales increased to 6.8 percent from an operating profit of 5.6 percent in the prior year period. Operating profit as a percentage of net sales for the nine months ended September 30, 2020 was favorably impacted by higher margins in our domestic utility pole and maintenance-of-way markets, a favorable sales mix in our Class I crosstie market and lower selling, general and administrative costs in the current year period.

PC operating profit increased by $28.6 million compared to the prior year period. Operating profit as a percentage of net sales increased to 16.9 percent from 11.2 percent in the prior year period. The current year period was favorably impacted by higher sales volumes in North America driven by increased home repair and remodeling activities during the pandemic, a favorable sales mix, better absorption on higher production volumes during the pandemic and lower selling, general and administrative costs.

CMC operating profit decreased by $14.4 million compared to the prior year period. Operating profit as a percentage of net sales decreased to 5.5 percent from an operating profit of 8.7 percent in the prior year period. Operating profit for the nine months ended September 30, 2020 was negatively affected primarily by lower sales prices for carbon pitch, carbon black feedstock, phthalic anhydride and naphthalene as a result of depressed oil prices in the current year period. Other contributing factors include lower sales volumes of carbon pitch and carbon black feedstock as a result of the pandemic. These decreases were offset, in part, by volume increases of carbon pitch in Australia.

Cash Flow

Net cash provided by operating activities for the nine months ended September 30, 2020 was $65.5 million compared to net cash provided by operating activities of $57.0 million in the prior year period. The net increase of $8.5 million in cash provided by operations was due primarily to an increase in net income as well as a positive net change in certain other operating activities of $24.2 million from the prior year period, which had a favorable result on cash provided by operations in the current year period. These drivers were partly offset by higher working capital usage of $15.7 million compared to the prior year period, mainly due to an increase in accounts receivable in the current year period.

Net cash provided by investing activities for the nine months ended September 30, 2020 was $35.0 million compared to net cash used in investing activities of $23.5 million in the prior year period. The net increase in cash provided by investing activities of $58.5 million is primarily due to net cash of $78.1 million provided by the sale of KJCC partly offset by an increase in capital expenditures of $17.0 million in the current year period.

Net cash used in financing activities was $93.7 million for the nine months ended September 30, 2020 compared to $33.0 million of net cash used in financing activities in the prior year period. The cash used in financing activities in the nine months ended September 30, 2020 reflected net repayments of debt of $93.1 million and repurchases of common stock of $1.2 million related to long-term incentive compensation plans. The cash used in financing activities in the prior year period, reflected net repayments of $32.2 million and repurchases of common stock of $0.9 million.

Liquidity and Capital Resources

We have a $600.0 million senior secured revolving credit facility and a $100.0 million secured term loan facility (collectively, the “Credit Facility”), as amended, with a maturity date of May 2024. The interest rate on the Credit Facility is variable and is based on LIBOR.

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 September 30, 2020, the basket totaled $217.2 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 September 30, 2020, we had $305.7 million of unused revolving credit availability for working capital purposes after restrictions by various debt covenants and certain letter of credit commitments. As of September 30, 2020, $7.0 million of commitments were utilized by outstanding letters of credit.

In the third quarter of 2020, we used the net proceeds of the KJCC sale to reduce our borrowings under the revolving credit facility. Under the terms of the Credit Facility, net proceeds must be used to reduce term loan borrowings within a specified period. Accordingly, we expect that we will repay term loans of approximately $10 to $20 million in the fourth quarter of 2020. Any amount of repaid term loan borrowings will not be available for future borrowing liquidity. In addition, as of December 31, 2020, our total secured leverage ratio will not be permitted to exceed 2.75 times and our total leverage ratio will not be permitted to exceed 5.0 times due to a scheduled reduction of these ratios under our credit agreement. We expect the effect of the step down of these covenant ratios to reduce our liquidity by approximately $50 million as of December 31, 2020.

The following table summarizes our estimated liquidity as of September 30, 2020 *(dollars in millions)*:

Cash and cash equivalents[1]	$	37.2
Amount available under Credit Facility		305.7
Total estimated liquidity	$	342.9

(1) Cash includes approximately $35.8 million held by foreign subsidiaries and excludes approximately $2.3 million of restricted cash.

Our estimated liquidity was $254.6 million at December 31, 2019.

Our need for cash in the next twelve months relates primarily to contractual obligations which include debt service, pension plan funding, purchase commitments and operating leases, as well as working capital, capital maintenance programs and the funding of plant consolidation and rationalizations. We may also use cash to pursue other potential strategic acquisitions or voluntary pension plan contributions. Capital expenditures in 2020, excluding acquisitions, if any, are expected to total approximately $55 to $60 million and are expected to be funded by cash from operations. We anticipate that our estimated liquidity adjusted for the pay down of the term loans and step down of the covenant ratios discussed above will continue to be adequate to fund our cash requirements for the next twelve months.

Debt Covenants

The covenants under the Credit Facility may restrict the availability to borrow or may restrict the ability of Koppers Inc. to pay dividends. The Credit Facility's covenants 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 September 30, 2020 was 2.37.
- 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 3.00. The total secured leverage ratio at September 30, 2020 was 1.51.
- 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 5.25. The total leverage ratio at September 30, 2020 was 3.83.

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.

Effects of COVID-19 on our Liquidity

As of September 30, 2020, we are in compliance with our debt covenants under the Credit Facility and had $342.9 million of liquidity to fund our operations. Our estimates and assumptions as of the date of this report indicate that we should remain in compliance with our debt covenants and we have identified actions we can implement to help maintain compliance if the impact of COVID-19 has a more pronounced impact on the economy, our business and our ability to generate cash flow and profits than estimated. These impacts are highly uncertain and unpredictable, and include the severity of the outbreak and the effectiveness of actions globally to contain or mitigate its effects. Accordingly, the financial effects of the pandemic on our business may have an adverse effect on the determination of, and compliance with, our debt covenants over the next twelve months. In the event we do not maintain compliance with our debt covenants, we may be required to pursue additional sources of financing to meet our financial obligations. Obtaining such financing is not guaranteed and is largely dependent upon market conditions and other factors. Further actions may be required to improve our cash position, including but not limited to, monetizing assets, implementing cost reductions including employee furloughs, and foregoing capital expenditures and other discretionary expenses.

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

There have been no material changes to our critical accounting policies as disclosed in our Annual Report on Form 10-K for the year ended December 31, 2019.

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, 2019.

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. There were no changes in our internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Exchange Act) that occurred during the quarter ended September 30, 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. We have not experienced any material impact to our internal controls over financial reporting despite the fact that a portion of our employees are working remotely due to the COVID-19 pandemic. We are continually monitoring and assessing the COVID-19 outbreak on our internal controls over financial reporting to minimize the impact, if any, on their design and operating effectiveness.

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

In addition to the other information set forth in this Quarterly Report on Form 10-Q, including the factors discussed below, carefully consider the factors discussed in Part I, “Item 1A. Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2019, any of which could materially affect our business, financial condition or future results. Those risk factors are not the only risks facing us. Additional risks and uncertainties not currently known or that we currently deem to be immaterial also may materially adversely affect our business, financial condition and/or operating results.

Health concerns arising from the outbreak of a health epidemic or pandemic, including the currently ongoing COVID-19 pandemic, may have an adverse effect on our business, operating results and financial condition.

The recent outbreak of COVID-19 is a global situation that is rapidly evolving. The COVID-19 pandemic is having a significant impact on global markets as a result of supply chain and production disruptions, workforce restrictions, reduced spending and other factors. Our operating results are subject to fluctuations based on general economic conditions, and the extent to which the COVID-19 pandemic ultimately may impact our business will depend on future developments, such as the ultimate geographic spread of the disease and the duration of the outbreak and business closures or business disruptions for us, our suppliers and our customers, all of which are highly uncertain and cannot be predicted with confidence. These same uncertainties exist with respect to any additional future outbreak of COVID-19 and any other health epidemic or pandemic that may arise in the future.

Any resulting financial distress of our customers due to deterioration in economic conditions could result in reduced sales and decreased collectability of accounts receivable, which would negatively impact our results of operations. The COVID-19 pandemic or any other health epidemic or pandemic also could have a material impact on our ability to obtain the raw materials and parts that we need in order to manufacture our products as our suppliers face disruptions in their businesses or closures. If our suppliers fail to meet our manufacturing needs, it would delay our production and shipments to customers and negatively affect our operations.

U.S. and international governmental responses to the COVID-19 pandemic have included “shelter in place”, “stay at home” and similar types of orders. These orders exempt certain individuals and businesses needed to maintain continuity of operations of critical infrastructure sectors as determined by the federal government. Although most of our operations have been considered essential and exempt, and therefore have been able to continue to operate without interruption, our operations in New Zealand were temporarily curtailed. If any of the applicable exemptions are amended or revoked in the future or if additional restrictions that impact us are implemented in response to COVID-19 or any other health epidemic or pandemic, it could adversely impact our business, operating results and financial condition. Furthermore, to the extent that any of these exemptions do not extend to our key suppliers and customers, this also would adversely impact us in turn.

In addition, our operations or the operations of our customers or suppliers could be disrupted if any of our or their employees were suspected of having contracted COVID-19 or any similar significant virus since such an occurrence could require us or our business partners to quarantine some number of employees, take actions to disinfect facilities or otherwise cause operations to be idled.

The ultimate impact of the current COVID-19 pandemic on general economic conditions, our business and our ability to generate cash flow and profits remains unable to be quantified given the uncertainties existing with respect to the extent and timing of the potential future spread or mitigation of COVID-19 and the imposition or relaxation of protective measures. To the extent the current COVID-19 pandemic or any other future health epidemic or pandemic adversely affects our business and financial results, it also may have the effect of heightening many of the other risks described in the risk factors included in the Annual Report on Form 10-K for the year ended December 31, 2019.

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

On November 2, 2020, the Management Development and Compensation Committee of the Board of Directors of Koppers Holdings Inc. (the “Company”) approved a one-time cash incentive payment in the aggregate amount of $3.0 million to participants in the 2020 Koppers Annual Incentive Plan. This one-time cash incentive is intended to not only recognize the successful completion of the sale of the Company’s 75-percent owned subsidiary, Koppers (Jiangsu) Carbon Chemical Company Limited (“KJCC”), on September 30, 2020, but also to recognize that annual incentive determinations in prior years were impacted by the understated pricing paid by KJCC’s largest customer in such prior years. As a result, the following one-time cash incentive payments were approved:

Named Executive Officer		**One-Time Cash Incentive Payment**
Leroy M. Ball	$	205,808
President and Chief Executive Officer		
Michael J. Zugay	$	57,538
Chief Financial Officer		
Steven R. Lacy	$	94,255
Assistant to the President of Koppers Inc.		
James A. Sullivan	$	189,280
Executive Vice President and Chief Operating Officer		
Douglas J. Fenwick	$	43,495
President, Performance Chemicals		

These one-time cash incentive payments will be made by the end of January 2021.

ITEM 6. EXHIBITS

4.1*	Third Supplemental Indenture, dated as of August 20, 2020, among Koppers Utility Services LLC, the Issuer, Koppers Holdings Inc., as a Guarantor, the other Subsidiary Guarantors and Wells Fargo Bank, National Association, as trustee
10.1*	Fifth Amendment to Credit Agreement, dated as of August 28, 2020, by and among Koppers Inc., as Borrower, the Guarantors party thereto, the Lenders party thereto, and PNC Bank, National Assocation, 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*	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH*	Inline XBRL Taxonomy Extension Schema Document
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

* 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: November 4, 2020

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

THIRD SUPPLEMENTAL INDENTURE

THIRD SUPPLEMENTAL INDENTURE (this "*Supplemental Indenture*"), dated as of August 20, 2020 , among Koppers Utility Services LLC, a Pennsylvania limited liability company (the "*Guaranteeing Subsidiary*"), a subsidiary of Koppers Inc. (or its permitted successor), a Pennsylvania corporation (the "*Issuer*"), the Issuer, Koppers Holdings Inc., as a Guarantor, the other Subsidiary Guarantors (as defined in the Indenture referred to herein) and Wells Fargo Bank, National Association, as trustee under the Indenture referred to below (the "*Trustee*").

W I T N E S S E T H

WHEREAS, the Issuer has heretofore executed and delivered to the Trustee an indenture (the "*Indenture*"), dated as of January 25, 2017 providing for the issuance of 6.00% Senior Notes due 2025 (the "*Notes*");

WHEREAS, the Indenture provides that under certain circumstances the Guaranteeing Subsidiary shall execute and deliver to the Trustee a supplemental indenture pursuant to which the Guaranteeing Subsidiary shall unconditionally guarantee all of the Issuer's Obligations under the Notes and the Indenture on the terms and conditions set forth herein (the "*Guarantee*"); and

WHEREAS, pursuant to Section 9.01 of the Indenture, the Trustee is authorized to execute and deliver this Supplemental Indenture.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the Guaranteeing Subsidiary and the Trustee mutually covenant and agree for the equal and ratable benefit of the Holders as follows:

1. CAPITALIZED TERMS. Capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.

2. AGREEMENT TO GUARANTEE. The Guaranteeing Subsidiary hereby agrees to provide an unconditional Guarantee on the terms and subject to the conditions set forth in the Guarantee and in the Indenture including but not limited to Article 10 thereof.

4. NO RECOURSE AGAINST OTHERS. No director, officer, employee, incorporator or stockholder of the Issuer or any Guarantor, as such, will have any liability for any obligations of the Issuer or the Guarantors under the Notes, this Indenture, the Guarantees or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes. The waiver may not be effective to waive liabilities under the federal securities laws.

5. NEW YORK LAW TO GOVERN. THE INTERNAL LAW OF THE STATE OF NEW YORK SHALL GOVERN AND BE USED TO CONSTRUE THIS SUPPLEMENTAL INDENTURE WITHOUT GIVING EFFECT TO APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.

6. COUNTERPARTS. The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

7. EFFECT OF HEADINGS. The Section headings herein are for convenience only and shall not affect the construction hereof.

8. THE TRUSTEE. The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiary and the Issuer.

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed and attested, all as of the date first above written.

Dated: August 20, 2020

KOPPERS INC.,
a Pennsylvania corporation

By: /s/ Jimmi Sue Smith
Name: Jimmi Sue Smith
Title: Vice President, Finance and Treasurer

KOPPERS HOLDINGS INC.,
a Pennsylvania corporation

By: /s/ Jimmi Sue Smith
Name: Jimmi Sue Smith
Title: Vice President, Finance and Treasurer

Subsidiary Guarantors:

KOPPERS UTILITY SERVICES LLC,
a Pennsylvania limited liability company

By: /s/ Jimmi Sue Smith
Name: Jimmi Sue Smit
Title: Treasurer

KOPPERS DELAWARE, INC.,
a Delaware corporation

By: /s/ Jimmi Sue Smith
Name: Jimmi Sue Smith
Title: Treasurer

KOPPERS WORLD-WIDE VENTURES CORPORATION,
a Delaware corporation

By: /s/ Stephanie L. Apostolou
Name: Stephanie L. Apostolou
Title: Secretary

KOPPERS ASIA LLC,
a Delaware limited liability company

By: /s/ Jimmi Sue Smith
Name: Jimmi Sue Smith
Title: Treasurer

KOPPERS VENTURES INC.,
a Delaware corporation

By: /s/ Jimmi Sue Smith
Name: Jimmi Sue Smith
Title: Treasurer

KOPPERS PERFORMANCE CHEMICALS INC.,
a New York corporation

By: /s/ Jimmi Sue Smith
Name: Jimmi Sue Smith
Title: Treasurer

KOPPERS RAILROAD STRUCTURES INC.,
a Delaware corporation

By: /s/ Jimmi Sue Smith
Name: Jimmi Sue Smith
Title: Treasurer

KOPPERS NZ LLC,
a New York limited liability company

By: /s/ Stephanie L. Apostolou
Name: Stephanie L. Apostolou
Title: Manager

KOPPERS-NEVADA LIMITED-LIABILITY COMPANY,
a Nevada limited liability company

By: /s/ Stephanie L. Apostolou
Name: Stephanie L. Apostolou
Title: Manager

WOOD PROTECTION MANAGEMENT LLC,
a Nevada limited liability company

By: /s/ Stephanie L. Apostolou
Name: Stephanie L. Apostolou
Title: Manager

KOPPERS RECOVERY RESOURCES LLC,
a Kansas limited liability company

By: /s/ Jimmi Sue Smith____________________
Name: Jimmi Sue Smith
Title: Treasurer

WOOD PROTECTION LP,
a Texas limited partnership

By: WOOD PROTECTION MANAGEMENT LLC,
its General Partner

By: /s/ Stephanie L. Apostolou
Name: Stephanie L. Apostolou
Title: Manager

KOPPERS UTILITY AND INDUSTRIAL PRODUCTS INC., a South Carolina corporation

By: /s/ Jimmi Sue Smith_____________
Name: Jimmi Sue Smith
Title: Treasurer

COX WOOD PRESERVING COMPANY,
a South Carolina corporation

By: /s/ Jimmi Sue Smith_____________
Name: Jimmi Sue Smith
Title: Treasurer

STRUCTURAL WOODS PRESERVING CO.,
a North Carolina corporation

By:/s/ Jimmi Sue Smith______________
Name: Jimmi Sue Smith
Title: Treasurer

COVE CITY WOOD PRESERVING, INC.,
a North Carolina corporation

By:/s/ Jimmi Sue Smith______________
Name: Jimmi Sue Smith
Title: Treasurer

CAROLINA POLE, INC.
a South Carolina corporation

By:/s/ Jimmi Sue Smith_______________
Name: Jimmi Sue Smith
Title: Treasurer

NORTH - SOUTH WOOD PRESERVING COMPANY, INC., a South Carolina corporation

By:/s/ Jimmi Sue Smith______________
Name: Jimmi Sue Smith
Title: Treasurer

CAROLINA POLE LELAND, INC.,
a South Carolina corporation

By:/s/ Jimmi Sue Smith__________
Name: Jimmi Sue Smith
Title: Treasurer

LELAND LAND LLC,
a North Carolina limited liability company

By:/s/ Jimmi Sue Smith______________
Name: Jimmi Sue Smith
Title: Treasurer

COX WOOD OF ALABAMA, LLC,
an Alabama limited liability company

By:/s/ Jimmi Sue Smith______________
Name: Jimmi Sue Smith
Title: Treasurer

NATIONAL WOOD SOURCING, LLC,
a South Carolina limited liability company

By:/s/ Jimmi Sue Smith______________
Name: Jimmi Sue Smith
Title: Treasurer

SUSTAINABLE MANAGEMENT SYSTEMS LLC,
a South Carolina limited liability company

By:/s/ Jimmi Sue Smith______________
Name: Jimmi Sue Smith
Title: Treasurer

ATLANTIC POLE - GEORGIA, LLC,
a South Carolina limited liability company

By:/s/ Jimmi Sue Smith_____________
Name: Jimmi Sue Smith
Title: Treasurer

ATLANTIC POLE - VIRGINIA, LLC,
a South Carolina limited liability company

By:/s/ Jimmi Sue Smith_____________
Name: Jimmi Sue Smith
Title: Treasurer

KOPPERS RECOVERY RESOURCES LLC,
a South Carolina limited liability company

By:/s/ Jimmi Sue Smith____________
Name: Jimmi Sue Smith
Title: Treasurer

RUBY'S CORNER, LLC,
a South Carolina limited liability company

By:/s/ Jimmi Sue Smith____________
Name: Jimmi Sue Smith
Title: Treasurer

SWEETWATER WOOD HOLDINGS, LLC,
a South Carolina limited liability company

By:/s/ Jimmi Sue Smith_____________
Name: Jimmi Sue Smith
Title: Treasurer

WELLS FARGO BANK, NATIONAL ASSOCIATION, as Trustee

By: /s/ Tina D. Gonzalez

Authorized Signatory

306336157.3

FIFTH AMENDMENT TO CREDIT AGREEMENT

THIS FIFTH AMENDMENT TO CREDIT AGREEMENT (the "Amendment"), dated as of August 28, 2020 ("Fifth 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, as amended by a Second Amendment to Credit Agreement and Joinder dated as of April 10, 2018, as amended by a Third Amendment to Credit Agreement, dated as of May 1, 2019, and as amended by a Fourth Amendment to Credit Agreement (the "Fourth Amendment to Credit Agreement"), dated as of February 26, 2020 (as so amended, the "Credit Agreement"); and

WHEREAS, the Borrower has requested that the Lenders amend certain provisions of the Credit Agreement 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 to Section 1.1 [Certain Definitions]. Section 1.1 of the Credit Agreement is hereby amended as follows:

(a) The definition of "Covered Entity" added to the Credit Agreement pursuant to the terms of the Fourth Amendment to Credit Agreement is hereby amended to add "QFC" before "Covered Entity" such that the new defined term is "QFC Covered Entity" and such definition shall be moved to its appropriate alphabetical order.

3. Amendment to Section 8.2.13 [Issuance of Stock]. Section 8.2.13 of the Credit Agreement is hereby amended and restated as follows:

"8.2.13 Issuance of Stock. Neither Holdings nor the Borrower shall issue any capital stock, options or warrants, the effect of which would result in a Change of Control. Other than (a) as permitted under Sections 8.2.5 and 8.2.9, or (b) issuance of capital stock by one Subsidiary which is not a Loan Party to another Subsidiary which is not a Loan Party, each of the Loan Parties other than the Borrower and Holdings shall not, and shall not permit any of its Subsidiaries to, issue any additional shares of its capital stock or any options, warrants or other rights in respect thereof."

4. Amendment to Section 11.17 [Acknowledgement Regarding Any Supported QFCs]. The reference to "Covered Entity" contained in Section 11.17 is hereby deleted and replaced by a reference to "QFC Covered Entity".

5. 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. The Loan Parties, the Administrative Agent and the Required Lenders shall have executed and delivered this Amendment to the Administrative Agent.

(b) Miscellaneous. The Administrative Agent shall have received such other documents, agreements, instruments, deliverables and items deemed necessary by the Administrative Agent.

6. 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 in 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.

7. 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.

8. 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.

9. 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.

10. 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.

11. 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.

12. 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.

13. 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.

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

15. 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.

16. Amendment/Novation. This Amendment amends 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 Fifth 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:Chief Financial Officer

GUARANTORS:

KOPPERS HOLDINGS INC.,
a Pennsylvania corporation
KOPPERS DELAWARE, INC.,
a Delaware corporation
KOPPERS VENTURES INC.,
a Delaware corporation
KOPPERS WORLD-WIDE VENTURES CORPORATION,
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
KOPPERS RECOVERY RESOURCES LLC
a Kansas limited liability company
KOPPERS UTILITY SERVICES LLC
a Pennsylvania limited liability company

By: /s/ Stephanie L. Apostolou
Name:Stephanie L. Apostolou
Title:Secretary

BORROWER:

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/ Stephanie L. Apostolou
Name:Stephanie L. Apostolou
Title:Manager

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

By:/s/ Stephanie L. Apostolou
Name:Stephanie L. Apostolou
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
KOPPERS RECOVERY RESOURCES 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

By: /s/ Stephanie L. Apostolou
Name:Stephanie L. Apostolou
Title:Secretary

ADMINISTRATIVE AGENT AND LENDERS:

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

By: /s/ Troy Brown
Name:Troy Brown
Title:Senior Vice President

WELLS FARGO BANK, NATIONAL ASSOCIATION,
as a Lender

By: /s/ Joseph F. King
Name:Joseph F. King
Title:Senior Vice President

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

By: /s/ Susan Rich
Name:Susan Rich
Title:Vice President

FIFTH THIRD BANK, NATIONAL ASSOCIATION
as a Lender

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

BANK OF MONTREAL,
as a Lender

By: /s/ Anne Robles
Name:Anne Robles
Title:Vice President

MUFG BANK, LTD.,
as a Lender

By: /s/ George Stoecklein
Name:George Stoecklein
Title:Managing Director

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/ Todd C. Moules
Name:Todd C. Moules
Title:Market President

NORTHWEST BANK,
as a Lender

By: /s/ Stephen J. Orban
Name:Stephen J. Orban
Title:Senior Vice President

THE HUNTINGTON NATIONAL BANK,
as a Lender

By: /s/ Marcel Fournier
Name:Marcel Fournier
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/ William J. King, Jr.
Name:William J. King, Jr.
Title:Senior Vice President

TRUIST BANK (successor by merger to SunTrust Bank),
as a Lender

By: /s/ Matthew J. Davis
Name:Matthew J. Davis
Title: Senior Vice President

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: November 4, 2020

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

CERTIFICATIONS

I, Michael J. Zugay, certify that:

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

Date: November 4, 2020

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

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 September 30, 2020 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

November 4, 2020

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

November 4, 2020