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

FORM 10-Q

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

For the quarterly period ended June 30, 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 July 31, 2020 amounted to 21,045,727 shares.

PART I—FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
(Dollars in millions, except per share amounts)	*(Unaudited)*	*(Unaudited)*	*(Unaudited)*	*(Unaudited)*
Net sales	$ 436.6	$ 443.8	$ 838.5	$ 820.7
Cost of sales	334.7	351.1	675.0	652.9
Depreciation and amortization	13.3	12.5	26.8	26.1
Impairment and restructuring charges	4.1	3.8	3.9	4.1
Selling, general and administrative expenses	34.8	38.3	69.5	75.2
Operating profit	49.7	38.1	63.3	62.4
Other income (loss), net	0.5	(0.1)	1.0	0.4
Interest expense	12.8	15.7	26.8	32.0
Income from continuing operations before income taxes	37.4	22.3	37.5	30.8
Income tax provision	8.0	8.0	6.2	6.8
Income from continuing operations	29.4	14.3	31.3	24.0
Income (loss) from discontinued operations, net of tax benefit (expense) of $0.2, $0.0, $1.0, and $(1.1)	0.0	0.1	(4.4)	2.8
Net income	29.4	14.4	26.9	26.8
Net income (loss) attributable to noncontrolling interests	0.2	(0.3)	(0.9)	0.6
Net income attributable to Koppers	$ 29.2	$ 14.7	$ 27.8	$ 26.2
Earnings (loss) per common share attributable to Koppers common shareholders:				
Basic -				
Continuing operations	$ 1.40	$ 0.70	$ 1.50	$ 1.17
Discontinued operations	(0.01)	0.02	(0.17)	0.10
Earnings per basic common share	$ 1.39	$ 0.72	$ 1.33	$ 1.27
Diluted -				
Continuing operations	$ 1.40	$ 0.68	$ 1.49	$ 1.15
Discontinued operations	(0.01)	0.02	(0.17)	0.10
Earnings per diluted common share	$ 1.39	$ 0.70	$ 1.32	$ 1.25
Comprehensive income	$ 73.7	$ 9.6	$ 22.8	$ 30.3
Comprehensive income (loss) attributable to noncontrolling interests	0.2	(0.6)	(1.0)	0.6
Comprehensive income attributable to Koppers	$ 73.5	$ 10.2	$ 23.8	$ 29.7
Weighted average shares outstanding (in thousands):				
Basic	21,001	20,662	20,927	20,619
Diluted	21,068	21,044	21,084	20,949

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

KOPPERS HOLDINGS INC.
CONDENSED CONSOLIDATED BALANCE SHEET

(Dollars in millions, except per share amounts)	June 30, 2020 (Unaudited)	December 31, 2019
Assets		
Cash and cash equivalents	$ 33.0	$ 32.3
Accounts receivable, net of allowance of $2.5 and $2.6	189.2	161.7
Income tax receivable	3.6	1.1
Inventories, net	261.1	288.5
Assets of discontinued operations held for sale	68.1	17.1
Other current assets	18.1	18.8
Total current assets	573.1	519.5
Property, plant and equipment, net	369.3	358.8
Operating lease right-of-use assets	102.7	112.3
Goodwill	294.4	296.1
Intangible assets, net	157.8	168.4
Deferred tax assets	25.9	23.7
Non-current assets of discontinued operations held for sale	0.0	59.3
Other assets	32.6	26.5
Total assets	$ 1,555.8	$ 1,564.6
Liabilities		
Accounts payable	$ 131.1	$ 162.8
Accrued liabilities	96.1	89.3
Current operating lease liabilities	21.0	22.0
Current maturities of long-term debt	10.2	10.2
Liabilities of discontinued operations held for sale	34.4	11.9
Total current liabilities	292.8	296.2
Long-term debt	896.9	891.0
Accrued postretirement benefits	46.4	46.6
Deferred tax liabilities	6.7	6.8
Operating lease liabilities	83.1	91.5
Non-current liabilities of discontinued operations held for sale	0.0	25.1
Other long-term liabilities	43.6	48.7
Total liabilities	1,369.5	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; 23,620,402 and 23,321,087 shares issued	0.2	0.2
Additional paid-in capital	228.0	221.9
Retained earnings	121.6	93.8
Accumulated other comprehensive loss	(81.8)	(77.7)
Treasury stock, at cost, 2,574,675 and 2,515,925 shares	(92.1)	(90.9)
Total Koppers shareholders' equity	175.9	147.3
Noncontrolling interests	10.4	11.4
Total equity	186.3	158.7
Total liabilities and equity	$ 1,555.8	$ 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

	Six Months Ended June 30,	
	2020	2019
(Dollars in millions)	*(Unaudited)*	*(Unaudited)*
Cash provided by (used in) operating activities:		
Net income	$ 26.9	$ 26.8
Adjustments to reconcile net cash provided by (used in) operating activities:		
Depreciation and amortization	27.3	28.0
Stock-based compensation	5.5	5.9
Change in derivative liability	(0.3)	(1.3)
Non-cash interest expense	1.3	1.2
Loss on disposal of assets and investment	0.0	0.3
Insurance proceeds	0.0	(3.0)
Deferred income taxes	(4.7)	0.4
Change in other liabilities	0.8	(4.3)
Other - net	1.0	(1.1)
Changes in working capital:		
Accounts receivable	(31.7)	(25.4)
Inventories	28.8	5.9
Accounts payable	(34.3)	(30.5)
Accrued liabilities	(0.2)	(6.0)
Other working capital	1.8	4.5
Net cash provided by operating activities	22.2	1.4
Cash (used in) provided by investing activities:		
Capital expenditures	(26.5)	(18.5)
Insurance proceeds received	0.0	3.0
Net cash provided by divestitures and asset sales	0.1	0.5
Net cash used in investing activities	(26.4)	(15.0)
Cash provided by (used in) financing activities:		
Net increase in credit facility borrowings	9.9	35.0
Repayments of long-term debt	(5.1)	(18.7)
Issuances of Common Stock	0.5	0.6
Repurchases of Common Stock	(1.2)	(0.9)
Payment of debt issuance costs	(0.2)	(0.9)
Net cash provided by financing activities	3.9	15.1
Effect of exchange rate changes on cash	0.8	0.0
Change in cash and cash equivalents of discontinued operations held for sale	0.2	(0.8)
Net increase in cash and cash equivalents	0.7	0.7
Cash and cash equivalents at beginning of period	32.3	37.4
Cash and cash equivalents at end of period	$ 33.0	$ 38.1
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash outflow from operating leases	$ 15.1	$ 15.3
Supplemental disclosure of non-cash investing and financing activities:		
Right-of-use assets obtained in exchange for new operating lease liabilities	$ 1.7	$ 16.5
Supplemental disclosure of cash flow information:		
Non-cash investing activities		
Accrued capital expenditures	$ 2.3	$ 4.8

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 spread throughout the United States and other countries across the world, and the duration and severity of its effects are currently unknown. While we expect the effects of the pandemic to continue to negatively impact our results of operations, cash flows and financial position, the current level of uncertainty over the economic and operational impacts of COVID-19 means the related 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 identifiable 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 June 30, 2020 and, therefore, an interim review of impairment was not required. Events and changes in circumstances arising after June 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 December 2019, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2019-12, "Income Taxes (Topic 740) – Simplifying the Accounting for Income Taxes." ASU 2019-12 is meant to simplify accounting for income taxes by removing certain exceptions to the principles in Topic 740 and amends existing guidance to facilitate consistent application. We adopted the standard as of January 1, 2020 and there was no material impact on our financial statements.

In August 2018, the FASB issued ASU 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.

In June 2016, the FASB issued ASU No. 2016-13, "Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments." ASU 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 the standard as of January 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 February 2020, we entered into a definitive agreement to sell 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. Refer to "Note 4 – Discontinued Operations" for more details.
- The cessation of naphthalene refining activities at our Follansbee, West Virginia coal tar distillation facility in the fourth quarter of 2018 subsequent to the commissioning of a new naphthalene refining plant in Stickney, Illinois. In August 2019, we ceased remaining production activities at the 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 we have targeted the third quarter of 2020 for discontinuing activities at this location and, as such, we recorded charges of $2.9 million for asset retirement obligations and $1.3 million for fixed asset write-offs and severance in the three months ended June 30, 2020.
- 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 income (loss) 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	0.8	4.2
Cost charged against assets	0.0	0.0	(0.8)	(0.8)
Reversal of accrued charges	(0.3)	0.0	0.0	(0.3)
Reserve at June 30, 2020	$ 1.1	$ 3.6	$ 2.4	$ 7.1

4. Discontinued Operations

On February 18, 2020, we entered into a definitive agreement to sell KJCC to Fangda Carbon New Material Co., Ltd and C-Chem Co., Ltd., a subsidiary of Nippon Steel Chemical & Material Co., Ltd. KJCC is located in China and is a 75 percent-owned coal tar distillation company which is part of our CMC segment. The sales price is $107.0 million, subject to adjustment for cash, debt and working capital at closing, which is expected to occur in the third quarter of 2020 due to required regulatory approvals in China and achievement of other customary closing conditions. At closing, we estimate the gain on the sale of KJCC will be approximately $45 million and net cash proceeds to Koppers will be approximately $65 million, after noncontrolling interest, taxes, expenses and working capital adjustments. The sale of KJCC represents a strategic shift that will have a major effect on our operations and financial results and is, 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 six months ended June 30, 2020 and 2019 consist of the following amounts:

	Three Months Ended June 30,		*Six Months Ended June 30,*	
	2020	*2019*	*2020*	*2019*
(Dollars in millions)				
Net sales	$ 12.9	$ 26.0	$ 22.8	$ 84.0
Operating (loss) profit	(0.2)	0.3	(5.3)	4.5

The cash flows related to KJCC have not been restated in the consolidated statement of cash flows. Net cash inflows and outflows from discontinued operations for the six months ended June 30, 2020 and 2019 consist of the following amounts:

	Six Months Ended June 30,	
	2020	*2019*
(Dollars in millions)		
Net cash (used in) provided by operating activities	$ (0.1)	$ 16.5
Net cash provided by (used in) investing activities	0.1	(1.7)
Net cash used in financing activities	0.0	(13.8)
Effect of exchange rate changes on cash	(0.2)	(0.2)
Net (decrease) increase in cash and cash equivalents	(0.2)	0.8

Assets 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 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 following represents the carrying amount of assets and liabilities, by major class, classified as held for sale on the Condensed Consolidated Balance Sheets as of June 30, 2020 and December 31, 2019:

(Dollars in millions)	June 30, 2020	December 31, 2019
Assets		
Cash and cash equivalents	$ 0.5	$ 0.7
Accounts receivable	0.4	2.2
Income tax receivable	0.7	0.8
Inventories, net	5.9	10.6
Property, plant and equipment, net	55.2	0.0
Operating lease right-of-use assets	1.1	0.0
Deferred tax assets	0.5	0.0
Other current assets	3.8	2.8
Total current assets held for sale	68.1	17.1
Property, plant and equipment, net	0.0	56.6
Operating lease right-of-use assets	0.0	1.2
Other assets	0.0	1.5
Total non-current assets held for sale	0.0	59.3
Total assets held for sale	$ 68.1	$ 76.4
Liabilities		
Accounts payable	$ 5.3	$ 7.1
Accrued liabilities	5.2	4.7
Current operating lease liabilities	1.0	0.1
Other current liabilities	22.9	0.0
Total current liabilities held for sale	34.4	11.9
Deferred tax liabilities	0.0	0.6
Operating lease liabilities	0.0	1.1
Other long-term liabilities	0.0	23.4
Total non-current liabilities held for sale	0.0	25.1
Total liabilities held for sale	$ 34.4	$ 37.0

The above amounts are excluded from the respective balance sheet footnotes as of June 30, 2020 and December 31, 2019. We have incurred aggregated deal costs related to this divestiture of $0.2 million and $1.2 million during the three and six months ended June 30, 2020, respectively, which are included in income (loss) from discontinued operations on the Condensed Consolidated Statement of Operations and Comprehensive Income.

5. Fair Value Measurements

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

	June 30, 2020		December 31, 2019	
(Dollars in millions)	Fair Value	Carrying Value	Fair Value	Carrying Value
Financial assets:				
Cash and cash equivalents, including restricted cash	$ 33.0	$ 33.0	$ 32.3	$ 32.3
Investments and other assets[(a)]	1.2	1.2	1.2	1.2
Financial liabilities:				
Total debt	$ 857.0	$ 916.6	$ 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 six months ended June 30, 2020 and 2019 is summarized in the table below:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
(Dollars in millions)				
Net income	$ 29.4	$ 14.4	$ 26.9	$ 26.8
Changes in other comprehensive income (loss):				
Currency translation adjustment	14.1	(1.1)	(9.0)	0.7
Unrealized gain (loss) on cash flow hedges, net of tax (expense) benefit of $(11.6), $2.0, $(1.7) and $(1.2)	30.0	(3.9)	4.5	2.3
Unrecognized pension net loss, net of tax expense of $0.0, $0.1, $0.1 and $0.2	0.2	0.2	0.4	0.5
Total comprehensive income	73.7	9.6	22.8	30.3
Comprehensive income (loss) attributable to noncontrolling interests	0.2	(0.6)	(1.0)	0.6
Comprehensive income attributable to Koppers	$ 73.5	$ 10.2	$ 23.8	$ 29.7

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 $2.3 million and $3.4 million for the three and six months ended June 30, 2020, respectively, and $0.9 million and $1.5 million for the three and six months ended June 30, 2019, respectively.

The following tables present the change in equity for the three months ended June 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 March 31, 2020	$ 0.2	$ 224.7	$ 92.4	$ (126.1)	$ (92.1)	$ 10.1	$ 109.2
Net income	0.0	0.0	29.2	0.0	0.0	0.2	29.4
Issuance of common stock	0.0	0.3	0.0	0.0	0.0	0.0	0.3
Employee stock plans	0.0	3.0	0.0	0.0	0.0	0.0	3.0
Other comprehensive income							
Currency translation adjustment	0.0	0.0	0.0	14.1	0.0	0.1	14.1
Unrealized gain on cash flow hedges	0.0	0.0	0.0	30.0	0.0	0.0	30.0
Unrecognized pension net loss	0.0	0.0	0.0	0.2	0.0	0.0	0.2
Balance at June 30, 2020	$ 0.2	$ 228.0	$ 121.6	$ (81.8)	$ (92.1)	$ 10.4	$ 186.3

(Dollars in millions)	Common Stock	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Treasury Stock	Noncontrolling Interests	Total Equity
Balance at March 31, 2019	$ 0.2	$ 209.0	$ 38.8	$ (79.2)	$ (90.8)	$ 12.0	$ 90.0
Net income	0.0	0.0	14.7	0.0	0.0	(0.3)	14.4
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	0.0	0.0	(0.8)	0.0	(0.3)	(1.1)
Unrealized loss on cash flow hedges	0.0	0.0	0.0	(3.9)	0.0	0.0	(3.9)
Unrecognized pension net loss	0.0	0.0	0.0	0.2	0.0	0.0	0.2
Balance at June 30, 2019	$ 0.2	$ 212.4	$ 53.5	$ (83.7)	$ (90.8)	$ 11.4	$ 103.0

The following tables present the change in equity for the six months ended June 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	27.8	0.0	0.0	(0.9)	26.9
Issuance of common stock	0.0	0.5	0.0	0.0	0.0	0.0	0.5
Employee stock plans	0.0	5.5	0.0	0.0	0.0	0.0	5.5
Other comprehensive income							
Currency translation adjustment	0.0	0.1	0.0	(9.0)	0.0	(0.1)	(9.0)
Unrealized gain on cash flow hedges	0.0	0.0	0.0	4.5	0.0	0.0	4.5
Unrecognized pension net loss	0.0	0.0	0.0	0.4	0.0	0.0	0.4
Repurchases of common stock	0.0	0.0	0.0	0.0	(1.2)	0.0	(1.2)
Balance at June 30, 2020	$ 0.2	$ 228.0	$ 121.6	$ (81.8)	$ (92.1)	$ 10.4	$ 186.3

(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	26.2	0.0	0.0	0.6	26.8
Issuance of common stock	0.0	0.6	0.0	0.0	0.0	0.0	0.6
Employee stock plans	0.0	5.9	0.0	0.0	0.0	0.0	5.9
Other comprehensive income							
Currency translation adjustment	0.0	0.0	0.0	0.7	0.0	(0.0)	0.7
Unrealized loss on cash flow hedges	0.0	0.0	0.0	2.3	0.0	0.0	2.3
Unrecognized pension net loss	0.0	0.0	0.0	0.5	0.0	0.0	0.5
Repurchases of common stock	0.0	(0.2)	0.1	0.0	(0.8)	0.0	(0.9)
Balance at June 30, 2019	$ 0.2	$ 212.4	$ 53.5	$ (83.7)	$ (90.8)	$ 11.4	$ 103.0

7. Earnings per Common Share

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

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

	Three Months Ended June 30,		Six Months Ended June 30,	
(Dollars in millions, except share amounts, in thousands)	*2020*	*2019*	*2020*	*2019*
Net income attributable to Koppers	$ 29.2	$ 14.7	$ 27.8	$ 26.2
Less: Income (loss) from discontinued operations	0.0	0.1	(4.4)	2.8
Plus: Non-controlling income (loss)	0.2	(0.3)	(0.9)	0.6
Income from continuing operations attributable to Koppers	$ 29.4	$ 14.3	$ 31.3	$ 24.0
Weighted average common shares outstanding:				
Basic	21,001	20,662	20,927	20,619
Effect of dilutive securities	67	382	157	330
Diluted	21,068	21,044	21,084	20,949
Earnings per common share – continuing operations:				
Basic earnings per common share	$ 1.40	$ 0.70	$ 1.50	$ 1.17
Diluted earnings per common share	1.40	0.68	1.49	1.15
Other data:				
Antidilutive securities excluded from computation of diluted earnings per common share	1,773	674	1,022	580

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 June 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 six months ended June 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	360,661	232,481	593,142	$ 15.69
Vested	(132,624)	(110,168)	(242,792)	$ 44.75
Forfeited	(31,068)	(25,282)	(56,350)	$ 33.93
Non-vested at June 30, 2020	539,981	542,217	1,082,198	$ 26.05

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 six months ended June 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		
Expired	(5,129)	$ 31.28		
Forfeited	(15,637)	$ 33.44		
Outstanding at June 30, 2020	1,133,784	$ 26.91	6.08	$ 0.5
Exercisable at June 30, 2020	771,797	$ 27.30	4.73	$ 0.5

Stock Compensation Expense

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
(Dollars in millions)				
Stock-based compensation expense recognized:				
Selling, general and administrative expenses	$ 3.0	$ 3.1	$ 5.5	$ 5.9
Less related income tax benefit	0.8	1.1	1.5	1.9
Decrease in net income attributable to Koppers	$ 2.2	$ 2.0	$ 4.0	$ 4.0

As of June 30, 2020, total future compensation expense related to non-vested stock-based compensation arrangements totaled $20.4 million and the weighted-average period over which this expense is expected to be recognized is approximately 29 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 $5.4 million and $5.1 million are recorded within accounts receivable in our RUPS segment, net of allowance within the consolidated balance sheet as of June 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:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
(Dollars in millions)				
Revenues from external customers:				
Railroad and Utility Products and Services	$ 209.9	$ 199.1	$ 399.9	$ 365.2
Performance Chemicals	137.1	120.8	248.5	219.8
Carbon Materials and Chemicals(a)	89.6	123.9	190.1	235.7
Total	$ 436.6	$ 443.8	$ 838.5	$ 820.7
Intersegment revenues:				
Railroad and Utility Products and Services	$ 0.0	$ 0.2	$ 0.0	$ 0.5
Performance Chemicals	3.7	3.1	6.9	6.2
Carbon Materials and Chemicals	21.4	18.7	39.4	36.6
Total	$ 25.1	$ 22.0	$ 46.3	$ 43.3
Depreciation and amortization expense:				
Railroad and Utility Products and Services	$ 5.0	$ 4.8	$ 9.9	$ 9.6
Performance Chemicals	4.4	4.6	8.9	9.5
Carbon Materials and Chemicals(b)	3.9	3.1	8.0	7.0
Total	$ 13.3	$ 12.5	$ 26.8	$ 26.1
Operating profit (loss):				
Railroad and Utility Products and Services	$ 16.2	$ 11.8	$ 25.4	$ 20.5
Performance Chemicals	32.6	14.0	36.7	26.8
Carbon Materials and Chemicals(c)	1.5	13.0	2.2	16.2
Corporate	(0.6)	(0.7)	(1.0)	(1.1)
Total	$ 49.7	$ 38.1	$ 63.3	$ 62.4

(a) Revenue excludes KJCC discontinued operations of $12.9 million and $26.0 million for the three months ended June 30, 2020 and 2019, respectively, and $22.8 million and $84.0 million for the six months ended June 30, 2020 and 2019, respectively.

(b) Depreciation and amortization expense excludes KJCC discontinued operations of $(0.4) million and $1.0 million for the three months ended June 30, 2020 and 2019, respectively, and $0.5 million and $1.9 million for the six months ended June 30, 2020 and 2019, respectively.

(c) Operating profit (loss) excludes KJCC discontinued operations of $(0.2) million and $0.3 million for the three months ended June 30, 2020 and 2019, respectively, and $(5.3) million and $4.5 million for the six months ended June 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:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
(Dollars in millions)				
Railroad and Utility Products and Services:				
Railroad treated products	$ 125.3	$ 115.5	$ 237.3	$ 204.1
Utility poles	66.0	60.0	127.8	114.5
Rail joints	6.0	8.4	12.5	16.8
Railroad infrastructure services	8.2	10.4	14.1	19.7
Other products	4.4	4.8	8.2	10.1
Total	209.9	199.1	399.9	365.2
Performance Chemicals:				
Wood preservative products	130.3	116.8	237.9	213.2
Other products	6.8	4.0	10.6	6.6
Total	137.1	120.8	248.5	219.8
Carbon Materials and Chemicals:				
Pitch and related products	58.3	74.3	108.5	137.1
Creosote and distillates	8.4	15.4	23.6	31.3
Phthalic anhydride and other chemicals	11.6	20.0	35.1	41.0
Naphthalene	3.9	5.7	8.9	12.1
Other products	7.5	8.5	14.0	14.3
Total	89.6	123.9	190.1	235.7
Total	$ 436.6	$ 443.8	$ 838.5	$ 820.7

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

(Dollars in millions)		*June 30, 2020*		*December 31, 2019*
Segment assets:				
Railroad and Utility Products and Services	$	562.0	$	562.2
Performance Chemicals		474.9		457.7
Carbon Materials and Chemicals[(a)]		467.6		502.1
All other		51.3		42.6
Total[(a)]	$	1,555.8	$	1,564.6
Goodwill:				
Railroad and Utility Products and Services	$	120.6	$	120.7
Performance Chemicals		173.8		175.4
Total	$	294.4	$	296.1

(a) The Carbon Materials and Chemicals segment includes $68.1 million and $76.4 million of discontinued operations assets held for sale related to our KJCC business at June 30, 2020 and December 31, 2019, respectively.

10. Income Taxes

Effective Tax Rate

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

The estimated annual effective income tax rate, excluding discrete items discussed above, was 27.8 percent and 34.7 percent for the six months ended June 30, 2020 and 2019, respectively. The estimated annual effective income tax rate differs from the U.S. federal statutory tax rate due to:

	June 30,	
	2020	*2019*
Federal income tax rate	21.0%	21.0%
Foreign earnings taxed at different rates	3.1	0.9
Nondeductible expenses	1.5	1.6
GILTI inclusion, net of foreign tax credits	1.3	0.7
State income taxes, net of federal tax benefit	0.6	0.8
Change in tax contingency reserves	0.1	0.2
Interest expense deduction limitation	0.0	9.8
Other	0.2	(0.3)
Estimated annual effective income tax rate	27.8%	34.7%

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 and 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.

This modification impacts both our 2019 and 2020 income tax provisions and we have included the net impact in the six months ended June 30, 2020 income tax provision. We have recorded a benefit of $1.0 million for changes to our 2019 tax provision and a benefit of $4.4 million for the release of a valuation allowance that was recorded for interest expense deduction limitations that were previously not expected to be realized. Other provisions of the CARES Act do not have a material impact to our income tax provision.

Income taxes as a percentage of pretax income were 21.4 percent for the three months ended June 30, 2020. This is lower than the estimated annual effective income tax rate due to discrete items. Discrete items included in income taxes for the three months ended June 30, 2020 were a net benefit of $2.4 million. Discrete items were primarily related to a benefit 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 35.9 percent for the three months ended June 30, 2019. This is higher than the estimated annual effective income tax rate due to a change in the geographical mix of earnings and due to an increase in unfavorable US tax adjustments for the interest expense deduction limitation and the GILTI inclusion.

Income taxes as a percentage of pretax income were 16.5 percent for the six months ended June 30, 2020. This is lower than the estimated annual effective income tax rate due to discrete items. Discrete items included in income taxes for the six months ended June 30, 2020 were a net benefit of $4.2 million. Discrete items included a benefit for the release of a valuation allowance that was recorded for interest expense deduction limitations that were previously not expected to be realized which was offset by a tax deduction reduction for vested stock awards.

Income taxes as a percentage of pretax income were 22.1 percent for the six months ended June 30, 2019. This is lower than the estimated annual effective income tax rate due to discrete items. Discrete items included in income taxes for the six months ended June 30, 2019 were a net benefit of $3.7 million. 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.

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 six months ended June 30, 2020.

Unrecognized Tax Benefits

We and our subsidiaries file income tax returns in the U.S. federal jurisdiction, individual U.S. state jurisdictions and non-U.S. jurisdictions. With few exceptions, we are no longer subject to U.S. federal, U.S. state, or non-U.S. income tax examinations by tax authorities for years prior to 2016.

Unrecognized tax benefits totaled $2.2 million and $2.1 million as of June 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 $2.1 million and $2.0 million as of June 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 June 30, 2020 and December 31, 2019, we had accrued approximately $1.0 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 June 30, 2020 and December 31, 2019 are summarized in the table below:

(Dollars in millions)	*June 30, 2020*	*December 31, 2019*
Raw materials	$ 218.7	$ 232.0
Work in process	10.9	12.0
Finished goods	90.8	107.8
	$ 320.4	$ 351.8
Less revaluation to LIFO	59.3	63.3
Net[(a)]	$ 261.1	$ 288.5

(a) Net inventories excludes $5.9 million and $10.6 million of discontinued operations assets held for sale related to our KJCC business at June 30, 2020 and December 31, 2019, respectively.

12. Property, Plant and Equipment

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

	June 30, 2020	December 31, 2019
(Dollars in millions)		
Land	$ 14.8	$ 15.0
Buildings	70.2	70.5
Machinery and equipment	757.4	732.4
	$ 842.4	$ 817.9
Less accumulated depreciation	473.1	459.1
Net(a)	$ 369.3	$ 358.8

(a) *Net property, plant, and equipment excludes $55.2 million and $56.6 million of discontinued operations assets held for sale related to our KJCC business at June 30, 2020 and December 31, 2019, respectively.*

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 six months ended June 30, 2020 and 2019:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
(Dollars in millions)				
Service cost	$ 0.4	$ 0.3	$ 0.7	$ 0.7
Interest cost	1.5	2.0	3.1	4.0
Expected return on plan assets	(1.8)	(2.0)	(3.8)	(4.0)
Amortization of net loss	0.3	0.4	0.7	0.8
Net periodic benefit cost	$ 0.4	$ 0.7	$ 0.7	$ 1.5
Defined contribution plan expense	$ 2.3	$ 2.5	$ 4.0	$ 4.1

14. Debt

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

	Weighted Average Interest Rate	Maturity	June 30, 2020	December 31, 2019
(Dollars in millions)				
Term Loan	3.76%	2024	$ 77.5	$ 82.5
Revolving Credit Facility	3.76%	2024	338.8	329.0
Other loans	6.12%	2021	0.3	0.4
Senior Notes due 2025	6.00%	2025	500.0	500.0
Debt			916.6	911.9
Less short-term debt and current maturities of long-term debt			10.2	10.2
Less unamortized debt issuance costs			9.5	10.7
Long-term debt			$ 896.9	$ 891.0

Credit Facility

On February 26, 2020, we entered into the Fourth Amendment to our $600.0 million senior secured revolving credit facility and our $100.0 million secured term loan facility (collectively, the Credit Facility") to, among other things: (1) revise the LIBOR replacement language in the Credit Facility, (2) revise certain provisions regarding mandatory prepayments of the term loan facility with proceeds of equity issuances and associated definitions, (3) remove the step downs in the maximum total secured leverage ratio and maximum total leverage ratio which would otherwise occur at the time of a first equity issuance, and (4) revise certain provisions regarding disposition of assets by certain subsidiaries of Koppers Inc. All other material terms, conditions and covenants with respect to the Credit Facility remain unchanged.

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 June 30, 2020, we had $157.5 million of unused revolving credit availability for working capital purposes after restrictions from certain letter of credit commitments and other covenants. As of June 30, 2020, $7.1 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)	*June 30, 2020*	*December 31, 2019*
Asset retirement obligation at beginning of year	$ 20.7	$ 27.0
Accruals	2.9	2.3
Accretion expense	0.6	1.5
Revision in estimated cash flows	0.1	2.4
Cash expenditures	(3.5)	(12.5)
Balance at end of period	$ 20.8	$ 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 $7.4 million and $15.2 million during the three and six months ended June 30, 2020, respectively, and $7.9 million and $15.9 million during the three and six months ended June 30, 2019, respectively. Variable lease costs were $0.8 million and $1.8 million during the three and six months ended June 30, 2020, respectively, and $0.9 million and $1.8 million during the three and six months ended June 30, 2019, respectively.

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

(Dollars in millions)		
2020	$	14.7
2021		25.7
2022		22.1
2023		16.2
2024		14.0
Thereafter		44.1
Total lease payments	$	136.8
Less: Interest		(32.7)
Present value of lease liabilities	$	104.1

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

(Dollars in millions)		*June 30, 2020*		*December 31, 2019*
Operating leases:				
Operating lease right-of-use assets	$	102.7	$	112.3
Current operating lease liabilities	$	21.0	$	22.0
Operating lease liabilities		83.1		91.5
Total operating lease liabilities	$	104.1	$	113.5
Weighted average remaining lease term, in years		6.7		7.1
Weighted average discount rate		7.7%		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 June 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)*	
	June 30, 2020	*December 31, 2019*	*June 30, 2020*	*December 31, 2019*
(Amounts in millions)				
Cash flow hedges	77.9	56.5	$ 10.3	$ 4.5
Not designated as hedges	15.9	16.6	2.0	1.7
Total	93.8	73.1	$ 12.3	$ 6.2

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

	June 30, 2020	*December 31, 2019*
(Dollars in millions)		
Other current assets	$ 1.8	$ 2.1
Other assets	10.5	4.1
Asset on balance sheet	$ 12.3	$ 6.2
Accumulated other comprehensive gain, net of tax	$ 7.8	$ 3.3

Based upon contracts outstanding at June 30, 2020, in the next twelve months we estimate that $1.2 million of unrealized gains, net of tax, related to commodity price hedging will be reclassified from comprehensive income (loss) into earnings.

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

	Three Months Ended June 30,		*Six Months Ended June 30,*	
	2020	*2019*	*2020*	*2019*
(Dollars in millions)				
Gain (loss) from contracts not designated as hedges	$ 8.3	$ (1.8)	$ 0.3	$ 1.3

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

(Dollars in millions)		*June 30, 2020*		*December 31, 2019*
Other current assets	$	0.6	$	0.3
Accrued liabilities		(0.8)		(0.5)
Net liability on balance sheet	$	(0.2)	$	(0.2)

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

(In millions)	*June 30, 2020*	*December 31, 2019*
British Pounds	GBP 2.5	GBP 3.7
New Zealand Dollars	NZD 17.0	NZD 16.0
United States Dollars	USD 4.6	USD 6.2
Euro	EUR 1.2	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 June 30, 2020. This is the same number of plaintiffs and cases pending as of December 31, 2019. As of June 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 and we are currently in discussions with the EPA to resolve the matter. Accordingly we have accrued our estimated liability of the probable penalty as of June 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 June 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 June 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 June 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 June 30, 2020, our estimated environmental remediation liability for this acquired site totals $1.3 million.

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

	Period ended	
	June 30, 2020	*December 31, 2019*
(Dollars in millions)		
Balance at beginning of year	$ 9.5	$ 10.1
Expense	0.1	0.5
Reversal of reserves	0.0	(0.8)
Cash expenditures	(0.2)	(0.3)
Currency translation	(0.1)	0.0
Balance at end of period	$ 9.3	$ 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, joint ventures or other matters as well as financings and debt reduction, are subject to known and unknown risks, uncertainties and contingencies. Many of these risks, uncertainties and contingencies are beyond our control, and may cause actual results, performance or achievements to differ materially from anticipated results, performance or achievements. Factors that might affect such forward-looking statements, include, among other things, the impact of changes in commodity prices, such as oil and copper, on product margins; general economic and business conditions; the length and extent of economic contraction 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, China and Europe.

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

Through our RUPS business, we believe that we are the largest supplier of 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. These events negatively impacted our financial performance, primarily with respect to our CMC business in the first two quarters of 2020 and are expected to negatively impact our financial performance in future periods. 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 curtailed in two locations, China and New Zealand, after government restrictions required the temporary closure of operations. These operations have returned to service in the second quarter of 2020. Our remaining 31 facilities, principally in the United States, Canada, the United Kingdom, Australia and Denmark, were permitted to continue to operate.

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 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 June 30, 2020. Events and changes in circumstances arising after June 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, RTA has not provided a forecast given the uncertainties related to COVID-19, but has reported, in general, the railroad industry is managing to offset lower volumes with increased productivity. In fact, 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, 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 push some second-half 2020 projects 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, even though rail traffic in 2020 lags significantly from the prior year, Class I railroad activities began improving in May and that has continued into June. Freight, coal, automotive and support industry-related loadings all saw either increases or stabilization. Through June 30, 2020, total U.S. carload traffic decreased 15.9 percent from the same period last year, while intermodal units dropped by 10.6 percent. The combined U.S. traffic for carloads and intermodal units fell by 13.2 percent.

In terms of raw material, while forestry has generally been deemed essential during the COVID-19 outbreak, new construction is not considered essential in certain states. While this has impacted some of the sawmills, we have not experienced a noticeable impact to date as most 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 17 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 we have targeted the third quarter of 2020 for discontinuing activities at this location and, as such, in the second quarter of 2020 we recorded charges of $4.2 million for asset retirement obligations, fixed asset write-offs and severance. 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 are showing some improvements. According to the National Association of Realtors® ("NAR"), total existing-home sales rebounded at a record pace in June showing signs of a market turnaround after three straight months of sales declines caused by the pandemic. According to the NAR, total existing home sales increased 20.7 percent since May, although overall home sales were down 11.3 percent from a year ago.

According to the Leading Indicator of Remodeling Activity ("LIRA") reported by the Joint Center for Housing Studies of Harvard University, expenditures for improvements and repairs to owner-occupied homes are expected to slow by the middle of next year as the COVID-19 pandemic continues to unfold. LIRA projects annual declines in renovation and repair spending of 0.4 percent by mid-2021 as the pace of home improvement and repairs tapers off.

The Conference Board Consumer Confidence Index® decreased in July, after increasing in June. The Index now stands at 92.6, down from 98.3 in June. Consumers are less optimistic about the short-term outlook for the economy and labor market, likely due to a resurgence of COVID-19 in certain regions.

Although the market data and projections for home improvements continue to vary widely, 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.

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 February 18, 2020, we entered into a definitive agreement to sell 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. KJCC is a 75 percent-owned coal tar distillation company which is part of our CMC segment. On April 29, 2020, the pending divestiture reached a key milestone by receiving antitrust approval from China's State Administration for Market Regulation of China (SAMR). In 2019, KJCC's sales totaled $127.4 million and its operating profit totaled $5.9 million. The sales price is $107.0 million, subject to adjustment for cash, debt and working capital at closing, which is expected to occur in the third quarter of 2020 due to required regulatory approvals in China and achievement of other closing conditions. At closing, we estimate the gain on the sale of KJCC will be approximately $45 million and net cash proceeds to Koppers will be approximately $65 million, after noncontrolling interest, taxes and expenses. The results of KJCC are reflected as a discontinued operation in the consolidated financial statements and the supporting footnotes.

In the third quarter of 2019, we ceased remaining production activities at our Follansbee, West Virginia. 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. 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. As a result, our raw material needs in North America have been significantly less than historically required.

For the external markets served by our CMC business, we expect that North America and Europe will be significantly impacted by the COVID-19 pandemic. We are seeing significant declines in auto manufacturing capacity and other industrial production markets, and consequently, that is resulting in lower demand for our products. Carbon pitch and phthalic anhydride markets have begun to soften 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 is resuming 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 June 30, 2020 and 2019

Consolidated Results

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

	Three Months Ended June 30,		
	2020	*2019*	*Net Change*
(Dollars in millions)			
Railroad and Utility Products and Services	$ 209.9	$ 199.1	5%
Performance Chemicals	137.1	120.8	13%
Carbon Materials and Chemicals	89.6	123.9	-28%
	$ 436.6	$ 443.8	-2%

RUPS net sales increased by $10.8 million or five percent compared to the prior year period. The sales increase was primarily due to volume increases in the Class I crosstie market as well as the domestic and Australian utility pole markets, along with price increases in the commercial crosstie market in the current year period. Sales of crossties increased by $9.7 million in the current year period. These increases were offset, in part, by volume decreases in our maintenance-of-way businesses and an unfavorable impact from foreign currency translation in the current year period of $0.5 million from our Australian pole business.

PC net sales increased by $16.3 million or 13 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. These increases were partially offset by a decrease in sales volumes in all of our international markets and an unfavorable impact from foreign currency translation in the current year period of $1.9 million.

CMC net sales decreased by $34.3 million or 28 percent compared to the prior year period due mainly to 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. Other contributing factors include lower sales volumes of carbon pitch globally, lower sales volumes of phthalic anhydride in North America and lower sales volumes of carbon black feedstock in Europe as a result of the pandemic. Foreign currency translation also had an unfavorable impact on sales in the current year period of $1.3 million.

Cost of sales as a percentage of net sales was 77 percent for the quarter ended June 30, 2020 compared to 79 percent in the prior year quarter. Gross margin at PC was favorably impacted by a net amount of $10.1 million due to changes in unrealized gains and losses from our copper swap contracts. Lower gross margins for CMC in the current year period were a result of lower sales volumes and prices for carbon pitch globally.

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

Impairment and restructuring charges for the quarter ended June 30, 2020 were consistent with the prior year period. We recorded charges of $2.9 million for asset retirement obligations and $1.3 million for fixed asset write-offs and severance in the three months ended June 30, 2020 related to the announced closure of our Denver, Colorado facility. Prior year charges consisted of asset retirement obligation charges and inventory and fixed asset write-offs related to the closure of our Follansbee, West Virginia facility.

Selling, general and administrative expenses for the quarter ended June 30, 2020 were $3.5 million lower when compared to the prior year period due mainly to a decrease of $1.1 million for employee benefit related expenses and $2.6 million for travel and facility related costs. These decreases were partially offset by an increase in employee incentive expense in the current year period.

Interest expense for the quarter ended June 30, 2020 was $2.9 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 drop in LIBOR rates.

Income tax expense for the quarters ended June 30, 2020 and 2019 was $8.0 million. Income before income taxes was $15.1 million higher in the quarter ended June 30, 2020 when compared to the prior year period. However, the related increase to income tax expense was offset by a lower estimated annual effective income tax rate in the quarter ended June 30, 2020 when compared to the prior year period. Also, the quarter ended June 30, 2020 included tax benefits of $2.4 million principally related to provisions of the CARES Act. Income tax expense as a percentage of pre-tax profit for the quarters ended June 30, 2020 and 2019 were 21.4 percent and 35.9 percent, respectively. See Note 10 – “Income Taxes” for further detail.

Segment Results.

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

	Three Months Ended June 30,		
	2020	*2019*	*% Change*
(Dollars in millions)			
Operating profit (loss):			
Railroad and Utility Products and Services	$ 16.2	$ 11.8	37%
Performance Chemicals	32.6	14.0	133%
Carbon Materials and Chemicals	1.5	13.0	-88%
Corporate	(0.6)	(0.7)	14%
	$ 49.7	$ 38.1	30%
Operating profit as a percentage of net sales:			
Railroad and Utility Products and Services	7.7%	5.9%	1.8%
Performance Chemicals	23.8%	11.6%	12.2%
Carbon Materials and Chemicals	1.7%	10.5%	-8.8%
	11.4%	8.6%	2.8%

RUPS operating profit increased by $4.4 million compared to the prior year period. Operating profit as a percentage of net sales increased to 7.7 percent from an operating profit of 5.9 percent in the prior year period. Operating profit as a percentage of net sales for the three months ended June 30, 2020 was favorably impacted by higher margins in our domestic utility pole and maintenance-of-way markets, a favorable sales mix in our commercial crosstie market and lower selling, general and administrative costs in the current year period.

PC operating profit increased by $18.6 million compared to the prior year period. Operating profit as a percentage of net sales increased to 23.8 percent from 11.6 percent in the prior year period. The current year period was favorably impacted by higher sales volumes, a favorable sales mix and better absorption on higher production volumes during the pandemic along with lower year-over-year raw material prices. These factors were compounded by a net benefit of $10.1 million due to changes in unrealized gains and losses from our copper swap contracts over the prior year period. Excluding the effect of unrealized gains from our copper swap contracts, our operating profit as a percentage of net sales would have been 17.8 percent in the current year period.

CMC operating profit decreased by $11.5 million compared to the prior year period. Operating profit as a percentage of net sales decreased to 1.7 percent from an operating profit of 10.5 percent in the prior year period. Operating profit for the quarter ended June 30, 2020 was negatively affected primarily 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. Other contributing factors include lower sales volumes of carbon pitch globally, lower sales volumes of phthalic anhydride in North America and lower sales volumes of carbon black feedstock in Europe as a result of the pandemic.

Results of Operations – Comparison of Six Months Ended June 30, 2020 and 2019

Consolidated Results

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

	Six Months Ended June 30,		
	2020	*2019*	*Net Change*
(Dollars in millions)			
Railroad and Utility Products and Services	$ 399.9	$ 365.2	10%
Performance Chemicals	248.5	219.8	13%
Carbon Materials and Chemicals	190.1	235.7	-19%
	$ 838.5	$ 820.7	2%

RUPS net sales increased by $34.7 million or 10 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 commercial crosstie market in the current year period. Sales of crossties increased by $33.4 million in the current year period. These increases were offset, in part, by volume decreases in our maintenance-of-way businesses and an unfavorable impact from foreign currency translation in the current year period of $1.5 million from our Australian pole business.

PC net sales increased by $28.7 million or 13 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. These increases were partially offset by a decrease in sales volumes in all of our international markets and an unfavorable impact from foreign currency translation in the current year period of $3.6 million.

CMC net sales decreased by $45.6 million or 19 percent compared to the prior year period due mainly to 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. Other contributing factors include lower sales volumes of carbon pitch and carbon black feedstock in Europe and North America as a result of the pandemic. Foreign currency translation also had an unfavorable impact on sales in the current year period of $4.6 million.

Cost of sales as a percentage of net sales and depreciation and amortization charges for the six months ended June 30, 2020 were consistent with the prior year period.

Impairment and restructuring charges for the six months ended June 30, 2020 were consistent with the prior year period. We recorded charges of $2.9 million for asset retirement obligations and $1.3 million for fixed asset write-offs and severance in the three months ended June 30, 2020 related to the announced closure of our Denver, Colorado facility. Prior year charges consisted of asset retirement obligation charges and inventory and fixed asset write-offs related to the closure of our Follansbee, West Virginia facility.

Selling, general and administrative expenses for the six months ended June 30, 2020 were $5.7 million lower when compared to the prior year period due mainly to a decrease of $2.4 million for employee benefit related expenses and $3.8 million for travel and facility related costs.

Interest expense for the six months ended June 30, 2020 was $5.2 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 drop in LIBOR rates.

Income tax expense for the six months ended June 30, 2020 was $6.2 million as compared to income tax expense of $6.8 million in the prior year period. Income before income taxes was $6.7 million higher in the six months ended June 30, 2020 when compared to the prior year period. However, the related increase to income tax expense was offset by a lower estimated annual effective income tax rate in the six months ended June 30, 2020 when compared to the prior year period. Both periods included benefits related to discrete tax items which significantly influenced the tax provision. In 2020, we recognized net tax benefits of $4.2 million principally related to provisions of the CARES Act and, in 2019, we recognized net tax benefits of $3.7 million principally related to the reversal of unrecognized tax benefits due to audit closures. Income tax expense as a percentage of pre-tax profit for the six months ended June 30, 2020 and 2019 were 16.5 percent and 22.1 percent, respectively. See Note 10 – "Income Taxes" for further detail.

Discontinued operations for the six months ended June 30, 2020 resulted in a loss of $4.4 million compared to income of $2.8 million in the prior year period due primarily to a year-over-year reduction in sales of $61.2 million attributable to the economic effects of COVID-19 on our KJCC operations and lower end market demand.

Segment Results.

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

	Six Months Ended June 30,		
	2020	*2019*	*% Change*
(Dollars in millions)			
Operating profit (loss):			
Railroad and Utility Products and Services	$ 25.4	$ 20.5	24%
Performance Chemicals	36.7	26.8	37%
Carbon Materials and Chemicals	2.2	16.2	-86%
Corporate	(1.0)	(1.1)	9%
	$ 63.3	$ 62.4	1%
Operating profit as a percentage of net sales:			
Railroad and Utility Products and Services	6.4%	5.6%	0.8%
Performance Chemicals	14.8%	12.2%	2.6%
Carbon Materials and Chemicals	1.2%	6.9%	-5.7%
	7.5%	7.6%	-0.1%

RUPS operating profit increased by $4.9 million compared to the prior year period. Operating profit as a percentage of net sales increased to 6.4 percent from an operating profit of 5.6 percent in the prior year period. Operating profit as a percentage of net sales for the six months ended June 30, 2020 was favorably impacted by higher margins in our domestic utility pole and maintenance-of-way markets, a favorable sales mix in our commercial crosstie market and lower selling, general and administrative costs in the current year period.

PC operating profit increased by $9.9 million compared to the prior year period. Operating profit as a percentage of net sales increased to 14.8 percent from 12.2 percent in the prior year period. The current year period was favorably impacted by higher sales volumes, a favorable sales mix and better absorption on higher production volumes during the pandemic along with lower year-over-year raw material prices. These favorable factors were partially offset by a net amount of $1.0 million due to changes in unrealized gains and losses from our copper swap contracts and $3.0 million of insurance proceeds recognized in the prior year period.

CMC operating profit decreased by $14.0 million compared to the prior year period. Operating profit as a percentage of net sales decreased to 1.2 percent from an operating profit of 6.9 percent in the prior year period. Operating profit for the six months ended June 30, 2020 was negatively affected primarily 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. Other contributing factors include lower sales volumes of carbon pitch and carbon black feedstock in Europe and North America as a result of the pandemic.

Cash Flow

Net cash provided by operating activities for the six months ended June 30, 2020 was $22.2 million compared to net cash provided by operating activities of $1.4 million in the prior year period. The net increase of $20.8 million in cash provided by operations was due primarily to lower working capital usage of $15.9 million compared to the prior year period, mainly due to improved inventory turnover in the current year period. In addition, the change in income and certain operating activities of $4.9 million from the prior year period had a favorable result on cash provided by operations in the current year period.

Net cash used in investing activities for the six months ended June 31, 2020 was $26.4 million compared to net cash used in investing activities of $15.0 million in the prior year period. The net increase in cash used for investing activities of $11.4 million is primarily due to an increase in capital expenditures of $8.0 million in the current year period. In addition, cash provided by insurance proceeds for capital expenditures of $3.0 million was received in the prior year period.

Net cash provided by financing activities was $3.9 million for the six months ended June 30, 2020 compared to $15.1 million of net cash provided by financing activities in the prior year period. The cash provided by financing activities in the six months ended June 30, 2020 reflected net borrowings of debt of $4.8 million partially offset by repurchases of common stock of $1.2 million related to long-term incentive compensation plans. The cash provided by financing activities in the prior year period reflected net borrowings of $16.3 million partially offset by repurchases of common stock of $0.9 million related to long-term incentive compensation plans.

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”) with a maturity date of May 2024. The interest rate on the Credit Facility is variable and is based on LIBOR. On February 26, 2020, we entered into the Fourth Amendment as described in Note 14 – “Debt”.

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 June 30, 2020, the basket totaled $179.4 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 June 30, 2020, we had $157.5 million of unused revolving credit availability for working capital purposes after restrictions by various debt covenants and certain letter of credit commitments. As of June 30, 2020, $7.1 million of commitments were utilized by outstanding letters of credit.

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

Cash and cash equivalents[(1)]	$	33.0
Amount available under Credit Facility		157.5
Total estimated liquidity	$	190.5

(1) Cash includes approximately $30.8 million held by foreign subsidiaries.

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

Our remaining 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 $50 to $60 million and are expected to be funded by cash from operations.

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 June 30, 2020 was 2.24.
- 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 June 30, 2020 was 2.06.
- 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 June 30, 2020 was 4.49.

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 June 30, 2020, we are in compliance with our debt covenant metrics and had $190.5 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 June 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 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 China and 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

Not applicable.

ITEM 6. EXHIBITS

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: August 5, 2020

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

Exhibit 31.1

CERTIFICATIONS

I, Leroy M. Ball, certify that:

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

Date: August 5, 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: August 5, 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 June 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

August 5, 2020

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

August 5, 2020