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

FORM 10-Q

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

For the quarterly period ended March 31, 2021

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 April 30, 2021 amounted to 21,240,861 shares.

PART I—FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

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

	Three Months Ended March 31,	
	2021	*2020*
(Dollars in millions, except per share amounts)	*(Unaudited)*	*(Unaudited)*
Net sales	$ 407.5	$ 401.9
Cost of sales	319.3	340.3
Depreciation and amortization	16.1	13.5
Gain on sale of assets	(7.5)	0.0
Impairment and restructuring charges	1.2	(0.2)
Selling, general and administrative expenses	34.5	34.7
Operating profit	43.9	13.6
Other income, net	1.0	0.5
Interest expense	10.2	14.0
Income from continuing operations before income taxes	34.7	0.1
Income tax provision (benefit)	8.5	(1.8)
Income from continuing operations	26.2	1.9
Loss from discontinued operations, net of tax benefit of $0.1 and $0.8	(0.4)	(4.4)
Net income (loss)	25.8	(2.5)
Net loss attributable to noncontrolling interests	(0.1)	(1.1)
Net income (loss) attributable to Koppers	$ 25.9	$ (1.4)
Earnings (loss) per common share attributable to Koppers common shareholders:		
Basic -		
Continuing operations	$ 1.24	$ 0.09
Discontinued operations	(0.02)	(0.16)
Earnings (loss) per basic common share	$ 1.22	$ (0.07)
Diluted -		
Continuing operations	$ 1.20	$ 0.09
Discontinued operations	(0.02)	(0.16)
Earnings (loss) per diluted common share	$ 1.18	$ (0.07)
Comprehensive income (loss)	$ 31.8	$ (51.0)
Comprehensive loss attributable to noncontrolling interests	(0.1)	(1.3)
Comprehensive income (loss) attributable to Koppers	$ 31.9	$ (49.7)
Weighted average shares outstanding (in thousands):		
Basic	21,142	20,852
Diluted	21,907	21,315

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

KOPPERS HOLDINGS INC.
CONDENSED CONSOLIDATED BALANCE SHEET

(Dollars in millions, except per share amounts)		March 31, 2021 (Unaudited)		December 31, 2020
Assets				
Cash and cash equivalents, including restricted cash (Note 4)	$	44.2	$	38.5
Accounts receivable, net of allowance of $3.1 and $2.6		194.7		175.1
Inventories, net		294.1		295.8
Derivative contracts		54.5		38.5
Other current assets		21.5		16.6
Total current assets		609.0		564.5
Property, plant and equipment, net		416.6		409.1
Operating lease right-of-use assets		103.6		102.5
Goodwill		297.1		297.8
Intangible assets, net		144.6		149.8
Deferred tax assets		17.5		18.4
Non-current derivative contracts		34.7		31.9
Other assets		25.8		24.6
Total assets	$	1,648.9	$	1,598.6
Liabilities				
Accounts payable	$	141.0	$	154.1
Accrued liabilities		94.5		106.7
Current operating lease liabilities		21.8		21.2
Current maturities of long-term debt		9.6		10.1
Total current liabilities		266.9		292.1
Long-term debt		801.0		765.8
Accrued postretirement benefits		45.8		46.2
Deferred tax liabilities		24.8		21.3
Operating lease liabilities		81.9		81.3
Other long-term liabilities		47.6		45.9
Total liabilities		1,268.0		1,252.6
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; 23,879,318 and 23,688,347 shares issued		0.2		0.2
Additional paid-in capital		238.9		234.1
Retained earnings		241.9		215.8
Accumulated other comprehensive loss		(10.0)		(15.9)
Treasury stock, at cost, 2,638,457 and 2,589,803 shares		(94.3)		(92.5)
Total Koppers shareholders’ equity		376.7		341.7
Noncontrolling interests		4.2		4.3
Total equity		380.9		346.0
Total liabilities and equity	$	1,648.9	$	1,598.6

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

KOPPERS HOLDINGS INC.
CONDENSED CONSOLIDATED STATEMENT OF CASH FLOWS

	Three Months Ended March 31, 2021	2020
(Dollars in millions)	*(Unaudited)*	*(Unaudited)*
Cash provided by (used in) operating activities:		
Net income (loss)	$ 25.8	$ (2.5)
Adjustments to reconcile net cash provided by (used in) operating activities:		
Depreciation and amortization	16.1	14.5
Stock-based compensation	3.5	2.5
Change in derivative contracts	(2.6)	8.4
Non-cash interest expense	0.7	0.7
Gain on sale of assets	(7.5)	0.0
Deferred income taxes	(0.2)	(1.9)
Change in other liabilities	3.2	0.6
Other - net	(0.6)	(1.4)
Changes in working capital:		
Accounts receivable	(21.3)	(21.0)
Inventories	0.0	8.6
Accounts payable	(8.5)	(6.7)
Accrued liabilities	(10.9)	(11.8)
Other working capital	(5.1)	(7.2)
Net cash used in operating activities	(7.4)	(17.2)
Cash (used in) provided by investing activities:		
Capital expenditures	(24.2)	(10.6)
Net cash provided by sale of assets	4.7	0.0
Net cash used in investing activities	(19.5)	(10.6)
Cash provided by (used in) financing activities:		
Net increase in credit facility borrowings	36.6	54.1
Repayments of long-term debt	(2.5)	(2.6)
Issuances of Common Stock	1.1	0.2
Repurchases of Common Stock	(1.8)	(1.2)
Payment of debt issuance costs	0.0	(0.2)
Net cash provided by financing activities	33.4	50.3
Effect of exchange rate changes on cash	(0.8)	(0.9)
Change in cash and cash equivalents of discontinued operations held for sale	0.0	0.3
Net increase in cash and cash equivalents	5.7	21.9
Cash and cash equivalents at beginning of period	38.5	32.3
Cash and cash equivalents at end of period	$ 44.2	$ 54.2
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash outflow from operating leases	$ 7.9	$ 7.9
Supplemental disclosure of non-cash investing and financing activities:		
Right-of-use assets obtained in exchange for new operating lease liabilities	$ 4.8	$ 0.3
Supplemental disclosure of cash flow information:		
Non-cash investing activities		
Accrued capital expenditures	$ 5.2	$ 1.5

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, 2020 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, 2020. 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, 2020.

COVID-19 Assessment

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

Such estimates and assumptions affect, among other things, our goodwill, long-lived asset and intangible asset valuation; inventory valuation; assessment of the annual effective tax rate; valuation of deferred income taxes; the allowance for doubtful accounts; and measurement of cash incentive plans. Events and changes in circumstances arising after March 31, 2021, including those resulting from the impacts of COVID-19, will be reflected in management's estimates for future periods.

2. New Accounting Pronouncements

In March 2020, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2020-04: Reference Rate Reform (Topic 848) Facilitation of the Effects of Reference Rate Reform on Financial Reporting. This update provides temporary optional expedients and exceptions to U.S. GAAP on contract modifications, hedging relationships, and other transactions affected by reference rate reform to ease entities' financial reporting burdens as the market transitions from the London Interbank Offered Rate (LIBOR) and other interbank offered rates to alternative reference rates. The guidance was effective upon issuance and may be applied prospectively to contract modifications made, hedging relationships entered into, and other transactions affected by reference rate reform, evaluated on or before December 31, 2022, beginning during the reporting period in which the guidance has been elected. The Company's debt agreements include the use of alternate rates when LIBOR is not available. We do not expect the change from LIBOR to an alternate rate will have a material impact to our financial statements and, to the extent we enter into modifications of agreements that are impacted by the LIBOR phase-out, we will apply such guidance to those contract modifications.

3. Plant Closures and Divestitures

Over the past seven 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. Recent closure activities include:

- In February 2021, we sold our Follansbee, West Virginia coal tar distillation facility and we recorded a gain on sale of $5.7 million, consisting of $2.6 million from cash proceeds in addition to the assumption of certain liabilities by the buyer.
- In September 2020, we sold Koppers (Jiangsu) Carbon Chemical Company Limited ("KJCC"). Refer to Note 4 – "Discontinued Operations" for more details.
- In October 2018, we sold our Clairton, Pennsylvania coal tar distillation facility. In the first quarter of 2021, certain post-sale conditions were achieved and the buyer of the property released cash held in escrow to us resulting in a gain on sale of $1.8 million.

Other closure and divestiture activity relates to our Railroad Utility Products and Services ("RUPS") segment. Most recently, we discontinued production activities at our crosstie treating plant located in Denver, Colorado in the third quarter of 2020.

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

	Severance and employee benefits	Asset Retirement	Other	Total
(Dollars in millions)				
Reserve at December 31, 2019	$ 0.9	$ 0.7	$ 2.4	$ 4.0
Accrual	0.5	2.9	3.4	6.8
Cost charged against assets	0.0	0.0	(3.4)	(3.4)
Reversal of accrued charges	(0.3)	0.0	0.0	(0.3)
Cash paid	(0.2)	(0.8)	(0.3)	(1.3)
Currency translation	0.0	0.0	0.2	0.2
Reserve at December 31, 2020	$ 0.9	$ 2.8	$ 2.3	$ 6.0
Accrual	0.0	0.0	1.3	1.3
Cost charged against assets	0.0	0.0	(1.3)	(1.3)
Reversal of accrued charges	(0.2)	0.0	0.0	(0.2)
Cash paid	(0.4)	(1.4)	0.0	(1.8)
Reserve at March 31, 2021	$ 0.3	$ 1.4	$ 2.3	$ 4.0

4. Discontinued Operations

On September 30, 2020, we sold KJCC to Fangda Carbon New Material Co., Ltd and C-Chem Co., Ltd., a subsidiary of Nippon Steel Chemical & Material Co., Ltd. KJCC was located in Pizhou, Jiangsu Province, China and was a 75 percent-owned coal tar distillation company which was part of our CMC segment. Included in the cash proceeds is restricted cash of $2.3 million which is being held in an escrow account and is recorded within cash and cash equivalents as of March 31, 2021 to cover potential customary indemnity claims by the buyers for a remaining period of 12 months. In addition, an amount of $5.6 million is recorded in accrued liabilities as of March 31, 2021 and December 31, 2020 in anticipation of final post-closing working capital adjustments payable to the buyers.

The sale of KJCC represented a strategic shift that had a major effect on our operations and financial results in 2020 and were, therefore, classified as discontinued operations in our condensed consolidated financial statements and notes, which were restated accordingly in the prior year.

Net sales and operating loss from discontinued operations for the three months ended March 31, 2020 consisted of the following amounts:

	Three Months Ended March 31, 2020
(Dollars in millions)	
Net sales	$ 9.9
Operating loss	(5.1)

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

5. Fair Value Measurements

Carrying amounts and the related estimated fair values of our financial instruments as of March 31, 2021 and December 31, 2020 are as follows:

	March 31, 2021		December 31, 2020	
(Dollars in millions)	*Fair Value*	*Carrying Value*	*Fair Value*	*Carrying Value*
Financial assets:				
Investments and other assets	$ 1.2	$ 1.2	$ 1.2	$ 1.2
Financial liabilities:				
Long-term debt (including current portion)	$ 833.2	$ 818.2	$ 799.2	$ 784.2

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 (Loss) and Equity

Total comprehensive income (loss) for the three months ended March 31, 2021 and 2020 is summarized in the table below:

	Three Months Ended March 31,	
(Dollars in millions)	*2021*	*2020*
Net income (loss)	$ 25.8	$ (2.5)
Changes in other comprehensive income (loss):		
Currency translation adjustment	(7.2)	(23.3)
Unrealized gains and losses on cash flow hedges, net of tax (expense) benefit of $(4.5) and $11.3	12.9	(25.4)
Unrecognized pension net loss, net of tax expense of $(0.1) and $(0.1)	0.3	0.2
Total comprehensive income (loss)	31.8	(51.0)
Comprehensive loss attributable to noncontrolling interests	(0.1)	(1.3)
Comprehensive income (loss) attributable to Koppers	$ 31.9	$ (49.7)

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 $7.2 million for the three months ended March 31, 2021, and $1.1 million for the three months ended March 31, 2020.

The following tables present the change in equity for the three months ended March 31, 2021 and 2020, 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, 2020	$ 0.2	$ 234.1	$ 215.8	$ (15.9)	$ (92.5)	$ 4.3	$ 346.0
Net income (loss)	0.0	0.0	25.9	0.0	0.0	(0.1)	25.8
Issuance of common stock	0.0	1.2	0.0	0.0	0.0	0.0	1.2
Employee stock plans	0.0	3.6	0.0	0.0	0.0	0.0	3.6
Other comprehensive (loss) income							
Currency translation adjustment	0.0	0.0	0.2	(7.2)	0.0	0.0	(7.0)
Unrealized gain on cash flow hedges	0.0	0.0	0.0	12.9	0.0	0.0	12.9
Unrecognized pension net loss	0.0	0.0	0.0	0.3	0.0	0.0	0.3
Repurchases of common stock	0.0	0.0	0.0	0.0	(1.8)	0.0	(1.8)
Balance at March 31, 2021	$ 0.2	$ 238.9	$ 241.9	$ (10.0)	$ (94.3)	$ 4.2	$ 380.9

(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 loss	0.0	0.0	(1.4)	0.0	0.0	(1.1)	(2.5)
Issuance of common stock	0.0	0.2	0.0	0.0	0.0	0.0	0.2
Employee stock plans	0.0	2.5	0.0	0.0	0.0	0.0	2.5
Other comprehensive (loss) income							
Currency translation adjustment	0.0	0.0	0.0	(23.2)	0.0	(0.2)	(23.3)
Unrealized loss on cash flow hedges	0.0	0.0	0.0	(25.4)	0.0	0.0	(25.4)
Unrecognized pension net loss	0.0	0.0	0.0	0.2	0.0	0.0	0.2
Repurchases of common stock	0.0	0.0	0.0	0.0	(1.2)	0.0	(1.2)
Balance at March 31, 2020	$ 0.2	$ 224.7	$ 92.4	$ (126.1)	$ (92.1)	$ 10.1	$ 109.2

7. Earnings per Common Share

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

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

	Three Months Ended March 31,	
	2021	2020
(Dollars in millions, except share amounts, in thousands)		
Net income (loss) attributable to Koppers	$ 25.9	$ (1.4)
Less: Loss from discontinued operations, net of tax	(0.4)	(4.4)
Plus: Loss from noncontrolling interests	(0.1)	(1.1)
Income from continuing operations attributable to Koppers	$ 26.2	$ 1.9
Weighted average common shares outstanding:		
Basic	21,142	20,852
Effect of dilutive securities	765	463
Diluted	21,907	21,315
Earnings per common share – continuing operations:		
Basic earnings per common share	$ 1.24	$ 0.09
Diluted earnings per common share	1.20	0.09
Other data:		
Antidilutive securities excluded from computation of diluted earnings per common share	445	682

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”. The LTIP provides for the grant to eligible persons of stock options, stock appreciation rights, restricted stock, restricted stock units, performance shares, performance awards, dividend equivalents and other stock-based awards, which are collectively referred to as the “awards.” On May 6, 2021, the shareholders approved an amendment to our 2020 LTIP to increase the number of shares available for grant by 1,500,000.

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:

	January 2021 Grant	March 2020 Grant	March 2019 Grant	May 2018 Grant
Grant date price per share of performance award	$ 29.84	$ 19.63	$ 26.63	$ 39.10
Expected dividend yield per share	0.00%	0.00%	0.00%	0.00%
Expected volatility	68.70%	45.60%	39.00%	39.40%
Risk-free interest rate	0.16%	0.72%	2.50%	2.35%
Look-back period in years	3.00	2.83	2.82	2.84
Grant date fair value per share	$ 41.50	$ 11.56	$ 40.30	$ 44.29

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

The following table shows a summary of the performance stock units as of March 31, 2021:

Performance Period	Minimum Shares	Target Shares	Maximum Shares
2018 – 2020	0	3,048	3,048
2019 – 2021	0	234,597	281,536
2020 – 2022	0	154,099	308,198
2021 – 2023	0	149,752	299,504

Performance stock units granted in March 2018 for the 2018 – 2020 performance period did not meet the minimum performance criteria and did not vest in March 2021.

The following table shows a summary of the status and activity of non-vested stock units for the three months ended March 31, 2021:

	Restricted Stock Units	Performance Stock Units	Total Stock Units	Weighted Average Grant Date Fair Value per Unit
Non-vested at December 31, 2020	509,509	391,744	901,253	$ 25.48
Granted	196,336	149,752	346,088	$ 34.90
Vested	(132,399)	0	(132,399)	$ 26.35
Non-vested at March 31, 2021	573,446	541,496	1,114,942	$ 28.24

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:

	January 2021 Grant	March 2020 Grant	March 2019 Grant	March 2018 Grant
Grant date price per share of stock option award	$ 29.84	$ 19.63	$ 26.63	$ 41.60
Expected dividend yield per share	0.00%	0.00%	0.00%	0.00%
Expected life in years	6.64	6.40	6.14	5.73
Expected volatility	54.80%	42.85%	39.44%	37.05%
Risk-free interest rate	0.59%	0.87%	2.53%	2.67%
Grant date fair value per share of option awards	$ 15.79	$ 8.42	$ 11.29	$ 16.38

We do not expect to declare any dividends for the foreseeable future. The expected life in years is based on historical exercise data of options previously granted by us. Expected volatility is based on the historical volatility of our common stock and the historical volatility of certain other similar public companies. The risk-free interest rate is based on U.S. Treasury bill rates for the expected life of the option.

The following table shows a summary of the status and activity of stock options for the three months ended March 31, 2021:

	Options	*Weighted Average Exercise Price per Option*	*Weighted Average Remaining Contractual Term (in years)*	*Aggregate Intrinsic Value (in millions)*
Outstanding at December 31, 2020	1,120,254	$ 26.89		
Granted	90,879	$ 29.84		
Exercised	(54,574)	$ 17.77		
Expired	(25,402)	$ 40.26		
Outstanding at March 31, 2021	1,131,157	$ 27.26	5.68	$ 10.8
Exercisable at March 31, 2021	815,122	$ 27.94	4.57	$ 7.7

Stock Compensation Expense

Total stock-based compensation expense recognized under our LTIP and employee stock purchase plan for the three months ended March 31, 2021 and 2020 is as follows:

	Three Months Ended March 31,	
	2021	*2020*
(Dollars in millions)		
Stock-based compensation expense recognized:		
Selling, general and administrative expenses	$ 3.5	$ 2.5
Less related income tax benefit	0.9	0.8
Decrease in net income attributable to Koppers	$ 2.6	$ 1.7
Intrinsic value of exercised stock options	$ 0.9	$ 0.0
Cash received from the exercise of stock options	$ 1.0	$ 0.0

As of March 31, 2021, total future compensation expense related to non-vested stock-based compensation arrangements totaled $24.7 million and the weighted-average period over which this expense is expected to be recognized is approximately 32 months.

9. Segment Information

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

Our 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. Utility products include transmission and distribution poles and pilings. The segment also operates a railroad services business that conducts engineering, design, repair and inspection services for railroad bridges and a business related to the recovery of used crossties.

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 earnings before interest, taxes, depreciation and amortization ("EBITDA") and operating profit or loss from operations. Operating profit does not include other loss, interest expense, income taxes or operating costs of Koppers Holdings Inc.

The accounting policies of the reportable segments are the same as those described in the summary of significant accounting policies as disclosed in our Annual Report on Form 10-K for the year ended December 31, 2020. Intersegment transactions are eliminated in consolidation.

Contract Balances

The timing of revenue recognition in accordance with ASC 606 results in both billed accounts receivable and unbilled receivables, both classified as accounts receivable, net of allowance within the condensed consolidated balance sheet. Contract assets of $7.8 million and $5.8 million are recorded within accounts receivable, net of allowance within the condensed consolidated balance sheet as of March 31, 2021 and December 31, 2020, 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 March 31, 2021	2020
(Dollars in millions)		
Revenues from external customers:		
Railroad and Utility Products and Services	$ 191.9	$ 190.0
Performance Chemicals	123.6	111.4
Carbon Materials and Chemicals(a)	92.0	100.5
Total	$ 407.5	$ 401.9
Intersegment revenues:		
Performance Chemicals	$ 3.5	$ 3.2
Carbon Materials and Chemicals	17.8	18.0
Total	$ 21.3	$ 21.2
Depreciation and amortization expense:		
Railroad and Utility Products and Services	$ 6.3	$ 4.9
Performance Chemicals	4.8	4.5
Carbon Materials and Chemicals(b)	5.0	4.1
Total	$ 16.1	$ 13.5
Operating profit (loss):		
Railroad and Utility Products and Services	$ 8.7	$ 9.2
Performance Chemicals	24.8	4.1
Carbon Materials and Chemicals(c)	10.8	0.7
Corporate	(0.4)	(0.4)
Total	$ 43.9	$ 13.6

(a) Revenue excludes KJCC discontinued operations of $9.9 million for the three months ended March 31, 2020.

(b) Depreciation and amortization expense excludes KJCC discontinued operations of $1.0 million for the three months ended March 31, 2020.

(c) Operating profit (loss) excludes KJCC discontinued operations of $(5.1) million for the three months ended March 31, 2020.

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

	Three Months Ended March 31,	
(Dollars in millions)	2021	2020
Railroad and Utility Products and Services:		
Railroad treated products	$ 108.9	$ 112.0
Utility poles	62.8	61.9
Railroad infrastructure services	8.9	6.0
Rail joints	5.5	6.4
Other products	5.8	3.7
Total	191.9	190.0
Performance Chemicals:		
Wood preservative products	119.2	107.6
Other products	4.4	3.8
Total	123.6	111.4
Carbon Materials and Chemicals:		
Pitch and related products	51.2	50.2
Phthalic anhydride and other chemicals	16.5	23.5
Creosote and distillates	13.1	15.2
Naphthalene	4.5	5.0
Other products	6.7	6.6
Total	92.0	100.5
Total	$ 407.5	$ 401.9

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

(Dollars in millions)	March 31, 2021	December 31, 2020
Segment assets:		
Railroad and Utility Products and Services	$ 596.5	$ 583.1
Performance Chemicals	566.7	536.1
Carbon Materials and Chemicals	428.3	424.2
All other	57.4	55.2
Total	$ 1,648.9	$ 1,598.6
Goodwill:		
Railroad and Utility Products and Services	$ 121.0	$ 121.1
Performance Chemicals	176.1	176.7
Total	$ 297.1	$ 297.8

10. Income Taxes

Effective Tax Rate

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

The estimated annual effective income tax rate, excluding discrete items discussed above, was 25.8 percent and 30.7 percent for the three months ended March 31, 2021 and 2020, respectively. The estimated annual effective income tax rate differs from the U.S. federal statutory tax rate due to:

	March 31,	
	2021	*2020*
Federal income tax rate	21.0%	21.0%
Foreign earnings taxed at different rates	2.6	4.3
Nondeductible expenses	1.1	2.3
State income taxes, net of federal tax benefit	0.5	1.0
GILTI inclusion, net of foreign tax credits	0.5	2.3
Change in tax contingency reserves	0.1	0.2
Other	0.0	(0.4)
Estimated annual effective income tax rate	25.8%	30.7%

Income taxes as a percentage of pretax income were 24.5 percent for the three months ended March 31, 2021. This is lower than the estimated annual effective income tax rate due to discrete items, principally an excess tax deduction for vested stock awards.

Income taxes as a percentage of pretax income for the three months ended March 31, 2020 were lower than the estimated annual effective income tax rate due to discrete items, which were a net benefit of $1.8 million. Discrete items included the tax benefit due to the enactment of the CARES Act which is discussed below. This benefit was offset by a reduction of our tax deduction for vested stock awards.

In March 2020, the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act") was enacted and a provision of the CARES Act temporarily increased the allowable business interest expense deduction from 30 percent of adjusted taxable income to 50 percent of adjusted taxable income, retroactively to January 1, 2019. Any such limitation that is disallowed in a year could be carried forward to future years. Due to the temporary change to the limitation, in the three months ended March 31, 2020, we recorded a tax benefit of $2.9 million to reverse a portion of a previously recorded valuation allowance for carryforward amounts that we determined would be utilized. Effective January 1, 2021, the limitation on the deduction was restored to 30 percent.

During the year, management regularly updates estimates of pre-tax income and income tax expense based on changes in pre-tax income projections by taxable jurisdiction, repatriation of foreign earnings, unrecognized tax benefits and other tax matters. To the extent that actual results vary from these estimates, the actual annual effective income tax rate at the end of the year could be materially different from the estimated annual effective income tax rate for the three months ended March 31, 2021.

Unrecognized Tax Benefits

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

Unrecognized tax benefits totaled $2.5 million as of March 31, 2021 and December 31, 2020. The total amount of unrecognized tax benefits that, if recognized, would affect the effective tax rate, was approximately $2.4 million as of March 31, 2021 and December 31, 2020. We recognize interest expense and any related penalties from unrecognized tax benefits in income tax expense. As of March 31, 2021 and December 31, 2020, we had accrued approximately $0.9 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 March 31, 2021 and December 31, 2020 are summarized in the table below:

		March 31, 2021		*December 31, 2020*
(Dollars in millions)				
Raw materials	$	230.9	$	233.7
Work in process		10.0		12.4
Finished goods		103.7		99.3
	$	344.6	$	345.4
Less revaluation to LIFO		50.5		49.6
Net	$	294.1	$	295.8

12. Property, Plant and Equipment

Property, plant and equipment as of March 31, 2021 and December 31, 2020 are summarized in the table below:

		March 31, 2021		December 31, 2020
(Dollars in millions)				
Land	$	15.7	$	16.7
Buildings		72.4		75.0
Machinery and equipment		763.8		812.1
	$	851.9	$	903.8
Less accumulated depreciation		435.3		494.7
Net	$	416.6	$	409.1

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 frozen and are closed to new participants. Accordingly, these pension plans no longer accrue additional years of service or recognize future increases in compensation for benefit purposes.

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

The following table provides the components of net periodic benefit cost for the pension plans for the three months ended March 31, 2021 and 2020:

	Three Months Ended March 31,			
		2021		2020
(Dollars in millions)				
Service cost	$	0.4	$	0.3
Interest cost		1.2		1.6
Expected return on plan assets		(1.8)		(2.0)
Amortization of net loss		0.4		0.4
Net periodic benefit cost	$	0.2	$	0.3
Defined contribution plan expense	$	1.7	$	1.6

14. Debt

Debt as of March 31, 2021 and December 31, 2020 was as follows:

	Weighted Average Interest Rate	Maturity		March 31, 2021		December 31, 2020
(Dollars in millions)						
Term Loan	2.59%	2024	$	9.6	$	12.2
Revolving Credit Facility	2.59%	2024		308.6		272.0
Senior Notes due 2025	6.00%	2025		500.0		500.0
Debt				818.2		784.2
Less short-term debt and current maturities of long-term debt				9.6		10.1
Less unamortized debt issuance costs				7.6		8.3
Long-term debt			$	801.0	$	765.8

Credit Facility

The Company maintains a $600.0 million senior secured revolving credit facility and a $100.0 million secured term loan facility (collectively, the Credit Facility"), as amended. The secured term loan has a quarterly amortization of $2.5 million and the interest rate on the Credit Facility is variable and is based on LIBOR.

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

As of March 31, 2021, we had $283.7 million of unused revolving credit availability for working capital purposes after restrictions from certain letter of credit commitments and other covenants. As of March 31, 2021, $7.7 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. 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 rail cars and barges; and site demolition, when required by governmental authorities or by contract. The following table reflects changes in the carrying values of asset retirement obligations:

		March 31, 2021		*December 31, 2020*
(Dollars in millions)				
Asset retirement obligation at beginning of year	$	19.8	$	20.7
Accretion expense		0.2		1.1
Revision in estimated cash flows		(2.4)		4.6
Cash expenditures		(3.9)		(6.6)
Balance at end of period	$	13.7	$	19.8

16. Leases

We recognize 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 to account for these components as a single lease component. In addition, we exclude leases expiring within twelve months from balance sheet recognition.

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 $7.7 million and $7.8 million and variable lease costs were $0.8 million and $1.0 million during the three months ended March 31, 2021 and 2020, respectively.

The following table presents information about the amount and timing of cash flows arising from our operating leases as of March 31, 2021:

(Dollars in millions)		
2021	$	22.2
2022		26.4
2023		20.9
2024		16.9
2025		13.7
Thereafter		33.7
Total lease payments	$	133.8
Less: Interest		(30.1)
Present value of lease liabilities	$	103.7

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

		March 31, 2021		*December 31, 2020*
(Dollars in millions)				
Operating leases:				
Operating lease right-of-use assets	$	103.6	$	102.5
Current operating lease liabilities	$	21.8	$	21.2
Operating lease liabilities		81.9		81.3
Total operating lease liabilities	$	103.7	$	102.5
Weighted average remaining lease term, in years		6.2		6.4
Weighted average discount rate		7.5%		7.5%

17. Derivative Financial Instruments

We utilize derivative instruments to manage exposures to risks that have been identified, measured and are capable of being mitigated. The primary risks that we manage 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 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 the end of 2022. We enter into foreign currency forward contracts to manage foreign currency risk associated with our receivable and payable balances in addition to foreign-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 where hedge accounting is not elected, 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 condensed consolidated statement of operations.

As of March 31, 2021 and December 31, 2020, we had outstanding copper swap contracts of the following amounts:

	Units Outstanding (in Pounds)		*Net Fair Value - Asset*	
	March 31, 2021	*December 31, 2020*	*March 31, 2021*	*December 31, 2020*
(Amounts in millions)				
Cash flow hedges	54.6	62.3	$ 75.3	$ 58.3
Contracts where hedge accounting was not elected	9.5	11.5	13.4	10.9
Total	64.1	73.8	$ 88.7	$ 69.2

As of March 31, 2021 and December 31, 2020, the fair value of the outstanding copper swap contracts is recorded in the balance sheet as follows:

	March 31, 2021	*December 31, 2020*
(Dollars in millions)		
Derivative contracts	$ 54.0	$ 37.3
Non-current derivative contracts	34.7	31.9
Asset on balance sheet	$ 88.7	$ 69.2
Accumulated other comprehensive gain, net of tax	$ 39.3	$ 44.4

In the next twelve months, we estimate that $22.3 million of unrealized gains, net of tax, related to commodity price hedging will be reclassified from other comprehensive income into earnings.

See Note 6 – “Comprehensive Income (Loss) and Equity”, for amounts recorded in other comprehensive income (loss) and for amounts reclassified from accumulated other comprehensive loss into net income (loss) for the periods specified below.

For the three months ended March 31, 2021 and 2020, the unrealized gain (loss) from contracts where hedge accounting was not elected is as follows:

	Three Months Ended March 31,	
	2021	*2020*
(Dollars in millions)		
Gain (loss) from contracts where hedge accounting was not elected	2.6	(8.0)

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 (loss).

As of March 31, 2021 and December 31, 2020, the fair value of outstanding foreign currency forward contracts is recorded in the balance sheet as follows:

	March 31, 2021	*December 31, 2020*
(Dollars in millions)		
Derivative contracts	$ 0.3	$ 1.2
Accrued liabilities	(0.5)	(0.5)
Net (liability) asset on balance sheet	$ (0.2)	$ 0.7

As of March 31, 2021 and December 31, 2020, the net currency units outstanding for these contracts were:

	March 31, 2021	*December 31, 2020*
(In millions)		
British Pounds	GBP 3.9	GBP 2.0
United States Dollars	USD 1.6	USD 7.6

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 63 plaintiffs in 33 cases pending as of March 31, 2021, compared to 64 plaintiffs in 34 cases pending as of December 31, 2020. As of March 31, 2021, there were 32 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 33 pending cases seek to recover compensatory damages. Plaintiffs in 28 of those cases also seek to recover punitive damages. The plaintiffs in the 32 cases filed in Pennsylvania seek unspecified damages in excess of the court's minimum jurisdictional limit. The plaintiff in the Tennessee state court case seeks damages of $15.0 million. The other defendants in these lawsuits vary from case to case and include companies such as Beazer East, Inc. ("Beazer East"), Honeywell International Inc., Graftech International Holdings, Dow Chemical Company, UCAR Carbon Company, Inc., and SGL Carbon Corporation. Discovery is proceeding in these cases. No trial dates have been set in any of these cases.

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, 2020, amounts paid by Beazer East as a result of its environmental remediation obligations under the Indemnity have averaged, in total, approximately $6.4 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. 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. At that time, 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. These costs may increase given the remedy will not be implemented for several years. 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 matters involving natural resource damages at the Portland Harbor site. One matter involves claims by the trustees to recover damages based upon an assessment of damages to natural resources caused by the releases of hazardous substances to the Willamette River. The assessment serves 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. Koppers Inc. has been engaged in a process to resolve its natural resource damage liabilities for the assessment area. A second matter involves a lawsuit filed in January 2017 by the Yakama Nation in Oregon federal court. Yakama Nation seeks recovery for response costs and the costs of assessing injury to natural resources to waterways beyond the current assessment area. 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 as a *de minimis* contributor and estimated such settlement amounts at the sites totaling $3.6 million as of March 31, 2021. The actual cost could be materially higher as there has not been a determination of how those costs will be allocated among the PRPs at the sites. Accordingly, an unfavorable resolution of these matters may have a material adverse effect on our business, financial condition, cash flows and results of operations.

There are two plant sites related to the Performance Chemicals business and one plant site related to the Utility and Industrial Products business in the United States where we have recorded environmental remediation liabilities for soil and groundwater contamination which occurred prior to our acquisition of the businesses. As of March 31, 2021, our estimated environmental remediation liability for these acquired sites totals $4.2 million.

***Foreign Environmental Matters*.** There is one plant site related to the Performance Chemicals business located in Australia where we have recorded an environmental remediation liability for soil and groundwater contamination which occurred prior to the acquisition of the site. As of March 31, 2021, our estimated environmental remediation liability for the site totals $1.5 million.

Environmental Reserves Rollforward. The following table reflects changes in the accrual for environmental remediation. A total of $2.8 million and $2.9 million are classified as current liabilities as of March 31, 2021 and December 31, 2020 respectively:

	Period ended	
	March 31, 2021	*December 31, 2020*
(Dollars in millions)		
Balance at beginning of year	$ 11.0	$ 9.5
Expense	0.0	1.8
Cash expenditures	(0.1)	(0.4)
Currency translation	0.0	0.1
Balance at end of period	$ 10.9	$ 11.0

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

This report and any documents incorporated herein by reference contain “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995 and may include, but are not limited to, statements about sales levels, acquisitions, restructuring, declines in the value of Koppers assets and the effect of any related impairment charges, profitability and anticipated expenses and cash outflows. All forward-looking statements involve risks and uncertainties. All statements contained herein that are not clearly historical in nature are forward-looking, and words such as “believe,” “anticipate,” “expect,” “estimate,” “may,” “will,” “should,” “continue,” “plans,” “potential,” “intends,” “likely,” or other similar words or phrases are generally intended to identify forward-looking statements. Any forward-looking statement contained herein, in press releases, written statements or documents filed with the Securities and Exchange Commission, or in Koppers communications and discussions with investors and analysts in the normal course of business through meetings, phone calls and conference calls, regarding expectations with respect to sales, earnings, cash flows, operating efficiencies, restructurings, product introduction or expansion, the benefits of acquisitions and divestitures, or other matters as well as financings and debt reduction, are subject to known and unknown risks, uncertainties and contingencies. Many of these risks, uncertainties and contingencies are beyond our control, and may cause actual results, performance or achievements to differ materially from anticipated results, performance or achievements. Factors that might affect such forward-looking statements, include, among other things, the impact of changes in commodity prices, such as oil and copper, on product margins; general economic and business conditions; existing and future adverse effects as a result of the coronavirus (COVID-19) pandemic; disruption in the U.S. and global financial markets; potential difficulties in protecting our intellectual property; the ratings on our debt and our ability to repay or refinance our outstanding indebtedness as it matures; our ability to operate within the limits of our debt covenants; potential impairment of our goodwill and/or long-lived assets; demand for Koppers goods and services; competitive conditions; interest rate and foreign currency rate fluctuations; availability and costs of key raw materials and unfavorable resolution of claims against us, as well as those discussed more fully elsewhere in this report and in documents filed with the Securities and Exchange Commission by Koppers, particularly our latest annual report on Form 10-K and subsequent filings. We caution you that the foregoing list of important factors may not contain all of the material factors that are important to you. In addition, in light of these risks and uncertainties, the matters referred to in the forward-looking statements contained in this report and the documents incorporated by reference herein may not in fact occur. Any forward-looking statements in this report speak only as of the date of this report, and we undertake no obligation to update any forward-looking statement to reflect events or circumstances after that date or to reflect the occurrence of unanticipated events.

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the unaudited financial statements and related notes included in Item 1 of this Part I as well as the audited consolidated financial statements and the related notes included in our Annual Report on Form 10-K for the year ended December 31, 2020.

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 capabilities in North America, South America, Australasia and Europe.

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

Through our RUPS business, we believe that we are the largest supplier of wood crossties to the Class I railroads in North America. Our other treated wood products include utility poles for the electric, telephone, and broadband utility industries in the United States and Australia and construction pilings in the U.S. We also provide rail joint bar products as well as various services to the railroad industry in North America.

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 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, trends in spending patterns and other factors. During the COVID-19 pandemic, substantially all of our global businesses have continued to operate without significant disruption. In the U.S., Koppers was designated as an essential business, as determined by the Cybersecurity and Infrastructure Security Agency (CISA) within the Department of Homeland Security. As a result, we have been able to meet the demands of our customers in the various markets we serve by continuing to operate to transport critical goods, provide power and connectivity to homes and businesses, and keep our infrastructure running reliably.

The full extent to which COVID-19 will adversely impact our business depends on future developments, which are highly uncertain and unpredictable, including new information concerning the ultimate severity of the outbreak and the effectiveness of actions globally to contain or mitigate its effects. Our condensed consolidated financial statements and discussion and analysis of financial condition and results of operations reflect estimates and assumptions made by us as of March 31, 2021. Events and changes in circumstances arising after March 31, 2021, including those resulting from the impacts of COVID-19, will be reflected in our estimates for future periods.

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 are the North American railroad industry, which has an installed base of approximately 450 million wood crossties, and the utility industry which utilizes wooden distribution and transmission poles. Both crossties and utility poles require periodic replacement.

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. 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.

Historically, North American demand for crossties had been in the range of 22 million to 25 million crossties annually. However, the crosstie replacement market has been significantly lower in recent years. According to the Railway Tie Association (“RTA”), the reported total crosstie installations in 2020 were approximately 18 million, of which 14 million were for Class I railroads. Throughout 2020, there was a decline in freight-rail traffic, which prompted larger track maintenance windows to be available and, as a result, the railroad industry managed to offset lower volumes with increased productivity as certain railroads used the reduced track time to increase maintenance on their infrastructure. Given the continuing uncertainties related to COVID-19, the RTA is forecasting modest increases of 2.7 percent in 2021 and 3.6 percent in 2022, primarily from the commercial market while Class I volumes are expected to remain at relatively similar demand levels. With a recovering economy as well as additional government stimulus payments to drive consumer spending, the RTA expects retail sales to increase from the prior year. Due to declining inventory levels in recent months, suppliers will need to replenish various goods in order to serve increasing demand. This should have a positive effect on freight activity in the coming months which may result in an increased requirement for track maintenance activities.

According to the American Association of Railroads ("AAR"), rail traffic has clearly rebounded from the depths of 2020, when much of the economy was shut down and rail volumes plummeted as well. Overall, railroad volumes are highly correlated with manufacturing output, therefore, the recent signs of strength in manufacturing are also positive indicators for the railroad industry. Year-to-date through March 31, 2021, total U.S. carload traffic decreased 2.6 percent from the prior year, while intermodal units increased by 13.2 percent. The combined U.S. traffic for carloads and intermodal units was higher by 5.6 percent as compared with the prior year. Looking ahead to 2021, the AAR stated that a significant amount of ongoing network investments has made the industry more adaptable and better able to adjust to the demands of a wide range of operational and market conditions.

With respect to our utility products business, 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 2021 demand will be relatively stable to slightly higher, as the overall industry is trending toward expanded and upgraded transmission networks. We continue to evaluate opportunities to potentially expand our market presence in the U.S. as well as certain overseas markets.

From a long-term perspective, we believe there remains an overall 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.

For distribution poles, nearly half of the installed base is over 40 years old and demand has historically been in the range of two million to three million poles annually. On an overall basis, we believe that the rate at which utilities purchase utility poles will grow as they continue replacement programs within their service territories. As a whole, the key factors that drive growth in the utility poles market include growing global energy consumption as well as expansion of the global telecommunication industry.

In the U.S., a significant amount of utility poles are treated with pentachlorophenol ("penta"), a wood preservative. The sole producer of penta in North America announced plans to exit penta production at the end of 2021. Given that penta availability will begin to be phased out over the next 12 months, we will transition from using penta for treating utility poles to another wood-treatment preservative. Our internally-produced creosote and chromated copper arsenate products are viable alternatives to penta and are currently used in the treatment of utility poles. As a result, we are currently working with our utility customers who use penta-treated poles to evaluate the use of chromated copper arsenate or creosote as potential treatment options.

In terms of raw materials, we expect the availability of pole supply to remain consistent even with lumber in high demand. For untreated crossties, the supply 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. While forestry has generally been deemed essential during the COVID-19 outbreak and tie demand has remained consistent, sawmills are being hampered by low demand in other key markets such as wood fibers used in palettes or shipping containers or mats for the oil and gas industry. So far to date, we have not experienced a noticeable impact as sawmills are continuing to produce poles and crossties to maintain their operations and cash flow. Consistent with typical seasonality, the RTA reports that the current availability of logs remains below the ideal rate, as is the outlook for log availability over the next six to 12 months.

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 our 15 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 the second quarter of 2020, we permanently closed our Denver, Colorado wood treatment facility. Concurrent with the decision to close the Denver facility, we announced our plan to modernize and upgrade parts of our treating network, specifically at our facility in North Little Rock, Arkansas, which will be primarily funded through proceeds from the sale of non-core assets, which includes the Denver facility. Separately, in the second quarter of 2021, we exited our Jasper, Texas facility lease and relocated the production of utility products to our Somerville, Texas plant.

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 and fire-retardant chemicals (“FlamePro®”). Our copper-based wood preservatives include 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, with any ineffectiveness reflected in current earnings. 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 strong demand. According to the National Association of Realtors® (“NAR”), total existing-home sales grew in December for the fourth consecutive month. According to the NAR, the median existing-home sales price in March 2021 rose to historic high levels, with all regions posting double-digit price gains. As a result of the record demand, housing inventory continues to represent near-historic lows. Driven by the lack of available inventory, total existing home sales decreased 3.7 percent in March 2021, although higher by 12.3 percent from a year ago. The increased interest is attributed to continued low interest rates and higher demand for existing homes, which includes buyers of vacation homes given the flexibility to work remotely.

According to the Leading Indicator of Remodeling Activity (“LIRA”) reported by the Joint Center for Housing Studies of Harvard University, the growth in home repair and improvement expenditures is expected to remain solid throughout the year and into 2022. The LIRA projects that annual spending will grow by 4.8 percent by the first quarter of 2022 and reach $370 billion in annual homeowner remodeling expenditures. Due to a combination of federal stimulus payments and strong house price appreciation, there has been a trend toward homeowners undertaking larger discretionary renovations of their properties.

The Conference Board Consumer Confidence Index® rose sharply again in April 2021, following a substantial gain in March 2021, with the index at 121.7, up from 109.0 in March 2021. Consumer confidence has rebounded sharply and is now at its highest level since February 2020. In addition, consumers’ assessment of current conditions improved significantly, suggesting the economic recovery strengthened further, potentially due to an improving job market and the recent round of stimulus checks.

During the pandemic, consumers are shifting much of their discretionary spending from areas such as travel, to the enhancement of their homes as they seek to personalize their overall living environments. This includes homeowners investing in big-ticket items such as new decks to expand and fully utilize their outdoor living space. 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 during 2021.

Although the market data and projections for home improvements are continually changing, we are anticipating continued strong demand for residential treated wood in North America, primarily in the U.S. In looking at residential renovation markets, businesses are indicating a continued positive outlook, at least through mid-2021. As COVID-19 is brought under control by the introduction of vaccines and other measures, this may have an unfavorable impact on pandemic-driven discretionary spending patterns in the second half of 2021. In the near term, 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 remote or virtual work environment and with interest rates at historically low levels, we expect the pace to continue for much of 2021.

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 realigned 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.

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 were imposed on certain imported steel and aluminum products, which has stimulated restarts of previously idled capacity. This development has resulted in additional demand for carbon pitch in the United States that can likely only be sustained through a continuation of current trade policy.

The availability of coal tar, the primary raw material for our CMC business, is linked to levels of metallurgical coke production. As the global steel industry, excluding Asia, has reduced the production of steel using metallurgical coke, the volumes of coal tar have also been reduced. For the past decade, the coal tar distillation industry has operated in an excess capacity mode, which further increased the competition for a limited amount of coal tar in North America. Over the past five years we have consolidated our operating footprint and significantly lowered production levels at the same time that we added distribution assets to move finished products from Europe to the United States more efficiently. As a result, our raw material needs in North America have been significantly less than historically required.

For the external markets served by our CMC business, we expect that North America and Europe will continue to be negatively impacted in 2021 by the COVID-19 pandemic until the global economy fully reopens and manufacturing activity improves. Over the past twelve months, we have experienced declines followed by slow recovery in industrial production markets which impacted demand for our products. Carbon pitch and phthalic anhydride markets have softened compared to the prior year period 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 impacted in some regions due to the volatility of 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 has 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.

Seasonality and Effects of Weather on Operations

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

Results of Operations – Comparison of Three Months Ended March 31, 2021 and 2020

Consolidated Results

Net sales for the three months ended March 31, 2021 and 2020 are summarized by segment in the following table:

	Three Months Ended March 31,		
(Dollars in millions)	*2021*	*2020*	*Net Change*
Railroad and Utility Products and Services	$ 191.9	$ 190.0	1%
Performance Chemicals	123.6	111.4	11%
Carbon Materials and Chemicals	92.0	100.5	-8%
	$ 407.5	$ 401.9	1%

RUPS net sales increased by $1.9 million or one percent compared to the prior year period. The sales increase was primarily due to volume increases for our Class I crosstie business, our railroad bridge services business and our crosstie disposal business. Foreign currency translation also had a favorable impact on sales in the current year period of $1.9 million, mainly from our Australian utility pole market. These increases were offset, in part, by volume decreases in the commercial crosstie market principally due to timing and higher backlog levels in the prior year period.

PC net sales increased by $12.2 million or 11 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 higher organic volumes driven by increased home repair and remodeling activities as the pandemic drove increased discretionary spending into these markets. We also experienced an increase in sales volumes in our international markets resulting from continued pent-up demand due to several months of restrictions associated with the pandemic.

CMC net sales decreased by $8.5 million or eight percent compared to the prior year period due mainly to lower sales volumes and prices for phthalic anhydride in North America, lower sales prices for carbon pitch globally and lower sales volumes for carbon black feedstock in Australia in the current year period. These decreases were offset, in part, by foreign currency translation, which had a favorable impact on sales in the current year period of $6.2 million.

Cost of sales as a percentage of net sales was 78 percent for the quarter ended March 31, 2021 compared to 85 percent in the prior year quarter. Gross margin at PC was favorably impacted by a $2.6 million unrealized gain from our copper swap contracts in the current year period. Gross margin at PC was unfavorably impacted by a $8.0 million unrealized loss from our copper swap contracts in the prior year period. Excluding these impacts, cost of sales as a percentage of net sales would have been 79 percent and 83 percent for the current year period and the prior year period, respectively. In addition, PC was positively impacted by higher sales volumes in North America, a favorable sales mix and better absorption on higher production volumes during the pandemic. Improved margins at RUPS were attributed to our railroad bridge services business and a favorable sales mix in our Class I crosstie market.

Depreciation and amortization charges for the quarter ended March 31, 2021 were $2.6 million higher when compared to the prior year period due mainly to an increase in an asset retirement obligation in our European CMC operations as well as an increase in capitalized assets in our North American RUPS operations.

Gain on sale of assets for the quarter ended March 31, 2021 was $7.5 million and is related to the sales of two previously decommissioned plants as described in Note 3 – “Plant Closures and Divestitures”.

Impairment and restructuring charges for the quarter ended March 31, 2021 were $1.4 million higher when compared to the prior year period. The current year period included demolition and other plant closure period costs related to the closure of our Denver, Colorado facility. The prior year period included a reversal of certain charges related to the closure of our Follansbee, West Virginia facility.

Selling, general and administrative expenses for the quarter ended March 31, 2021 were consistent with the prior year period.

Interest expense for the quarter ended March 31, 2021 was $3.8 million lower when compared to the prior year period primarily due to our lower average debt level and lower interest rates due to the significant decrease in LIBOR rates. In the third quarter of 2020, we used the net proceeds of the KJCC sale to reduce our borrowings under the Credit Facility.

Income tax expense for the quarter ended March 31, 2021 was $8.5 million, an increase of $10.3 million when compared to the prior year quarter. The increase is primarily due to income before income taxes being $34.8 million higher in the quarter ended March 31, 2021 when compared to the prior year quarter. See Note 10 – “Income Taxes” for support for our estimated annual effective income tax rate and specific discrete items.

Discontinued operations for the quarter ended March 31, 2021 resulted in a loss of $0.4 million compared to a loss of $4.4 million in the prior year period. The loss in the prior year period was due primarily to a reduction in sales attributable to the economic effects of the pandemic on KJCC, which was sold in the third quarter of 2020.

Segment Results.

Segment operating profit for the three months ended March 31, 2021 and 2020 is summarized by segment in the following table:

	Three Months Ended March 31,		
	2021	*2020*	*% Change*
(Dollars in millions)			
Operating profit (loss):			
Railroad and Utility Products and Services	$ 8.7	$ 9.2	-5%
Performance Chemicals	24.8	4.1	1,090%
Carbon Materials and Chemicals	10.8	0.7	1,429%
Corporate	(0.4)	(0.4)	0%
	$ 43.9	$ 13.6	399%
Operating profit as a percentage of net sales:			
Railroad and Utility Products and Services	4.5%	4.8%	-0.3%
Performance Chemicals	20.1%	3.7%	35.8%
Carbon Materials and Chemicals	11.7%	0.7%	10.9%
	10.8%	3.4%	13.2%

RUPS operating profit decreased by $0.5 million compared to the prior year period. Operating profit as a percentage of net sales decreased to 4.5 percent from an operating profit of 4.8 percent in the prior year period. Operating profit as a percentage of net sales for the quarter ended March 31, 2021 was unfavorably impacted primarily by the impact on profitability from volume decreases in the commercial crosstie market principally due to timing and higher backlog levels in the prior year period. These decreases were offset, in part, by higher margins in our railroad bridge services business and a favorable sales mix in our Class I crosstie market.

PC operating profit increased by $20.7 million compared to the prior year period. Operating profit as a percentage of net sales increased to 20.1 percent from 3.7 percent in the prior year period. The current year period was favorably impacted by a $2.6 million unrealized gain from our copper swap contracts compared to the prior year period which was unfavorably impacted by an $8.0 million unrealized loss from our copper swap contracts. Excluding the effect of unrealized gains and losses from our copper swap contracts, our operating profit as a percentage of net sales was 18.0 percent in the current year period compared with 10.8 percent in the prior year period. The current year period was also favorably impacted by higher sales volumes in North America driven by increased home repair and remodeling activities during the pandemic, a favorable sales mix and better absorption on higher production volumes during the pandemic.

CMC operating profit increased by $10.0 million compared to the prior year period. Operating profit as a percentage of net sales increased to 11.6 percent from an operating profit of 0.7 percent in the prior year period. Operating profit for the quarter ended March 31, 2021 was favorably impacted by a $7.5 million gain on sale of assets related to the sales of two previously decommissioned plants. Excluding this impact, operating profit margin would have been 3.0 percent for the current year period. Operating profit for the quarter ended March 31, 2020 was negatively affected primarily by lower sales prices for carbon pitch in Australia, Europe and North America along with reduced sales volumes of carbon pitch in North America. These unfavorable drivers were primarily due to reduced demand as a result of an oversupply in the aluminum market. The global drop in crude oil prices also had an unfavorable impact on pricing and inventory write-downs within the segment during the prior year period.

Cash Flow

Net cash used in operating activities for the three months ended March 31, 2021 was $7.4 million compared to net cash used in operating activities of $17.2 million in the prior year period. The net decrease of $9.8 million in cash used in operations was due primarily to an increase in net income and certain other operating activities of $17.5 million from the prior year period, which had a favorable result on cash provided by operations in the current year period. These drivers were partly offset by higher working capital usage of $7.7 million compared to the prior year period, mainly due to a decrease in accounts payable in the current year period.

Net cash used in investing activities for the three months ended March 31, 2021 was $19.5 million compared to net cash used in investing activities of $10.6 million in the prior year period. The net increase of $8.9 million in cash used in investing activities was primarily due to an increase in capital expenditures of $13.6 million in the current year period, partially offset by $4.7 million of cash received related primarily to sales of two previously decommissioned CMC plants.

Net cash provided by financing activities was $33.4 million for the three months ended March 31, 2021 compared to $50.3 million of net cash provided by financing activities in the prior year period. The cash provided by financing activities in the three months ended March 31, 2021 reflected net borrowings of debt of $34.1 million partially offset by repurchases of common stock of $1.8 million related to long-term incentive compensation plans. The cash provided by financing activities in the prior year period reflected net borrowings of debt of $51.5 million partially offset by repurchases of common stock of $1.2 million.

Liquidity and Capital Resources

We have a $600.0 million senior secured revolving credit facility and a $100.0 million secured term loan facility (collectively, the "Credit Facility") as 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 March 31, 2021, the basket totaled $240.2 million. Notwithstanding such restrictions, the indenture governing the 2025 Notes permits an additional aggregate amount of $0.30 per share each fiscal quarter to finance dividends on the capital stock of Koppers Holdings, whether or not there is any basket availability, provided that at the time of such payment, no default in the indenture has occurred or would result from financing the dividends.

In addition, certain required coverage ratios in Koppers Inc.'s Credit Facility may restrict the ability of Koppers Inc. to pay dividends.

Liquidity

The following table summarizes our estimated liquidity as of March 31, 2021 *(dollars in millions)*:

Cash and cash equivalents(1)	$	41.9
Amount available under Credit Facility		283.7
Total estimated liquidity	$	325.6

(1) Cash includes approximately $39.8 million held by foreign subsidiaries and excludes approximately $2.3 million of restricted cash.

Our liquidity was $344.0 million at December 31, 2020.

Our need for cash in the next twelve months relates primarily to contractual obligations which include debt service, pension plan funding, purchase commitments and operating leases, as well as working capital, capital maintenance programs and the funding of plant consolidation and rationalizations. We may also use cash to pursue other potential strategic acquisitions or voluntary pension plan contributions. Capital expenditures in 2021, excluding acquisitions, if any, are expected to total approximately $105 to $115 million and are expected to be funded by cash from operations. We anticipate that our estimated liquidity will continue to be adequate to fund our cash requirements for the next twelve months.

Debt Covenants

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

- The fixed charge coverage ratio, calculated as of the end of each fiscal quarter for the four fiscal quarters then ended, is not permitted to be less than 1.10. The fixed charge coverage ratio at March 31, 2021 was 2.53.
- 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 2.75. The total secured leverage ratio at March 31, 2021 was 1.34.
- 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 5.00. The total leverage ratio at March 31, 2021 was 3.44.

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.

Non-GAAP Financial Measures

We utilize certain financial measures that are not in accordance with U.S. generally accepted accounting principles (US GAAP) to analyze and manage the performance of the business. We believe that EBITDA (as defined below), adjusted EBITDA, adjusted EBITDA margin, and net leverage ratio provide information useful to investors in understanding the underlying operational performance of the company, our business and performance trends, and facilitate comparisons between periods and with other corporations in similar industries. The exclusion of certain items permits evaluation and a comparison of results for ongoing business operations, and it is on this basis that our management internally assesses our performance. In addition, our board of directors and executive management team use adjusted EBITDA as a performance measure under the company's annual incentive plans.

Although we believe that these non-GAAP financial measures enhance investors' understanding of its business and performance, these non-GAAP financial measures should not be considered an alternative to GAAP basis financial measures and should be read in conjunction with the relevant GAAP financial measures. Other companies in a similar industry may define or calculate these measures differently than we do, limiting their usefulness as comparative measures. Because of these limitations, these non-GAAP financial measures should not be considered in isolation or as substitutes for performance measures calculated in accordance with GAAP.

EBITDA is a non-GAAP financial measure defined as net income from continuing operations before income taxes and interest, depreciation and amortization. The adjustments to arrive at adjusted EBITDA are items that we believe are not representative of underlying business performance. Adjusted items typically include certain expenses associated with impairment, restructuring and plant closure costs, significant gains and losses on asset disposals or business combinations, other non-recurring items or recurring non-cash income or expense items such as LIFO and mark-to-market commodity hedging.

A reconciliation of segment net income to adjusted segment EBITDA is not available without unreasonable efforts as we do not measure net income at the segment level or use it as a measure of operating performance.

The following table summarizes EBITDA and adjusted EBITDA on a consolidated basis as calculated by us for the quarters indicated below:

	Three Months Ended March 31,	
(amounts in millions)	*2021*	*2020*
Net income (loss)	$ 25.8	$ (2.5)
Interest expense	10.1	14.0
Depreciation and amortization	16.1	13.5
Income tax provision (benefit)	8.5	(1.8)
Discontinued operations	0.4	4.4
EBITDA with noncontrolling interests	60.9	27.6
Adjustments to arrive at adjusted EBITDA:		
Impairment, restructuring and plant closure (benefits) costs	(4.2)	2.7
Non-cash LIFO expense (benefit)	1.0	(0.6)
Mark-to-market commodity hedging (gains) losses	(2.6)	7.9
Total adjustments	(5.8)	10.0
Adjusted EBITDA	$ 55.1	$ 37.6

The following table summarizes EBITDA and adjusted EBITDA on a consolidated and segment basis as calculated by us for the quarters indicated below:

	Three Months Ended March 31,	
(amounts in millions)	*2021*	*2020*
EBITDA with noncontrolling interests:		
Railroad and Utility Products and Services	$ 14.7	$ 13.8
Performance Chemicals	30.4	9.1
Carbon Materials and Chemicals	15.3	4.5
Corporate unallocated	0.5	0.2
Total EBITDA	$ 60.9	$ 27.6
Adjusted EBITDA:		
Railroad and Utility Products and Services	$ 16.4	$ 13.4
Performance Chemicals	27.8	17.0
Carbon Materials and Chemicals	10.4	7.0
Corporate unallocated	0.5	0.2
Total Adjusted EBITDA	$ 55.1	$ 37.6
Adjusted EBITDA margin as a percentage of GAAP sales:		
Railroad and Utility Products and Services	8.5%	7.1%
Performance Chemicals	22.5%	15.3%
Carbon Materials and Chemicals	11.3%	7.0%
Total Adjusted EBITDA margin	13.5%	9.4%

The increase in adjusted EBITDA of $17.5 million over the prior year period is primarily due to higher sales volumes, favorable product mix and improved cost absorption from our PC segment which was driven by the demand for copper-based preservatives in the U.S. from strong housing, repair and remodeling markets. As an effect of the pandemic on the consumer markets, this strong market was driven by the diversion of discretionary spending from leisure and entertainment categories to home repair and beautification projects. Our RUPS segment also experienced improved adjusted EBITDA from higher sales volumes and margins in our railroad bridge services business and a favorable sales mix in our Class I crosstie market. Adjusted EBITDA margins increased at our CMC segment driven primarily by improved results in our Australian and European markets.

	Three Months Ended March 31, 2021				
	RUPS	*PC*	*CMC*	*Corporate Unallocated*	*Consolidated*
Operating profit (loss)	$ 8.7	$ 24.8	$ 10.8	$ (0.4)	$ 43.9
Other income (loss)	(0.3)	0.8	(0.5)	0.9	0.9
Depreciation and amortization	6.3	4.8	5.0	0.0	16.1
EBITDA with noncontrolling interest	$ 14.7	$ 30.4	$ 15.3	$ 0.5	$ 60.9
Adjustments to arrive at adjusted EBITDA:					
Impairment, restructuring and plant closure (benefits) costs	1.3	0.0	(5.5)	0.0	(4.2)
Non-cash LIFO expense	0.4	0.0	0.6	0.0	1.0
Mark-to-market commodity hedging gains	0.0	(2.6)	0.0	0.0	(2.6)
Adjusted EBITDA	$ 16.4	$ 27.8	$ 10.4	$ 0.5	$ 55.1
Adj. EBITDA % of Consolidated Adj. EBITDA (excluding corporate unallocated)	*30.0%*	*50.9%*	*19.1%*		

	Three Months Ended March 31, 2020				
	RUPS	PC	CMC	Corporate Unallocated	Consolidated
Operating profit (loss)	$ 9.2	$ 4.1	$ 0.7	$ (0.4)	$ 13.6
Other income (loss)	(0.3)	0.5	(0.3)	0.6	0.5
Depreciation and amortization	4.9	4.5	4.1	0.0	13.5
EBITDA with noncontrolling interest	$ 13.8	$ 9.1	$ 4.5	$ 0.2	$ 27.6
Adjustments to arrive at adjusted EBITDA:					
Impairment, restructuring and plant closure costs	0.0	0.0	2.7	0.0	2.7
Non-cash LIFO benefit	(0.4)	0.0	(0.2)	0.0	(0.6)
Mark-to-market commodity hedging losses	0.0	7.9	0.0	0.0	7.9
Adjusted EBITDA	$ 13.4	$ 17.0	$ 7.0	$ 0.2	$ 37.6
Adj. EBITDA % of Consolidated Adj. EBITDA (excluding corporate unallocated)	*35.8%*	*45.5%*	*18.7%*		

Net leverage ratio is a non-GAAP financial measure defined as net debt (total debt less cash) divided by adjusted EBITDA for the latest twelve months and is a financial measure used by us to assess our borrowing capacity and ability to service our debt. The following table summarizes net leverage ratio as calculated by us for the twelve month periods indicated below:

	Twelve Months Ended		
(amounts in millions)	March 31, 2021	December 31, 2020	March 31, 2020
Total Debt	$ 810.6	$ 775.9	$ 953.2
Less: Cash	44.2	38.5	54.2
Net Debt	$ 766.4	$ 737.4	$ 899.0
Adjusted EBITDA	$ 228.5	$ 211.0	$ 197.9
Net Leverage Ratio	3.4	3.5	4.5

Our net leverage ratio decreased over the past 12 months primarily due to the $132.6 million decrease in net debt, principally due to cash generated from operating activities in excess of capital expenditures and the net proceeds from the divestiture of KJCC totaling $74.7 million.

The following table summarizes EBITDA and adjusted EBITDA on a consolidated basis as calculated by us for the twelve month periods indicated below:

	Twelve Months Ended		
	March 31, 2021	December 31, 2020	March 31, 2020
Net income	$ 149.3	$ 121.0	$ 52.4
Interest expense	45.0	48.9	59.8
Depreciation and amortization	57.7	56.1	54.3
Income tax provision (benefit)	32.1	21.0	(0.6)
Discontinued operations, net of tax	(31.5)	(31.9)	3.4
EBITDA	252.6	215.1	169.3
Adjustments to arrive at adjusted EBITDA:			
Impairment, restructuring and plant closure costs	4.7	15.7	18.8
Non-cash LIFO (benefit) expense	(12.2)	(13.7)	2.8
Mark-to-market commodity hedging (gains) losses	(19.7)	(9.2)	7.0
Pension settlement	0.1	0.1	0.0
Discretionary incentive	3.0	3.0	0.0
Adjusted EBITDA with noncontrolling interests	$ 228.5	$ 211.0	$ 197.9

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, 2020.

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, 2020.

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 March 31, 2021 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. We have not experienced any material impact to our internal controls over financial reporting despite the fact that a portion of our employees are working remotely due to the COVID-19 pandemic. We are continually monitoring and assessing the COVID-19 outbreak on our internal controls over financial reporting to minimize the impact, if any, on their design and operating effectiveness.

PART II—OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

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

ITEM 1A. RISK FACTORS

There have been no material changes to the Risk Factors previously disclosed in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2020.

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

10.1*	Form of Change in Control Agreement entered into as of March 1, 2021 between the Company and the named Executive.
10.2	First Amendment to the Koppers Holdings Inc. 2020 Long Term Incentive Plan (Incorporated by reference to Exhibit 99.2 to our Registration Statement on Form S-8 filed on May 7, 2021 (File No. 333-255869)).
10.3	Amended and Restated Koppers Holdings Inc. Employee Stock Purchase Plan (Incorporated by reference to Exhibit 99.1 to our Registration Statement on Form S-8 filed on May 7, 2021 (File No. 333-255870)).
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: May 7, 2021

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

CHANGE IN CONTROL AGREEMENT

This Agreement made this 1st day of March, 2021 by and between [ ] ("Executive") and Koppers Holdings Inc. (the "Company").

WHEREAS, the Company considers it essential to the best interests of its stockholders to foster the continuous employment of certain key management personnel of the Company and its affiliates; and

WHEREAS, the Board of Directors of the Company (the "Board") recognizes that the possibility of a change in control of the Company exists and that such possibility, and the uncertainty and questions which it may raise among management, may result in the departure or distraction of management personnel to the detriment of the Company and its stockholders; and

WHEREAS, the Board has determined that appropriate steps should be taken to reinforce and encourage the continued attention and dedication of certain members of the management of the Company and its affiliates to their assigned duties without distraction in the face of potentially disturbing circumstances arising from the possibility of a change in control of the Company.

NOW THEREFORE, in consideration of the mutual covenants contained herein, and intending to be legally bound hereby, the parties agree as follows:

1. <u>Term of Agreement</u>. The term of this Agreement (the "Term") shall commence as of March 1, 2021 and shall continue in effect until March 1, 2023; provided, however, that as of March 1, 2023 and each March 1 thereafter, the Term shall automatically be extended for one additional year unless, at least ninety (90) days prior to such renewal date either the Company or Executive shall have given notice to the other that such party does not wish to extend the Term; and provided further, however, that if a Change in Control (as hereinafter defined) shall have occurred during the original or any extended Term, the Term shall continue for a period of not less than twenty-four (24) months following the month in which such Change in Control occurred.

2. <u>Change in Control</u>.

   a. <u>Definition</u>. For purposes of this Agreement, a "Change in Control" shall have the definition ascribed to such term in the Company's 2018 Long Term Incentive Plan, as amended from time to time.

   b. <u>Termination Following Change in Control</u>. Executive shall be entitled to the benefits provided in subsection (c) below if any of the events, described in Section 2(a) constituting a Change in Control shall have occurred, and:

      i. Executive terminates Executive's employment upon 30 days' written notice after being required to relocate Executive's primary office to a location greater than 50 miles from the then current location of Executive's office or Executive terminates Executive's employment upon 30 days' written notice after a material reduction in Executive's duties, responsibilities or compensation (unless the Company either revokes such relocation requirement or revokes such material reduction in Executive's duties, responsibilities or compensation, as the case may be, during the period beginning on the date of Executive's written notice of termination and ending 30 days thereafter); or

ii. The Company or its affiliates, as the case may be, terminates Executive's employment for any reason other than for Cause (as defined below) or by reason of Executive's Disability (as defined below);

<u>Provided</u>, <u>however</u>, that such termination, whether pursuant to Section 2(b)(i) or 2(b)(ii) above, shall have occurred (x) during the two-year period following such Change in Control; or (y) prior to the date on which a Change in Control of the Company occurs, if it can be reasonably demonstrated by Executive that such termination of employment was at the request of a third party who has taken steps reasonably calculated to effect a Change in Control or otherwise arose in connection with or anticipation of a Change in Control.

c. <u>Compensation Upon Termination</u> - In the event that a termination of employment of Executive occurs under the circumstances set forth in Section 2(b) above:

i. No later than the fifth day following the date of termination, the Company shall pay to Executive his or her full base salary through the date of termination at the rate in effect at the time notice of termination is given;

ii. In lieu of any further salary payments to Executive for periods subsequent to the date of termination, the Company shall pay as severance pay to Executive, at the time specified in subsection (d) below, a lump sum severance payment (the "Severance Payment") equal to two times Executive's annual Base Salary as in effect as of the date of termination or immediately prior to the Change in Control, whichever is greater;

iii. In lieu of any payments under the executive incentive plan or other bonus plan in effect for the year in which Executive's date of termination occurs, the Company shall pay Executive, at the time specified in subsection (d) below, a pro rata portion of all contingent awards granted under such plans for all uncompleted periods, assuming for this purpose that the amount of each award that would have been paid upon completion of such period would equal the average of the payments from the executive incentive plan for the previous two (2) years, and basing such pro rata portion upon the portion of the award period that has elapsed as of the date of termination;

iv. For a twenty-four (24) month period or for the term of this Agreement, whichever is later, the Company shall arrange to provide Executive with life, disability, accident and group health insurance benefits substantially similar to those which Executive was receiving immediately prior to the notice of termination (or, in the Company's discretion, the monetary equivalent of such benefits, payable on a monthly basis). Benefits otherwise receivable by Executive pursuant to this paragraph (iv) shall be reduced to the extent comparable benefits are actually received by Executive during the twenty-four (24) month period following Executive's termination, and any such benefits actually received by Executive shall be reported to the Company; and

v. The Company's obligations to indemnify and defend Executive with respect to matters arising out of Executive's performance during the Term shall continue after Executive's termination to the same extent that they existed prior to such termination. The Company will, at all times, maintain in force and effect Directors and Officers Liability Insurance.

d. Except as provided in subsection (f) hereof, the payments provided for in subsections (c) (ii) and (iii), above, shall be made no later than the fifth day following the date of termination; provided, however, that if the amounts of such payments cannot be finally determined on or before such day, the Company shall pay to Executive on such day an estimate, as determined in good faith by the Company, of the minimum amount of such payments and shall pay the remainder of such payments (together with interest at the rate provided in section 1274(b)(2)(B) of the Internal Revenue Code as amended (the "Code")) as soon as the amount thereof can be determined, but in no event later than the thirtieth day after the date of termination. In the event that the amount of the estimated payments exceeds the amount subsequently determined to have been due, such excess shall constitute a loan by the Company to Executive, payable on the fifth day after demand by the Company (together with interest at the rate provided in section 1274 (b)(2)(B) of the Code).

e. Except as provided in subsection (c)(v) hereof, Executive shall not be required to mitigate the amount of any payment provided for in this Section by seeking other employment or otherwise, nor shall the amount of any payment or benefit provided for in this Section 2 be reduced by any compensation earned by Executive as the result of employment by another employer, by retirement benefits, by offset against any amount claimed to be owed by Executive to the Company, or otherwise.

f. Notwithstanding the provisions of this Section 2, in no event shall the aggregate present value of "parachute payments" as defined in Section 280G of the Code, exceed three times Executive's "base amount", as defined in Section 280G(b)(3) of the Code. If the preceding limitation is exceeded, then Executive's payments and benefits in this Section 2 shall be reduced to the extent necessary to cause the total payments and "parachute payments" to comply with the limitation.

g. Executive's entitlement to the benefits set forth in Sections 2(c)(ii), (iii), (iv) and (v) shall be conditioned upon Executive executing and delivering a release satisfactory to the Company releasing the Company and its affiliates and persons employed by such entities from any and all claims, demands, damages, actions and/or causes of action whatsoever, which Executive may have had on account of the termination of Executive's employment, including, but not limited to claims of discrimination, including on the basis of sex, race, age, national origin, religion, or handicapped status (with all applicable periods during which Executive may revoke the release or any provision thereof having expired), and any and all claims, demands and causes of action under any retirement or welfare benefit plan of the Company (as defined in the Employee Retirement Income Security Act of 1974, as amended), other than under the Company's 401(k) plan and the Qualified Plan, severance or other termination pay. Such release shall not, however, apply to the ongoing obligations of the Company arising under this Agreement, or any rights of indemnification Executive may have under the Company's policies or by contract or by statute.

Notwithstanding anything to the contrary herein, including in subsection (d), in the case of payments or benefits under this Agreement that are or may be deferred compensation subject to Internal Revenue Code Section 409A and are subject to an effective release as set forth above, where the period for execution and non-revocation of the release spans more than one calendar year, no such payment or benefit shall be made or provided any earlier than the beginning of the second calendar year. In no event may Executive, directly or indirectly, designate the calendar year of payment.

3. Successors; Binding Agreement.

a. The Company will require any successor (whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of the business and/or assets of the Company to assume expressly and agree to perform this Agreement in the same manner and to the same extent that the Company would be required to perform it if no such succession had taken place. As used in this Agreement, "Company" shall mean the Company as herein before defined and any successor to its business and/or assets as aforesaid which assumes and agrees to perform this Agreement by operation of law, or otherwise.

b. This Agreement shall inure to the benefit of and be enforceable by Executive and Executive's personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees and legatees. If Executive should die while any amount would still be payable to Executive hereunder had Executive continued to live, all such amounts, unless otherwise provided herein, shall be paid in accordance with the terms of this Agreement to Executive's devisee, legatee or other designee or, if there is no such designee, to Executive's estate.

4. Notice. For the purpose of this Agreement, notices and all other communications provided for in this Agreement shall be in writing and shall be deemed to have

been duly given when delivered or mailed by United States certified or registered mail, return receipt requested, postage prepaid, addressed to the respective addresses set forth on the signature page of this Agreement, provided that all notices to the Company shall be directed to the attention of the Board with a copy to the Secretary of the Company, or to such other address as either party may have furnished to the other in writing in accordance herewith, except that notice of change of address shall be effective only upon receipt.

5. Miscellaneous. No provision of this Agreement may be modified, waived or discharged unless such waiver, modification or discharge is agreed to in writing and signed by Executive and such officer of the Company as may be specifically designated by the Board. No waiver by either party hereto at any time of any breach by the other party hereto of, or compliance with, any condition or provision of this Agreement to be performed by such other party shall be deemed a waiver of similar or dissimilar provisions or conditions at the same or at any prior or subsequent time. No agreements or representations, oral or otherwise, express or implied, with respect to the subject matter hereof have been made by either party which are not expressly set forth in this Agreement. The validity interpretation, construction and performance of this Agreement shall be governed by the laws of the Commonwealth of Pennsylvania without regard to its conflicts of law principles. Any payments provided for hereunder shall be paid net of any applicable withholding required under federal, state or local law. The obligations of the Company under Section 2 shall survive the expiration of the term of this Agreement.

6. Counterparts. This Agreement may be executed in several counterparts, each of which shall be deemed to be an original but all of which together will constitute one and the same instrument.

7. Definitions.

a. Cause. Termination by the Company of Executive’s employment for “Cause” shall mean termination (a) upon the willful and continued failure by Executive to substantially perform Executive’s duties with the Company or its affiliates, as the case may be, (other than any such failure resulting from Executive’s incapacity due to physical or mental illness), after a written demand for substantial performance is delivered to Executive by the Chief Executive Officer, which demand specifically identifies the manner in which the Chief Executive Officer believes that Executive has not substantially performed Executive’s duties, and Executive is given a reasonable opportunity to remedy such identified failure to perform, or (b) the willful engaging by Executive in conduct which is demonstrably and materially injurious to the Company or its affiliates, as the case may be, monetarily or otherwise. For purposes of this subsection, no act, or failure to act, on Executive’s part shall be deemed “willful” unless done, or omitted to be done, by Executive not in good faith and without reasonable belief that Executive’s action or omission was in the best interest of the Company or its affiliates, as the case may be.

b. Disability. If, as a result of Executive's incapacity due to physical or mental illness, Executive shall have been absent from the full-time performance of Executive's duties with the Company for at least six (6) consecutive months out of the previous twelve (12) months, and within thirty (30) days after written notice of termination is given to Executive by the Company or its affiliates shall not have returned to the full-time performance of Executive's duties, Executive's employment shall be deemed terminated for "Disability."

8. Dispute Resolution.

a. Negotiation. If a dispute or controversy arises under or in connection with this Agreement, the parties agree first to try in good faith to settle the dispute or controversy. Any party may initiate the negotiation process by written notice to the others, identifying the dispute or controversy and the desire for negotiation.

b. Arbitration. If the parties have not resolved the dispute or controversy by direct negotiations within thirty (30) days of such notice, any party may initiate arbitration as herein provided. All disputes or controversies arising under or in connection with this Agreement which are not resolved by negotiation shall be decided by arbitration in accordance with the Employment Dispute Resolution Rules of the American Arbitration Association, provided, however, that any such arbitration shall be before a single arbitrator selected by agreement of the parties. Judgment upon the award or decision of the arbitrator may be entered and enforced in any court of competent jurisdiction. In the event that the parties cannot agree upon the selection of an arbitrator, the parties agree that the American Arbitration Association in Pittsburgh, Pennsylvania will select the arbitrator. Notwithstanding the foregoing to the contrary, a party shall not be prohibited or precluded from seeking equitable relief in a court of competent jurisdiction without first resorting to the dispute resolution provisions of this Section 9 in circumstances in which a party's interests or property will otherwise be compromised. It is specifically intended by the parties that if any equitable relief is granted by an arbitrator, said relief may be enforced in any court of competent jurisdiction. The forum of such arbitration shall be in Pittsburgh, Pennsylvania to the exclusion of all other jurisdictions.

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

d. Costs and Fees. All dispute resolution costs, which shall include any fee for the arbitrator for services rendered shall be borne by the Company. Each party is to pay its own counsel fees and expenses.

9. Severability and Reformation. The provisions of this Agreement shall be deemed to be divisible so that in the event that any of the provisions of this Agreement shall be held to be invalid or unenforceable in whole or in part, those provisions to the

extent enforceable and all other provisions shall nevertheless continue to be valid and enforceable as though the invalid or unenforceable parts had not been included in this Agreement. In the event that any provision of this Agreement (including, but not limited to, any provision related to a time period, geographical area or scope of restriction) shall be declared by a court of competent jurisdiction to exceed the maximum limitations or restrictions such court deems reasonable and enforceable, then such provision shall be deemed modified and reformed so as to be valid and enforceable to the maximum extent lawfully permitted.

10. Entire Agreement. This Agreement sets forth the entire agreement of the parties hereto in respect of the subject matter contained herein, and supersedes all prior agreements, promises, covenants, arrangements, communications, representations or warranties; whether oral or written, by any officer, employee or representative of any party hereto; and any prior agreement of the parties hereto in respect of the subject matter contained herein is hereby terminated and canceled.

11. Compliance with Code Section 409A.

a. The terms of this Agreement are intended to, and shall be interpreted and applied so as to, comply in all respects with the provisions of Internal Revenue Code Section 409A and regulations and rulings thereunder. The terms of this Agreement may be amended or modified at any time and in any respect by the Company if and to the extent recommended by counsel in order to conform to the requirements of Internal Revenue Code Section 409A and regulations and rulings thereunder.

b. Notwithstanding any provision of this Agreement to the contrary, in the event that Executive is a "specified employee" within the meaning of Internal Revenue Code Section 409A(a)(2)(B)(i), no payment under this Agreement may be made, or may commence, before the date which is 6 months after the date of Executive's "separation from service" within the meaning of Internal Revenue Code Section 409A(a)(2)(B)(i) (or, if earlier, the date of the Executive's death) if and to the extent such payment is a payment of "deferred compensation" subject to Internal Revenue Code Section 409A.

12. Confidential information.

a. Executive agrees and understands that Executive has been and will be exposed to and receive certain confidential information of the Company and its affiliates, including, but not limited to: technical information; business and marketing plans; strategies; customer information; product information; pricing information and policies; promotions; developments; financing plans; business policies and practices; processes; techniques; methodologies; formulae; processes; compilations of information; research materials; software (source and object code); algorithms; computer processing systems; drawings; proposals; job notes; reports; records; specifications; inventions; discoveries; improvements; innovations; designs; ideas; trade secrets; proprietary information; manufacturing, packaging, advertising, distribution, and sales methods; sales and profit figures; and client and client lists and other forms of information considered by the Company or its affiliates to be confidential and in the nature of a trade secret (hereinafter all referred to as "Confidential Information"). Executive acknowledges that the Confidential Information is a valuable and unique asset of the Company and hereby covenants that both during and after Executive's employment, Executive shall keep such Confidential Information confidential and shall not disclose such information, either directly or indirectly, to any third person or entity without the prior written consent of a duly authorized representative of the Company. Further, Executive agrees that Executive will not use any Confidential Information for any purpose (including, but not limited to, use for Executive's own benefit or for the benefit of a third party) other than for purposes authorized by the Company or its affiliates and for the benefit of the Company and/or its affiliates. The parties agree that any Confidential Information that was disclosed or provided to Executive by the Company or its affiliates prior to the effective date of this Agreement was intended to be and shall be subject to the terms and conditions of this Agreement. Executive agrees that this confidentiality covenant has no temporal or territorial restriction. The obligation of confidentiality imposed herein shall not apply: (i) to information that is now or hereafter becomes publicly known or generally known in the Company's industry other than as a result of Executive's breach of Executive's obligations hereunder and (ii) to information that is required to be disclosed by applicable laws, governmental regulations or judicial or regulatory process; provided, however, in such event, that Executive may disclose such information only to the extent required and shall give at least fifteen (15) days' prior written notice to the Company of the requirement to disclose such information to the extent practicable under the circumstances.

IN WITNESS WHEREOF, the parties hereto have executed and delivered this Agreement as of the day and year first above written.

THE COMPANY: **EXECUTIVE:**

______________________________ ______________________________

Daniel R. Groves _____

Vice President, Culture and Engagement

Exhibit 31.1

CERTIFICATIONS

I, Leroy M. Ball, certify that:

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

Date: May 7, 2021

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

Exhibit 31.2

CERTIFICATIONS

I, Michael J. Zugay, certify that:

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

Date: May 7, 2021

/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 March 31, 2021 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	/s/ MICHAEL J. ZUGAY
Leroy M. Ball	Michael J. Zugay
President and Chief Executive Officer	Chief Financial Officer
May 7, 2021	May 7, 2021