

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, 2024

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)

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

Securities registered pursuant to Section 12(b) of the Act. 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, 2024 amounted to

21,200,184
shares.

PART I—FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

KOPPERS HOLDINGS INC.

CONDENSED CONSOLIDATED STATEMENT OF OPERATIONS

	Three Months Ended March 31,	
	2024 (Unaudited)	2023 (Unaudited)
(Dollars in millions, except share and per share amounts)		
Net sales	\$ 497.6	\$ 513.4
Cost of sales	401.4	409.3
Depreciation and amortization	16.1	14.0
Selling, general and administrative expenses	45.5	41.6
(Gain) on sale of assets	0.0	1.8
Operating profit	34.6	50.3
Other loss, net	(0.1)	(0.2)
Interest expense	17.1	14.0
Income before income taxes	17.4	36.1
Income tax provision	4.4	9.9
Net income	13.0	26.2
Net income attributable to noncontrolling interests	0.0	0.7
Net income attributable to Koppers	\$ 13.0	\$ 25.5
Earnings per common share attributable to Koppers common shareholders:		
Basic	\$ 0.61	\$ 1.22
Diluted	\$ 0.59	\$ 1.19
Weighted average shares outstanding (in thousands):		
Basic	21,066	20,842
Diluted	21,909	21,385

KOPPERS HOLDINGS INC.
CONDENSED CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

(Dollars in millions)	Three Months Ended March 31,	
	2024 (Unaudited)	2023 (Unaudited)
Net income	\$ 13.0	\$ 26.2
Changes in other comprehensive income (loss):		
Currency translation adjustment	(13.9)	2.7
Cash flow hedges, net of tax expense of \$		
2.8		
and \$		
1.9	7.0	4.7
Pension adjustments, net of tax expense of \$		
0.1		
and \$		
0.1	0.4	0.3
Comprehensive income	6.5	33.9
Comprehensive income attributable to noncontrolling interests	0.0	0.7
Comprehensive income attributable to Koppers	\$ 6.5	\$ 33.2

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

KOPPERS HOLDINGS INC.
CONDENSED CONSOLIDATED BALANCE SHEET

	March 31, 2024 (Unaudited)	December 31, 2023
(Dollars in millions, except share and per share amounts)		
Assets		
Cash and cash equivalents	\$ 49.0	\$ 66.5
Accounts receivable, net of allowance of \$ 6.7 and \$ 6.5	218.3	202.4
Inventories, net	399.0	395.7
Derivative contracts	11.4	7.1
Other current assets	30.0	27.3
Total current assets	707.7	699.0
Property, plant and equipment, net of accumulated depreciation of \$ 479.4 and \$ 473.2	640.5	631.7
Goodwill	293.1	294.4
Intangible assets, net	98.5	102.2
Operating lease right-of-use assets	85.8	90.5
Deferred tax assets	9.8	10.4
Other assets	9.9	7.3
Total assets	\$ 1,845.3	\$ 1,835.5
Liabilities		
Accounts payable	\$ 195.2	\$ 202.9
Accrued liabilities	87.5	95.1
Current operating lease liabilities	22.2	22.9

Current maturities of long-term debt	4.0	5.0
Total current liabilities	308.9	325.9
Long-term debt	865.1	835.4
Operating lease liabilities	63.4	67.4
Accrued postretirement benefits	27.9	31.6
Deferred tax liabilities	28.1	25.9
Other long-term liabilities	42.0	46.3
Total liabilities	1,335.4	1,332.5
Commitments and contingent liabilities (Note 13)		
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;		
25,630,272		
and		
25,163,238		
shares issued	0.3	0.3
Additional paid-in capital	300.0	291.1
Retained earnings	455.4	444.0
	((
Accumulated other comprehensive loss	95.3	88.8
))

Treasury stock, at cost,			
4,441,930			
and		((
4,302,996		154.6	147.7
shares))
Total Koppers shareholders' equity		505.8	498.9
		4.1	4.1
Noncontrolling interests			
Total equity		509.9	503.0
Total liabilities and equity	\$	1,845.3	\$ 1,835.5

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,	
	2024 (Unaudited)	2023 (Unaudited)
(Dollars in millions)		
Cash provided by (used in) operating activities:		
Net income	\$ 13.0	\$ 26.2
Adjustments to reconcile net cash used in operating activities:		
Depreciation and amortization	16.1	14.0
Stock-based compensation	5.4	4.0
Change in derivative contracts	(1.8)	(1.1)
Non-cash interest expense	0.8	0.6
Loss (gain) on sale of assets	0.1	1.8
Insurance proceeds	(0.5)	0.0
Deferred income taxes	0.5	0.1
Change in other liabilities	(3.8)	0.4
Other - net	(0.8)	0.4
Changes in working capital:		
Accounts receivable	18.2	25.1
Inventories	(8.2)	22.4
Accounts payable	4.3	14.1
Accrued liabilities	(9.0)	18.5
Other working capital	(1.6)	6.0
Net cash (used in) operating activities	12.3	15.3
Cash (used in) provided by investing activities:		
Capital expenditures	(26.3)	(30.4)

	0.5	0.0
Insurance proceeds received		
	0.0	1.9
Cash provided by sale of assets	((
	25.8	28.5
Net cash (used in) investing activities))
Cash provided by (used in) financing activities:		
	190.7	122.0
Borrowings of credit facility	((
	160.8	58.5
Repayments of credit facility))
	(
	2.0	0.0
Repayments of long-term debt)	
	3.5	1.2
Issuances of Common Stock	((
	6.9	5.8
Repurchases of Common Stock))
	((
	0.0	0.8
Payment of debt issuance costs)
	((
	1.5	1.3
Dividends paid))
	23.0	56.8
Net cash provided by financing activities	(
	2.4	0.1
Effect of exchange rate changes on cash)	
	(
	17.5	13.1
Net (decrease) increase in cash and cash equivalents)	
	66.5	33.3
Cash and cash equivalents at beginning of period		
	49.0	46.4
Cash and cash equivalents at end of period	\$	\$
Supplemental disclosure of non-cash investing and financing activities:		
	1.8	5.9
Right-of-use assets obtained in exchange for new operating lease liabilities	\$	\$
	3.5	8.4
Accrued capital expenditures		

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

KOPPERS HOLDINGS INC.
CONDENSED CONSOLIDATED STATEMENT OF SHAREHOLDERS' EQUITY

(Dollars in millions, except per share amounts)	Three Months Ended March 31,	
	2024 (Unaudited)	2023 (Unaudited)
Common Stock		
Balance at beginning and end of period	\$ 0.3	\$ 0.2
Additional paid-in capital		
Balance at beginning of period	291.1	263.9
Employee stock plans	5.4	4.0
Issuance of common stock	3.5	1.3
Balance at end of period	300.0	269.2
Retained earnings		
Balance at beginning of period	444.0	360.2
Net income attributable to Koppers	13.0	25.5
Common Stock dividends (\$ 0.07 and \$ 0.06 per share)	(1.6)	(1.5)
Balance at end of period	455.4	384.2
Accumulated other comprehensive loss		
Balance at beginning of period	(88.8)	(97.3)
Currency translation adjustment	(13.9)	2.7
Cash flow hedges, net of tax ⁽¹⁾	7.0	4.7
Pension adjustments, net of tax ⁽²⁾	0.4	0.3
Balance at end of period	(95.3)	(89.6)
Treasury stock		
Balance at beginning of period	(147.7)	(127.6)
Purchases	(6.9)	(5.8)

Balance at end of period	(154.6)	(133.4)
Noncontrolling interests		
Balance at beginning of period	4.1	3.6
Net income attributable to noncontrolling interests	0.0	0.7
Balance at end of period	4.1	4.3
Total equity – beginning of period	\$ 503.0	\$ 403.0
Total equity – end of period	\$ 509.9	\$ 434.9

(1) Amounts reclassified from accumulated other comprehensive income to net income related to derivative financial instruments, net of tax, were \$

1.1
million and \$

1.7
million during the three months ended March 31, 2024 and 2023, respectively.

(2) Amounts reclassified from accumulated other comprehensive income to net income consist of amounts shown for pension adjustments. This component of accumulated other comprehensive income is included in the computation of net periodic pension cost as disclosed in Note 10 – Pensions and Post-Retirement Benefit Plans.

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

KOPPERS HOLDINGS INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (*Unaudited*)

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, 2023 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, 2023. Certain prior period amounts in the condensed consolidated financial statements and notes to the condensed consolidated financial statements have been reclassified to conform to the current period's presentation.

The financial information included herein should be read in conjunction with our audited consolidated financial statements and related notes included in our Annual Report on Form 10-K for the year ended December 31, 2023 .

2. New Accounting Pronouncements

In November 2023, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures. This ASU updates reportable segment disclosures by expanding the frequency and extent of segment disclosures. ASU No. 2023-07 is effective for fiscal years beginning after December 15, 2023, and for interim periods within fiscal years beginning after December 15, 2024. Early adoption is permitted. The amendments should be applied retrospectively to all prior periods presented in the financial statements. We are currently evaluating this ASU to determine its impact on our disclosures.

In December 2023, the FASB issued ASU No. 2023-09, Income Taxes (Topic 740): Improvements to Income Tax Disclosures. This ASU updates income tax disclosures by requiring annual disclosures of consistent categories and greater disaggregation of information in the rate reconciliation and income taxes paid disaggregated by jurisdiction. ASU No. 2023-09 is effective for fiscal years beginning after December 15, 2024. Early adoption is permitted. The amendments should be applied on a prospective basis. We are currently evaluating this ASU to determine its impact on our disclosures.

3. Fair Value Measurements

The following table presents the estimated fair values and the related carrying amounts of our financial instruments:

	March 31, 2024		December 31, 2023	
	Fair Value	Carrying Value	Fair Value	Carrying Value
<i>(Dollars in millions)</i>				
Financial assets:				
Investments and other assets	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.3
Financial liabilities:				
Long-term debt (including current portion)	\$ 888.3	\$ 877.6	\$ 860.4	\$ 849.4

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.

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 (as defined in Note 11 – Debt) approximates carrying value due to the variable rate nature of this instrument.

See Note 12 – Derivative Financial Instruments, for the fair value of our derivative financial instruments.

4. Common Stock

The following table presents changes in common stock and treasury stock:

	Three Months Ended March 31,	
	2024	2023
<i>(Shares in thousands)</i>		
Common Stock:		
Balance at beginning of period	25,163	24,547
Issued for employee stock plans	467	238
	25,630	24,785
Treasury Stock:		
	((
Balance at beginning of period	4,303	3,784
Shares repurchased	((
	139	178
	((
Balance at end of period	4,442	3,962
	21,188	20,823
Common Stock Outstanding		

5. Earnings and Dividends per Common Share

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

	Three Months Ended March 31,	
	2024	2023
<i>(Dollars in millions, except share and per share amounts)</i>		
Net income attributable to Koppers	\$ 13.0	\$ 25.5
Weighted average common shares outstanding (in thousands):		
Basic	21,066	20,842
Effect of dilutive securities	843	543
Diluted	21,909	21,385
Earnings per common share:		
Basic	\$ 0.61	\$ 1.22
Diluted	0.59	1.19
Other data:		
Antidilutive securities excluded from computation of diluted earnings per common share	55	629

On May 2, 2024, we declared a quarterly dividend of \$

0.07

per common share, payable on June 10, 2024 to shareholders of record as of May 24, 2024.

6. Stock-based Compensation

The board of directors granted restricted stock units and performance stock units (collectively, the stock units) to certain employee participants in January 2024.

No stock options were granted in 2024. Starting in 2023, most grants of restricted stock units vest in three years. Performance stock units have vesting based upon either a performance condition or a market condition. Performance stock units granted with a performance condition have a cumulative three-year performance objective based on adjusted EBITDA (see Note 7 – Segment Information). For performance stock units granted with a market condition, the applicable objective is based on our total shareholder return relative to the Standard & Poor's SmallCap 600 Materials Index and has multi-year performance objectives. Both types of performance stock units have a three-year period for vesting, if the applicable performance objectives are achieved.

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. For the awards granted in January 2024, target shares for units with a market condition totaled 56,796 and target shares for units with a performance condition totaled 125,399.

We calculated the fair value of the restricted stock units and performance stock units with a performance condition using the market price of the underlying common stock on the date of grant. We calculated the fair value of the performance stock units with a market condition on the date of grant using a Monte Carlo valuation model and the assumptions listed below:

		January 2024 Grant
Grant date price per share of performance award	\$	46.68
Expected volatility		38.14 %
Risk-free interest rate		4.14 %
Look-back period in years		3.00
Grant date fair value per share	\$	59.41

The following table shows a summary of the status and activity of non-vested stock units:

	Restricted Stock Units	Performance Stock Units	Total Stock Units	Weighted Average Grant Date Fair Value per Unit
Non-vested at December 31, 2023	531,339	580,763	1,112,102	\$ 33.62
Granted	145,627	182,196	327,823	\$ 48.95
Credited from dividends	170	0	170	\$ 43.00
	(((
Vested	209,723	136,560	346,283	\$ 32.83
)))	
	(((
Forfeited	4,239	2,198	6,437	\$ 31.91
)))	
Non-vested at March 31, 2024	463,174	624,201	1,087,375	\$ 38.50

The following table shows a summary of the status and activity of stock options:

	Options	Weighted Average Exercise Price per Option	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in millions)
Outstanding at December 31, 2023	706,868	\$ 27.51		
	(
Exercised	132,131	\$ 26.78		
)			
Outstanding at March 31, 2024	574,737	\$ 27.67	4.84	\$ 15.8
Exercisable at March 31, 2024	502,962	\$ 27.14	4.46	\$ 14.1

The following table presents total stock-based compensation expense recognized in the condensed consolidated statement of operations:

	Three Months Ended March 31,	
	2024	2023
(Dollars in millions)		
Selling, general and administrative expenses	\$ 5.4	\$ 4.0
Less related income tax benefit	1.5	1.1
Decrease in net income attributable to Koppers	\$ 3.9	\$ 2.9

7. Segment Information

We have

three

reportable segments: Railroad and Utility Products and Services (RUPS), Performance Chemicals (PC) and Carbon Materials and Chemicals (CMC). 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 primarily sells pressure-treated railroad ties to the railroad industry and treated utility poles to 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. Utility products include the pressure treatment of transmission and distribution poles for electric and telephone utilities. In addition, we provide untreated wood products and rail joint bars, which are steel bars used to join rails together for railroads, to the railroad markets and inspection services to the utility markets. We also operate 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, serving the same customer base as our North American railroad business.

Our PC segment develops, manufactures, and markets wood preservation chemicals and wood treatment technologies and services to a diverse range of end-markets including residential, infrastructure 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 a critical raw material used in the production of aluminum and steel. 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.

Our primary measure of segment profitability is adjusted earnings before interest, income taxes, depreciation, amortization and certain non-cash and/or non-recurring items that do not contribute directly to management's evaluation of our operating results (as defined by us, adjusted EBITDA). These items include impairment, restructuring and plant closure costs, mark-to-market commodity hedging, gain or loss on sale of assets and LIFO inventory effects. This presentation is consistent with how our chief operating decision maker evaluates the results of operations and makes strategic decisions about the business. In addition, adjusted EBITDA is the primary measure used to determine the level of achievement of management's short-term incentive goals and related payout, as well as one of the measures used to determine performance and related payouts for certain performance share units granted to management. For these reasons, we believe that adjusted EBITDA represents the most relevant measure of segment profit and loss.

Adjusted EBITDA is reconciled to net income on a consolidated basis, the most directly comparable financial measure determined and reported in accordance with U.S. GAAP. The accounting policies of the reportable segments are the same as those described in the summary of significant accounting policies. Intersegment transactions are eliminated in consolidation.

Contract Balances

The timing of revenue recognition results in both billed accounts receivable and unbilled receivables, both classified as accounts receivable, net of allowance within the condensed consolidated balance sheet. Contract assets of \$

5.1
million and \$

7.8
million are recorded within accounts receivable, net of allowance within the condensed consolidated balance sheet as of March 31, 2024 and December 31, 2023, respectively.

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

	Three Months Ended March 31,	
	2024	2023
<i>(Dollars in millions)</i>		
Railroad and Utility Products and Services:		
Railroad treated products	\$ 141.9	\$ 127.5
Utility poles	64.5	63.3
Railroad infrastructure products and services	18.7	22.3
Total Railroad and Utility Products and Services	225.1	213.1
Performance Chemicals:		
Wood preservative products	141.1	136.9
Other products	9.0	10.0
Total Performance Chemicals	150.1	146.9
Carbon Materials and Chemicals:		
Pitch and related products	72.8	105.8
Phthalic anhydride, naphthalene, and other chemicals	34.6	29.0
Carbon black feedstock and distillates	15.0	18.6
Total Carbon Materials and Chemicals	122.4	153.4
Total	\$ 497.6	\$ 513.4

Intersegment revenues:

Performance Chemicals				
			7.6	5.6
	\$		\$	
Carbon Materials and Chemicals				
			26.3	19.0
Total				
			33.9	24.6
	\$		\$	

The following table sets forth certain operating data, net of all intersegment transactions, for our segments:

		Three Months Ended March 31, 2024	2023
(Dollars in millions)			
Depreciation and amortization expense:			
Railroad and Utility Products and Services	\$	6.9	\$ 5.9
Performance Chemicals		3.4	3.5
Carbon Materials and Chemicals		5.8	4.6
Total	\$	16.1	\$ 14.0
Adjusted EBITDA:			
Railroad and Utility Products and Services	\$	17.7	\$ 15.8
Performance Chemicals		29.8	26.3
Carbon Materials and Chemicals		4.0	19.4
Items excluded from the determination of segment profit:			
LIFO expense ⁽¹⁾		(2.6)	(0.3)
Gain on sale of assets		0.0	1.8
Mark-to-market commodity hedging gains		1.7	1.1
Interest expense		(17.1)	(14.0)
Depreciation and amortization		(16.1)	(14.0)
Income tax provision		(4.4)	(9.9)
Net income	\$	13.0	\$ 26.2

(1) The LIFO expense adjustment removes the entire impact of LIFO and effectively reflects the results as if we were on a FIFO inventory basis.

The following table sets forth assets and goodwill allocated to each of our segments:

		March 31, 2024	December 31, 2023
(Dollars in millions)			
Segment assets:			
Railroad and Utility Products and Services	\$	759.3	\$ 743.7

Performance Chemicals		530.9		520.6
Carbon Materials and Chemicals		516.4		538.9
All other		38.7		32.3
Total	\$	1,845.3	\$	1,835.5
Goodwill:				
Railroad and Utility Products and Services	\$	120.5	\$	120.6
Performance Chemicals		172.6		173.8
Total	\$	293.1	\$	294.4

8. 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 differs from the U.S. federal statutory tax rate due to:

	2024	March 31, 2023
Federal income tax rate	21.0 %	21.0 %
Foreign earnings taxed at different rates	4.3	4.3
Nondeductible expenses	1.8	1.4
State income taxes, net of federal tax benefit	1.1	1.3
Change in tax contingency reserves	0.1	0.0
GILTI inclusion, net of foreign tax credits	0.0	0.4
Estimated annual effective income tax rate	28.3 %	28.4 %

Income taxes as a percentage of pretax income were

25.3
percent and

27.4
percent for the three months ended March 31, 2024 and 2023, respectively. Both periods were lower than the estimated annual effective income tax rate of

28.3
percent and

28.4
percent due to discrete items, principally an excess tax deduction for vested stock awards.

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. Effective January 1, 2024, certain jurisdictions in which we operate have enacted legislation that is consistent with one or more Organization for Economic Co-operation and Development Global Anti-Base Erosion Model Rules (commonly referred to as "Pillar Two"). These Pillar Two rules include minimum domestic top up taxes, income inclusion rules and undertaxed profit rules all aimed to ensure that multinationals pay a minimum effective corporate tax rate of

15
percent in each jurisdiction in which they operate. We do not expect these Pillar Two rules to materially impact our annual effective rate in 2024. 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, 2024.

Unrecognized Tax Benefits

We file income tax returns in the U.S. federal jurisdiction, individual U.S. state jurisdictions and non-U.S. jurisdictions. With few exceptions, we are no longer subject to U.S. federal, U.S. state, or non-U.S. income tax examinations by tax authorities for years prior to 2017.

As of March 31, 2024 and December 31, 2023, unrecognized tax benefits of \$

1.5

million for both periods would affect the effective tax rate if recognized. We do not anticipate material changes to the amount of unrecognized tax benefits within the next twelve months.

9. Inventories, net

	March 31, 2024	December 31, 2023
(Dollars in millions)		
Raw materials	\$ 348.4	\$ 348.4

Work in process		15.8		17.9
Finished goods		147.0		139.0
Total	\$	511.2	\$	505.3
Less revaluation to LIFO		112.2		109.6
Net	\$	399.0	\$	395.7

10. 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.

We are evaluating the termination of our United States qualified pension plan and are targeting the potential completion of this effort in the first quarter 2025. We estimate that a termination will require additional cash funding of \$

25
million and will result in an estimated settlement loss of \$

40
million, before tax, subject to changes to certain assumptions including the discount rate.

In connection with the planned termination of our defined benefit pension plan in the United Kingdom, in 2021, we entered into a buy-in bulk annuity insurance policy in exchange for a premium payment of \$

67.8

million, which is subject to adjustment as a result of subsequent data cleansing activities. Under the terms of this buy-in insurance policy, the insurer is liable to pay the benefits of the plan, but the plan still retains full legal responsibility to pay the benefits to members using the insurance payments. The buy-in policy will be treated as a plan asset going forward until such time as the buy-in policy is converted to a buy-out policy, which is when individual insurance policies will be assigned to each member of the plan and the plan will no longer have legal responsibility to pay the benefits to the members. The data cleansing effort has been substantially completed and we expect to recognize a pre-tax pension settlement loss of approximately \$

20

million upon the pension obligation becoming irrevocably settled.

The timing of the conversion to a buy-out policy may be impacted by a ruling from the High Court of Justice in the United Kingdom in the case of *Virgin Media Limited v NTL Pension Trustees II Limited and Others* related to certain amendments to UK pension plans. This ruling is currently under appeal.

The following table provides the components of net periodic benefit cost for the pension plans:

		2024	Three Months Ended March 31, 2023
(Dollars in millions)			
Service cost	\$	0.4	\$ 0.4
Interest cost		1.9	2.1
Expected return on plan assets		(1.5)	(1.7)
Amortization of net loss		0.5	0.5
Net periodic benefit cost	\$	1.3	\$ 1.3
Defined contribution plan expense	\$	3.0	\$ 2.5

11. Debt

The following table summarizes debt:

	Weighted Average Interest Rate	Maturity	March 31, 2024	December 31, 2023
(Dollars in millions)				
Credit Facility	7.29 %	2027	\$ 491.3	\$ 461.4
Term Loan B	8.93 %	2030	386.3	388.0
Debt			\$ 877.6	\$ 849.4
Less short-term debt and current maturities of long-term debt			4.0	5.0
Less unamortized debt issuance costs			8.5	9.0
Long-term debt			\$ 865.1	\$ 835.4

Credit Facility

We have a credit agreement (the Credit Facility) with a consortium of banks. The Credit Facility provides for an \$

800.0
million revolving credit facility, a \$

50.0
million swingline facility and provides for the ability to incur one or more uncommitted incremental revolving or term loan facilities in an aggregate amount of at least \$

730.0
million, subject to applicable financial covenants. The interest rate on the Credit Facility is variable and may be based on the Secured Overnight Financing Rate (SOFR), which is the applicable benchmark for current borrowings, or an alternative benchmark depending on the borrowing type.

Borrowings under the Credit Facility are secured by a first priority lien on substantially all of the assets (excluding real property and other customary assets) of Koppers Inc., Koppers Holdings Inc. and our material domestic subsidiaries. The Credit Facility contains certain covenants that may limit Koppers Inc. and its restricted subsidiaries from taking certain actions. These limitations include, among others, restrictions on additional indebtedness, liens, dividends, investments, acquisitions, certain distributions, asset sales, transactions with affiliates and modifications to material documents, including organizational documents. In addition, such covenants may 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, 2024, we had approximately \$

301
million of unused revolving credit availability after restrictions from certain letter of credit commitments and other covenants. As of March 31, 2024, \$

7.8
million of commitments were utilized by outstanding letters of credit.

Term Loan B

In April 2023, a new class of senior secured term loans under the Credit Facility (the Term Loan B) was issued at

97
percent of face value, resulting in \$

388.0
million of net proceeds, before debt financing costs. The interest rate on the Term Loan B is variable and is based on, at our option, adjusted Term SOFR Rate or adjusted Daily Simple SOFR. The interest rate margins applicable to adjusted Term SOFR Rate or adjusted Daily Simple SOFR loans are

3.50
percent with a floor of

0.50
percent. The principal balance of the Term Loan B is repayable in quarterly installments in an amount equal to

0.25
percent of the principal amount, commencing on January 1, 2024 and on the last business day of each quarterly period thereafter, with the balance due at maturity on April 10, 2030.

Interest Rate Swaps

See Note 12 – Derivative Financial Instruments for discussion of the interest rate swap agreements, which effectively convert the variable rate to a fixed rate for a portion of our variable rate debt.

Subsequent Events

On April 12, 2024, we entered into Amendment No. 3 to the Credit Facility (Amendment No. 3) which, among other modifications: (i) provides for the incurrence of incremental term loans in an aggregate principal amount of \$

100
million to be used for general corporate purposes, thereby increasing the aggregate principal amount of the Term Loan B to \$

497
million as of April 12, 2024 and (ii) effectively reduces the interest rate margins applicable to the Term Loan B by

0.50
percent to

3.00
percent with a floor of

0.50
percent, in the case of adjusted Term SOFR Rate or adjusted Daily Simple SOFR loans.

12. 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, fuel oil, foreign currency exchange risk, principally the U.S. dollar, Australian dollar and British pound sterling, and interest rate risk associated with variable rate borrowings. 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.

The Company recognizes all derivative instruments as either assets or liabilities at fair value on the balance sheet. The derivative instruments are classified as current or noncurrent based upon the expected timing of cash flows and are subject to offset under our master netting arrangements. A derivative instrument's fair value is determined using significant other observable inputs, a Level 2 fair value measurement.

For derivative instruments that are designated and qualify as cash flow hedges, the effective portion of the gain or loss on the derivative is reported as a component of other comprehensive income and is reclassified into earnings in the same period or periods during which the hedged transaction affects earnings. Gains and losses on the derivative instruments representing hedge ineffectiveness are recognized in current earnings.

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 2025. We designate certain of our commodity swaps as cash flow hedges of forecasted purchases of commodities. For those commodity swaps where hedge accounting is not elected, the fair value of the commodity swap is recognized as an asset or liability on the condensed consolidated balance sheet and the related unrealized 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.

We enter into heating oil swap contracts to manage price risk associated with fuel oil purchases for our plant operations and certain raw material requirements. The fair value associated with these swap contracts are not designated as hedges, and the related unrealized gain or loss on the derivative is reported in current earnings. These amounts are classified in cost of sales in the consolidated statement of operations. As of March 31, 2024 and December 31, 2023, we had contracts totaling

1.7
million and

1.5
million gallons, respectively.

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. The fair value associated with forward contracts related to foreign currency that are not designated as hedges, and the related unrealized 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.

We enter into interest rate swaps to effectively convert portions of our variable interest rate debt into fixed rate debt to add stability to interest expense and to manage our exposure to interest rate movements. We entered into interest rate swap agreements with an aggregate notional value of \$

400.0
million at a weighted average fixed SOFR rate of

3.97
percent for a portion of our variable rate debt. All swap agreements expire in April 2027. The interest rate swaps have been designated as cash flow hedges on interest payments involving the receipt of variable amounts from a counterparty in exchange for us making fixed-rate payments over the life of the agreements without exchange of the underlying notional amount.

See the condensed consolidated statement of comprehensive income and condensed consolidated statement of shareholders' equity for amounts recorded in other comprehensive income and for amounts reclassified from accumulated other comprehensive income into net income.

The fair value of the outstanding derivative contracts recorded in the balance sheet are as follows:

					March 31, 2024
	Copper Swap Contracts	Heating Oil Contracts	Foreign Currency Forward Contracts	Interest Rate Swap Contracts	Total
(Dollars in millions)					
Derivative contracts	7.7	0.0	0.0	3.7	11.4
	\$	\$	\$	\$	\$
Other assets	1.1	0.0	0.0	1.3	2.4
Other long-term liabilities	0.0	0.0	0.0	(2.5)	(2.5)
Net asset on balance sheet	8.8	0.0	0.0	2.5	11.3
	\$	\$	\$	\$	\$
Accumulated other comprehensive gain, net of tax	4.5	0.0	0.0	1.8	6.3
	\$	\$	\$	\$	\$

					December 31, 2023
	Copper Swap Contracts	Heating Oil Contracts	Foreign Currency Forward Contracts	Interest Rate Swap Contracts	Total
(Dollars in millions)					
Derivative contracts	4.1	0.0	0.2	2.8	7.1
	\$	\$	\$	\$	\$
Accrued liabilities	0.0	(0.3)	(0.1)	0.0	(0.4)
Other long-term liabilities	0.0	0.0	0.0	(6.5)	(6.5)
Net asset (liability) on balance sheet	4.1	(0.3)	0.1	(3.7)	0.2
	\$	\$	\$	\$	\$
Accumulated other comprehensive gain (loss), net of tax	2.0	0.0	0.0	(2.9)	(0.9)
	\$	\$	\$	\$	\$

Over the next twelve months , we estimate unrealized gains of \$

4.2

million for commodity price hedging as well as unrealized gains of \$

2.8
million for interest rate swaps will be reclassified from accumulated other comprehensive income into earnings.

Copper Swap Contracts

As of the periods presented, we had outstanding copper swap contracts of the following amounts:

	Units Outstanding (in Pounds)		Net Fair Value – Asset	
	March 31, 2024	December 31, 2023	March 31, 2024	December 31, 2023
(Amounts in millions)				
Cash flow hedges	26.6	31.7	\$ 5.8	\$ 2.6
Contracts where hedge accounting was not elected	10.6	9.5	3.0	1.5
Total	37.2	41.2	\$ 8.8	\$ 4.1

The unrealized gain from copper swaps contracts where hedge accounting was not elected is as follows:

	Three Months Ended March 31,	
	2024	2023
(Dollars in millions)		
Gain from contracts where hedge accounting was not elected	\$ 1.5	\$ 1.1

Foreign Currency Forward Contracts

The net currency units outstanding for contracts were:

	March 31, 2024	December 31, 2023
(In millions)		
	USD	USD
	9.0	10.3
United States Dollars		
	GBP	GBP
	0.9	0.0
British Pound Sterling		
	AUD	AUD
	0.0	3.0
Australian Dollars		

13. 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 condensed 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

51 plaintiffs in 27 cases pending as of March 31, 2024 and December 31, 2023. As of March 31, 2024 and December 31, 2023, there were

26 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

27 pending cases seek to recover compensatory damages. Plaintiffs in

24 of those cases also seek to recover punitive damages. The plaintiffs in the

26 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, 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

no t 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 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. 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 were approximately \$

1.1

billion and \$

1.7

billion, respectively. These costs are likely to increase given recent submissions to EPA regarding remedy design and because the remedy will not be implemented for several years. Responsibility for implementing and funding that work is yet to be determined. The funding of that work amongst the PRPs is the subject of a 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 in 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 stating that it may be a PRP at the Newark Bay CERCLA site. In January 2010, Koppers Inc. submitted a response to the general notice letter asserting that Koppers Inc. is a *de minimis* party at this site.

We have accrued the estimated costs of participating in the PRP group at the Portland Harbor and Newark Bay CERCLA sites and estimated *de minimis* contributor settlement amounts at the sites totaling \$

3.9

million as of March 31, 2024. 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, 2024, our estimated environmental remediation liability for these acquired sites totals \$

3.8

million.

Foreign Environmental Matters. There is one plant site related to the Performance Chemicals business located in Australia where we have recorded an environmental remediation liability for soil and groundwater contamination which occurred prior to the acquisition of the business. As of March 31, 2024, our estimated environmental remediation liability for the acquired site totals \$

1.2

million.

Environmental Reserves Rollforward. The following table reflects changes in the accrual for environmental remediation. A total of \$

2.2

million was classified as current liabilities as of March 31, 2024 and December 31, 2023.

	March 31, 2024	Period ended December 31, 2023
(Dollars in millions)		
Balance at beginning of period	\$ 10.6	\$ 10.9
Expense	0.0	0.2
Cash expenditures	0.0	(0.4)
Currency translation	(0.1)	(0.1)
Balance at end of period	\$ 10.5	\$ 10.6

14. Subsequent Events

On April 1, 2024, we completed our acquisition of substantially all of the assets of Brown Wood Preserving Company, Inc. and certain of its affiliates (Brown Wood) for approximately \$

100

million in cash, subject to a post-closing working capital adjustment to be determined. Brown Wood is a utility pole treating business with principal operating locations in Alabama and Mississippi. We financed the acquisition with cash and available borrowings under our Credit Facility.

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 future dividends, 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; inflation; 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; unexpected business disruptions; potential impairment of our goodwill and/or long-lived assets; demand for Koppers goods and services; competitive conditions; capital market conditions, including interest rates, borrowing costs and foreign currency rate fluctuations; availability of and fluctuations in the prices of key raw materials, such as coal tar, lumber and scrap copper; disruptions and inefficiencies in the supply chain; economic, political and environmental conditions in international markets; changes in laws; the impact of environmental laws and regulations; 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, 2023.

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: RUPS, PC and CMC.

Through our RUPS business, we believe that we are the largest supplier of railroad 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 United States. In addition, we provide untreated wood products and rail joint bars to the railroad markets and inspection services to the utility markets. We also operate 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, serving the same customer base as our North American railroad business.

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, and the production of aluminum, steel, carbon black, high-strength concrete, plasticizers and specialty chemicals.

Non-GAAP Financial Measures

We utilize certain financial measures that are not in accordance with U.S. generally accepted accounting principles (U.S. GAAP) to analyze and manage the performance of our business. We believe that adjusted EBITDA provides information useful to investors in understanding the underlying operational performance of the company, our business and performance trends, and facilitates comparisons between periods. The exclusion of certain items permits evaluation and a comparison between periods of results for business operations, and it is on this basis that our management internally assesses our performance. Adjusted EBITDA is the primary measure of profitability we use to evaluate our businesses. In addition, adjusted EBITDA is the primary measure used to determine the level of achievement of management's short-term incentive goals and related payout, as well as one of the measures used to determine performance and related payouts for certain performance share units granted to management.

Although we believe that these non-GAAP financial measures enhance investors' understanding of our business and performance, these non-GAAP financial measures should not be considered an alternative to GAAP 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.

Adjusted EBITDA is a non-GAAP financial measure defined as income before interest, income taxes, depreciation, amortization and other adjustments. These other adjustments 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, LIFO, mark-to-market commodity hedging and other unusual items. The LIFO expense adjustment removes the entire impact of LIFO and effectively reflects the results as if we were on a FIFO inventory basis. See Adjusted EBITDA reconciliation in the below section for the reconciliation from net income to adjusted EBITDA on a consolidated basis.

We do not provide reconciliations of guidance for adjusted EBITDA and adjusted EPS to comparable GAAP measures, in reliance on the unreasonable efforts exception. We are unable, without unreasonable efforts, to forecast certain items required to develop meaningful comparable GAAP financial measures. These items include, but are not limited to, restructuring and impairment charges, acquisition-related costs, mark-to-market commodity hedging, and LIFO adjustments that are difficult to forecast for a GAAP estimate and may be significant.

Outlook

We remain committed to expanding and optimizing our business and making continued progress towards our long-term financial goals. After considering global economic conditions, as well as ongoing uncertainty associated with geopolitical and supply chain challenges, the following summarizes our 2024 financial goals:

- sales of approximately \$2.25 billion,
- adjusted EBITDA of approximately \$265 million to \$280 million, and
- capital expenditures, including capitalized interest but excluding acquisitions, of approximately \$80 million to \$90 million with approximately \$23 million to \$33 million of the total allocated to discretionary projects.

Our keys to success for 2024 are the following:

- For our RUPS segment, we need to (i) recoup cost increases, including the value of our creosote preservative in the market, (ii) ensure our facilities run uninterrupted to serve customer demand, (iii) maximize opportunities for increased volumes, including expanding our customer base into the Texas utility pole market, (iv) lower costs and (v) successfully integrate the Brown Wood asset acquisition with our domestic utility pole business.
- For our PC segment, we need to (i) increase market share for certain newer product lines and (ii) improve gross margin by maintaining volumes and reducing operating costs.
- For our CMC segment, we need to (i) optimize production from our yield enhancement project in Nyborg, Denmark, (ii) push acceptance of petroleum-blended products, which mitigates reductions in coal tar volumes and (iii) execute on domestic plant optimization projects.

Significant market indicators for our businesses include:

- The Railway Tie Association's estimate of total crosstie installations in 2024 is approximately 18.6 million ties, with approximately 14.7 million for Class I railroads. This is consistent with 2023 crosstie installations of approximately 18.5 million crossties with the small increase expected to be from the commercial market.
- According to BMO Capital Markets, market demand for utility poles is expected to remain high throughout 2024 as a result of aging pole infrastructure, efforts to strengthen poles against larger and more frequent storms, and a need to add larger poles to support continued electrification and expansion of broadband access. In the first quarter of 2024, we experienced a decrease in volumes as a result of temporary customer overstock and budget realignment. We expect demand to return to normal levels in 2024.
- Product demand for our PC business has historically been closely associated with consumer spending on home repair and remodeling projects in North America. The Leading Indicator of Remodeling Activity (LIRA) reported by the Joint Center for Housing Studies of Harvard University projects that annual homeowner renovation and maintenance expenditures will decline by over seven percent in the third quarter of 2024 before easing to just a 2.6 percent decline through the first quarter of 2025. Spending on home improvements and repairs are expected to drop from \$463 billion to \$451 billion over the next four quarters. While the LIRA projects a decrease in 2024, the outlook for our PC business remains relatively positive driven by improvements in the industrial markets and expected flat volumes for our residential business.
- For the external markets served by our CMC business, we anticipate a slowdown in the near-term in manufacturing overall as well as in the steel, aluminum and carbon black industries. 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 been reduced. We are actively working to mitigate the impacts of long-term decline of coal tar supply by gaining market acceptance for petroleum-blended products. We are also investing in projects to increase distillation yields and balance raw material supply and cost with customer demand and pricing.

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, 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. Any or all of these factors could impact our actual results for 2024.

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, 2024 and 2023

Consolidated Results

Net sales are summarized by segment in the following table:

		Three Months Ended March 31,			
		2024	2023	Change	% Change
(Dollars in millions)					
Railroad and Utility Products and Services	\$	225.1	\$ 213.1	\$ 12.0	6%
Performance Chemicals		150.1	146.9	3.2	2%
Carbon Materials and Chemicals		122.4	153.4	(31.0)	-20%
	\$	497.6	\$ 513.4	\$ (15.8)	-3%

RUPS net sales increased largely due to \$9.6 million of volume increases for crossties and a net \$8.1 million of pricing increases across multiple markets, particularly for crossties and domestic utility poles. These increases were partly offset by lower activity in our maintenance of way businesses and a 4.2 percent volume decrease in our domestic utility pole business due to temporary customer overstock and budget realignment. Foreign currency changes compared to the prior year period had an unfavorable impact on sales in the current year period of \$0.6 million, mainly from our Australian utility pole business.

PC net sales increased as a result of volume increases of \$6.8 million in the current year period, including a 6.1 percent volume increase in the Americas, primarily for our copper-based preservatives. These increases were partly offset by \$3.3 million of lower prices in the Americas and Australasia. Foreign currency changes compared to the prior year period had an unfavorable impact on sales in the current year period of \$0.2 million.

CMC net sales decreased mainly due to \$28.6 million of lower sales prices across most products, including carbon pitch where prices were down 24.6 percent globally, along with \$11.5 million of lower volumes of carbon pitch and carbon black feedstock. The decreases in carbon pitch prices and volumes were driven by reduced market demand in the current year period. These decreases were partly offset by volume increases for phthalic anhydride. Foreign currency changes compared to the prior year period from our international markets had an unfavorable impact on sales in the current year period of \$1.7 million.

Cost of sales as a percentage of net sales was 81 percent, compared to 80 percent in the prior year period as the market driven reduction in CMC pricing, primarily carbon pitch, more than offset lower CMC raw material costs, particularly in North America and Australia. Significant items impacting cost of sales in individual operating segments are discussed as part of "Segment adjusted EBITDA and adjusted EBITDA margin" herein.

Depreciation and amortization expenses were \$2.1 million higher when compared to the prior year period as recent capital expenditures include increased investment in growth projects, such as the expansion of our RUPS facility in North Little Rock, Arkansas and a yield enhancement project at our CMC facility in Nyborg, Denmark. Additionally, asset retirement obligations in our European CMC operations increased during the first quarter of 2024 when compared to the prior year period.

Selling, general and administrative expenses were \$3.9 million higher when compared to the prior year period due mainly to an increase in compensation-related costs along with an increase in professional service expenses.

Gain on sale of assets for the quarter ended March 31, 2023 was related to a sale of assets of our former coal tar distillation facility located in China.

Interest expense was \$3.1 million higher when compared to the prior year period due primarily to higher interest rates.

Income tax expense decreased by \$5.5 million when compared to the prior year period primarily due to lower income before income taxes. See Note 8 – Income Taxes.

Segment Results

Segment adjusted EBITDA and adjusted EBITDA margin is summarized in the following table:

	Three Months Ended March 31,			
	2024	2023	Change	% Change
(Dollars in millions)				
Adjusted EBITDA:				
Railroad and Utility Products and Services	\$ 17.7	\$ 15.8	\$ 1.9	12%
Performance Chemicals	29.8	26.3	3.5	13%
Carbon Materials and Chemicals	4.0	19.4	(15.4)	-79%
Total Adjusted EBITDA	\$ 51.5	\$ 61.5	\$ (10.0)	-16%
Adjusted EBITDA margin as a percentage of GAAP sales:				
Railroad and Utility Products and Services	7.9%	7.4%	0.5%	7%
Performance Chemicals	19.9%	17.9%	2.0%	11%
Carbon Materials and Chemicals	3.3%	12.6%	-9.3%	-74%

RUPS adjusted EBITDA increased due primarily to net sales price increases and \$3.7 million from improved plant utilization, which combined to more than offset \$10.6 million of higher operating, raw material and selling, general and administrative expenses.

PC adjusted EBITDA increased primarily as a result of higher volumes. Lower sales prices were offset by raw material price decreases.

CMC adjusted EBITDA decreased due to price and volume decreases along with lower North American plant utilization primarily due to a plant outage in January, partly offset by an \$18.6 million reduction in raw material costs, particularly in Europe and North America.

Segment Results

Adjusted EBITDA Reconciliation. The following table reconciles net income to adjusted EBITDA on a consolidated basis:

	Three Months Ended March 31,	
	2024	2023
(Dollars in millions)		
Net income	\$ 13.0	\$ 26.2
Interest expense	17.1	14.0
Depreciation and amortization	16.1	14.0
Income tax provision	4.4	9.9
Sub-total	50.6	64.1
Adjustments to arrive at adjusted EBITDA:		
LIFO expense ⁽¹⁾	2.6	0.3
(Gain) on sale of assets	0.0	(1.8)
Mark-to-market commodity hedging gains	(1.7)	(1.1)
Total adjustments	0.9	(2.6)
Adjusted EBITDA	\$ 51.5	\$ 61.5

(1) The LIFO expense adjustment removes the entire impact of LIFO and effectively reflects the results as if we were on a FIFO inventory basis.

Cash Flow

Net cash used in operating activities for the three months ended March 31, 2024 was \$12.3 million compared to \$15.3 million in the prior year. The improvement was primarily the result of lower working capital usage in the current year which more than offset the cash impact of lower net income in the current year period the reasons for which are discussed under results of operations.

Net cash used in investing activities for the three months ended March 31, 2024 was \$25.8 million compared to \$28.5 million in the prior year driven primarily by capital expenditures. Capital expenditures were higher in the prior year period due to investment in growth projects, such as the expansion of our RUPS facility in North Little Rock, Arkansas which was completed in the fourth quarter of 2023 and a yield enhancement project at our CMC facility in Nyborg, Denmark which was completed in the first quarter of 2024.

Net cash provided by financing activities for the three months ended March 31, 2024 was \$23.0 million compared to \$56.8 million in the prior year. The primary source of financing cash flows was net borrowings of \$27.9 million and the primary uses of financing cash flows were payments related to taxes withheld under stock-based compensation plans and dividends paid. In the prior year, the primary source of financing cash flows was net borrowings of \$63.5 million and the primary uses of financing cash flows were repurchases of common stock and dividends paid.

Liquidity and Capital Resources

Our Credit Facility is described in Note 11 – 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 permits Koppers Inc. to make dividend payments to Koppers Holdings if certain conditions are met, including, among other permitted dividend payments, the ability to fund the payment of regularly scheduled dividends on and repurchases of Koppers Holdings common stock, in an aggregate amount per year not to exceed the greater of (a) \$50.0 million in any fiscal year, with unused amounts in any fiscal year being carried over to the succeeding fiscal year, and (b) 6.0 percent of market capitalization.

Liquidity

As of March 31, 2024, liquidity was approximately \$340 million.

Our need for cash in the next twelve months relates primarily to capital spending, purchase commitments, operating leases, working capital, debt service, pension plan funding, dividends and share repurchases. We may also use cash to pursue other potential strategic acquisitions or voluntary pension plan contributions, including pension plan settlements. Capital expenditures in 2024, excluding acquisitions, if any, are expected to total approximately \$80 million to \$90 million and are expected to be funded by cash from operations. We anticipate that our liquidity will continue to be adequate to fund our cash requirements for at least the next twelve months, and based on our current expectations, for the foreseeable future.

We manage our working capital to increase our flexibility to pay down debt. Debt will fluctuate throughout any operating period based upon the timing of receipts from customers and payments to vendors. As of March 31, 2024, approximately 90 percent of accounts payable was current and ten percent was 1-30 days past due. As of December 31, 2023, approximately 85 percent of accounts payable was current and 15 percent was 1-30 days past due.

Bank Debt Covenants

The bank debt 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 total net leverage ratio is calculated as of the last day of each fiscal quarter in accordance with the Credit Facility definitions of consolidated total net debt divided by consolidated EBITDA and is not permitted to exceed 4.75. The total net leverage ratio as of March 31, 2024 was 3.2. In connection with the completion of the Brown Wood acquisition as described in Note 14 – Subsequent Events, the total net leverage ratio will not be permitted to exceed 5.00 from the second quarter of 2024 through the first quarter of 2025.
- The cash interest coverage ratio, calculated as of the last day of each fiscal quarter, is not permitted to be less than 2.0. The cash interest coverage ratio as of March 31, 2024 was 3.9.

We are currently in compliance with all covenants governing the Credit Facility. Our continued ability to meet these financial covenants may be affected by events beyond our control.

Legal Matters

The information set forth in Note 13 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, 2023.

Environmental and Other Matters

The information set forth in Note 13 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, 2023.

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, 2024 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

The information set forth in Note 13 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, 2023.

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

During the three months ended March 31, 2024, none of our directors or executive officers adopted or terminated any Rule 10b5-1 trading arrangement or any non-Rule 10b5-1 trading arrangement (as such terms are defined in Item 408 of Regulation S-K).

ITEM 6. EXHIBITS

3.1*	Third Amended and Restated Bylaws of Koppers Holdings Inc., as amended on May 2, 2024.
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 with the Inline XBRL document.
101.SCH*	Inline XBRL Taxonomy Extension Schema With Embedded Linkbase Documents
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 3, 2024

By: /s/ JIMMI SUE SMITH
Jimmi Sue Smith
Chief Financial Officer
(Principal Financial Officer and Duly Authorized Officer)

THIRD AMENDED AND RESTATED BYLAWS

OF

Koppers Holdings Inc.
(a Pennsylvania Corporation)
as amended May 2, 2024

ARTICLE I

Offices and Fiscal Year

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

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

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

ARTICLE II

Notice—Waivers—Meetings Generally

Section 2.01. Manner of Giving Notice.

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

hour of the meeting and any other information required by any other provision of the Associations Code, the articles or these bylaws.

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

Section 2.03.Notice of Meetings of Shareholders.

(a) General Rule. Written notice specifying the place (or means of Internet or other electronic communications technology by which the meeting will be held), date and time of every meeting of the shareholders shall be given by, or at the direction of, the Secretary or other authorized person to each shareholder of record entitled to vote at the meeting at least (1) ten days prior to the day named for a meeting called to consider a transaction under Chapter 3 of the Associations Code or a fundamental change under Chapter 19 of the Associations Code or (2) five days prior to the day named for the meeting in any other case. If the Secretary neglects or refuses to give notice of a meeting, the person or persons calling the meeting may do so. In the case of a special meeting of shareholders, the notice shall specify the general nature of the business to be transacted.

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

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

Section 2.04.Waiver of Notice.

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

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

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

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

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

ARTICLE III

Shareholders

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

Section 3.02. Annual Meeting. The Board of Directors may fix and designate the date and time of the annual meeting of the shareholders, but if no such date and time is fixed and designated by the Board of Directors, the meeting for any calendar year shall be held on the third Wednesday of April in such year, if not a legal holiday under the laws of the Commonwealth of Pennsylvania, and, if a legal holiday, then on the next succeeding business day, not a Saturday, at 10:00 a.m. The business at an annual meeting of shareholders shall include (a) the election of

directors to succeed those whose terms shall expire, and (b) such other business as may properly be brought before the meeting as provided in this Article III. The proposal of business to be considered by the shareholders at an annual meeting of shareholders shall be made only (w) pursuant to the corporation's notice of meeting, (x) by the presiding officer of the meeting, (y) by or at the direction of the Board of Directors, or (z) by one or more shareholders in accordance with applicable rules of the Securities and Exchange Commission and the provisions of this Article III.

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

Section 3.04. Nominations of Directors.

(a) Only persons who are nominated in accordance with the procedures set forth in this Section 3.04 shall be eligible to serve as directors of the corporation. Nominations of a person for election to the Board of Directors may be made at a meeting of shareholders (1) pursuant to the corporation's notice of meeting (or any supplement thereto), (2) by or at the direction of the Board of Directors, or (3) by any shareholder of the corporation present at the meeting who (A) is a shareholder of record at the time of giving notice as provided for in this Section 3.04, (B) shall be entitled to vote for the election of the Board of Directors at the applicable meeting of shareholders and (C) shall have complied with all requirements set forth in this Section 3.04. For purposes of this Section 3.04, a shareholder shall be deemed to be present at a meeting if the shareholder or a qualified representative of such shareholder appear at such meeting. A "qualified representative" of a shareholder shall be (1) a duly authorized officer, manager or partner of such shareholder, or (2) any other person authorized by a writing executed by such shareholder or an electronic transmission delivered by such shareholder to act for such shareholder as proxy at the meeting; provided, however, that such person purporting to be a qualified representative of a shareholder must produce such writing or electronic transmission, or a reliable reproduction of such writing or electronic transmission, at the meeting.

(b) For a nomination by a shareholder to be properly brought before a meeting of shareholders:

(1) The Nominating Person must (A) timely deliver to the Secretary of the corporation (i) the notice of the nomination in writing (the "Nomination Notice") and (ii) any other information reasonably requested by the corporation pursuant to this Section 3.04, and (B) comply in all respects with the requirements of Regulation 14A under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), including, without limitation, the requirements of Rule 14a-19 (as Regulation 14A may be amended from time to time by the Securities and Exchange Commission (the "SEC"), including any SEC Staff interpretations relating thereto), and

(2) The Board of Directors, a duly authorized committee thereof, or an executive officer of the corporation designated by the Board of Directors or such a committee thereof must determine affirmatively in good faith that the Nominating Person has satisfied the requirements of this Section 3.04(b).

(c) Except as otherwise provided in this Section 3.04, in order for the Nomination Notice and any other information reasonably requested by the corporation pursuant to this Section 3.04 to be deemed to have been delivered timely, the Nomination Notice and any such other information must be delivered to the Secretary of the corporation at the principal executive offices of the corporation not later than the close of business (1) in the case of an annual meeting that is called for a date that is within 30 days before or 30 days after the anniversary date of the immediately preceding annual meeting of shareholders, not less than 120 days nor more than 150 days prior to such anniversary date, (2) in the case of an annual meeting that is called for a date that is not within 30 days before or 30 days after the anniversary date of the immediately preceding annual meeting, or in the case where an annual meeting was not held in the immediately preceding year, not later than the close of business on the tenth day following the day on which notice of the date of the annual meeting was mailed or public disclosure of the date of the annual meeting was made, whichever occurs first, and (3) in the case of a special meeting at which directors are to be elected, no later than the close of business on the tenth day following the earlier of the day on which notice of the date of the special meeting was mailed or the first public disclosure of the special meeting was made. The first public disclosure of the date of any meeting of shareholders shall be when public disclosure of such meeting date is first made in a filing by the corporation with the SEC, in any notice given to the New York Stock Exchange, or in a news release reported by any national news service. In no event shall the public announcement of an adjournment of a meeting commence a new time period for determining the timeliness of the delivery of a Nomination Notice or any other information reasonably requested by the corporation pursuant to this Section 3.04.

(d) Each Nomination Notice shall set forth:

(1) As to each proposed nominee:

- (A) the name, age, business address, and residence address of each proposed nominee,
- (B) the principal occupation of each proposed nominee,
- (C) a written representation that the Nominating Person intends to appear in person or by proxy at the meeting to nominate each proposed nominee,
- (D) the class and total number or amount of securities of the corporation that are beneficially owned by each proposed nominee,
- (E) the total number of shares of the corporation that will be voted by the Nominating Person for each proposed nominee,

(F) a description of all arrangements or understandings between the Nominating Person and each proposed nominee, on the one hand, and any other person or persons (naming such person or persons), on the other hand, pursuant to which the nomination or nominations are being made by the Nominating Person,

(G) all information relating to each proposed nominee that is required to be disclosed in solicitations of proxies for election of directors or is otherwise required, in each case, pursuant to Regulation 14A under the Exchange Act, applicable listing standards, and other applicable law (including each such person's written consent to being named in any proxy statement relating to the meeting as a nominee and to serving as a director, if elected, and including information as to the purpose of such nomination), and

(H) a written representation and agreement executed by each proposed nominee (in a form provided by the corporation) stating that:

(i) such proposed nominee has disclosed, and that such proposed nominee will disclose promptly prior to the meeting and, if elected, during his or her term as a director, (1) any agreement, arrangement or understanding with, and any commitment or assurance to, any person or entity as to how such proposed nominee, if elected as a director of the corporation, will act or vote on any issue or question or (2) any other commitment that could limit or interfere with such proposed nominee's ability to comply, if elected as a director of the corporation, with such proposed nominee's fiduciary duties under applicable law,

(ii) such proposed nominee has disclosed, and that such proposed nominee will disclose promptly prior to the meeting and, if elected, during his or her term as a director, any agreement, arrangement or understanding with any person or entity other than the corporation with respect to any direct or indirect compensation, reimbursement or indemnification for candidacy or services as a director,

(iii) such proposed nominee agrees, including following election if such proposed nominee is elected as a director of the corporation, to comply with this Section 3.04 and all applicable corporate governance, conflict of interest, confidentiality, stock ownership, trading, and other policies and guidelines of the corporation applicable to directors, and

(iv) such proposed nominee agrees, if such proposed nominee is elected as a director of the corporation, to serve the entire term until the next meeting of shareholders at which such proposed nominee would face re-election;

(2) As to each Nominating Person and each Related Person, if any:

(A) the name and address of each Nominating Person (in the case of a shareholder of the corporation, as they appear on the corporation's books), and of each Related Person,

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

(i) any option, warrant, convertible security, stock appreciation right, or similar right with an exercise or conversion privilege or a settlement payment or mechanism at a price related to any class or series of securities of the corporation or with a value derived in whole or in part from the value of any class or series of securities of the corporation, any derivative or synthetic arrangement having the characteristics of a long position in any class or series of securities of the corporation, or any contract, derivative, swap or other transaction or series of transactions designed to produce economic benefits and risks that correspond substantially to the ownership of any class or series of securities of the corporation, including due to the fact that the value of such contract, derivative, swap or other transaction or series of transactions is determined by reference to the price, value or volatility of any class or series of securities of the corporation, whether or not such instrument or right shall be subject to settlement in the underlying class or series of capital stock of the corporation through the delivery of cash or other property, or otherwise, and without regard to whether the shareholder of record, the beneficial owner, if any, or any affiliates or associates or others acting in concert therewith, may have entered into transactions that hedge or mitigate the economic effect of such instrument, contract or right (a "Derivative

Instrument”) directly or indirectly owned beneficially by each such Nominating Person and Related Person, and any other direct or indirect opportunity to profit or share in any profit derived from any increase or decrease in the value of shares of the corporation,

(ii) any proxy, contract, arrangement, understanding, or relationship pursuant to which each such Nominating Person and Related Person has a right to vote, direct the voting of, or cause the voting of any shares or any security of the corporation,

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

(iv) any rights to dividends on the securities of the corporation owned beneficially by each such Nominating Person and Related Person that are separated or separable from the underlying securities of the corporation,

(v) any proportionate interest in securities of the corporation or Derivative Instruments or Short Interests held, directly or indirectly, by a general or limited partnership in which each such Nominating Person and Related Person is a general partner or, directly or indirectly, beneficially owns an interest in a general partner of such general or limited partnership,

(vi) any performance-related fees (other than an asset-based fee) that each such Nominating Person and Related Person is entitled to, based on any increase or decrease in the value of shares of the corporation or Derivative Instruments

or Short Interests, if any, as of the date of such notice and any updates or supplements, including without limitation, any such interests held by members of the immediate family of each such Nominating Person and Related Person sharing the same household, and

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

(C) a written representation as to whether and the extent to which any other hedging or other transaction or series of transactions has been entered into by or on behalf of, or any other agreement, arrangement, or understanding (including any borrowing or lending of shares) has been made, the effect or intent of which is to mitigate loss or manage risk, or to increase or decrease the voting power of, each such Nominating Person or Related Person with respect to any security of the corporation,

(D) a written representation as to whether each Nominating Person and Related Person intends or is part of a group that intends to deliver to beneficial owners of the corporation's securities representing at least 67% of the voting power entitled to vote generally in the election of directors at the meeting either (i) at least 20 calendar days before the date of the meeting, a copy of a definitive proxy statement for the solicitation of proxies for its director candidates or (ii) at least 40 calendar days before the date of the meeting, a Notice of Internet Availability of Proxy Materials that would satisfy the requirements of Rule 14a-16(d) of the Exchange Act,

(E) a description of any agreement, arrangement or understanding (including the material terms thereof) between or among any such Nominating Person, on the one hand, and any Related Person, on the other hand, related to any subject matter that would be material to a reasonable shareholder's evaluation of (i) the solicitation of shareholders by such Nominating Person or (ii) any

nominee of such Nominating Person, including, without limitation, matters of social, labor, environmental and governance policies, regardless of whether such agreement, arrangement or understanding relates specifically to the corporation,

(F) a description of any plans or proposals on the part of such Nominating Person or any Related Person to nominate directors at any other Public Company within the next 12 months,

(G) a description of any proposals or nominations submitted on behalf of such Nominating Person or any Related Person to nominate directors at any other Public Company within the past 36 months (whether or not such proposal or nomination was publicly disclosed), and

(H) any other information relating to each such Nominating Person or any Related Person that would be required to be disclosed in a proxy statement or other filings required to be made in connection with solicitations of proxies for, as applicable, the proposal or for the elections of directors in a contested election pursuant to Section 14 of the Exchange Act, including without limitation, the information that would be disclosed under Item 5(b) of Schedule 14A under the Exchange Act, assuming that each such Nominating Person or Related Person was deemed a "participant" as defined paragraphs (a)(ii), (iii) (iv), (y) and (vi) of Instruction 3 to Item 4 of Schedule 14A.

(3)For purposes of this Section 3.04:

(A) The definitions of the phrases "Derivative Instrument" and "Short Interest" shall be deemed to cover equity interests in any principal competitor of the corporation to the same extent that such definitions cover a class or series of securities of the corporation.

(B) A Nominating Person shall be deemed to be "acting in concert" with a person or entity if such Nominating Person has knowingly acted (whether or not pursuant to an express agreement, arrangement or understanding) at any time during the prior two years in concert with such person or entity (or any Control Person thereof) in relation to matters (whether or not specific to the corporation) that would be material to the Nominating Person's solicitation of shareholders or a shareholder's evaluation of any proposed nominee, including, without limitation, matters of social, labor, environmental and governance policies; provided, however, that a Nominating Person shall not be deemed to be acting in concert

with a person or entity whose primary business is to serve as investment manager or advisor with respect to investing and trading in securities for a client or its own account solely as a result of such person's or entity's actions in a capacity as investment manager or advisor with respect to investing and trading in securities for a client or its own account,

(C) A "Control Person" is, with respect to any person or entity, (i) any other person or entity controlling or controlled by (directly or indirectly), or under common control with, such person or entity, and (ii) to the extent not included in clause (i) above, the respective directors, trustees, executive officers and managing members (including, with respect to an entity exempted from taxation under Section 501(1) of the Internal Revenue Code, each member of the board of trustees, board of directors, executive council or similar governing body thereof) of any such person or entity or any other Control Person of such person or entity,

(D) A "Family Member" is a person's spouse, parent, child, sibling, mother- or father-in-law, daughter- or son-in-law, sister- or brother-in-law and anyone (other than domestic employees) who shares the person's home,

(E) A "Nominating Person" is any shareholder giving the Nomination Notice or, if the Nomination Notice is given on behalf of a beneficial owner, such beneficial owner, and if such shareholder or beneficial owner is an entity, each Control Person thereof (in each case of a shareholder, beneficial owner or Control Person, together with any Family Member thereof),

(F) A "Public Company" is any entity with a class of equity securities registered pursuant to Section 12 of the Exchange Act, whether or not trading in such securities has been suspended, and

(G) A "Related Person" of any Nominating Person is (i) any person or entity (and any Control Person of any such person or entity) with respect to which such Nominating Person is acting in concert, and (ii) any beneficial owner of securities of the corporation owned of record or beneficially by such Nominating Person or any other Related Person.

(e) In no event may a Nominating Person provide notice under this Section 3.04 or otherwise with respect to a greater number of director candidates than are subject to election by shareholders at the applicable meeting. If the corporation shall, subsequent to receipt of a Nomination Notice, increase the number of directors subject to election at the meeting, a

Nomination Notice as to any additional nominees shall be due on the later of (A) what otherwise would have been the conclusion of the time period for the timely delivery of a Nomination Notice with respect to the meeting or (B) the tenth (10th) day following the date of public disclosure of such increase.

(f) The corporation may require any proposed nominee, Nominating Person or Related Person to provide any such additional information as may be reasonably requested by the corporation to facilitate disclosure to shareholders of all material facts that, in the reasonable discretion of the corporation, are relevant for shareholders to make an informed decision on the director election proposal, including such other information as may reasonably be requested by the corporation to determine the eligibility of such proposed nominee to serve as an independent director of the corporation or that could be material to a reasonable shareholder's understanding of the independence, or lack thereof, of such proposed nominee. Such Nominating Person or Related Person shall provide such additional information within ten (10) days after it has been requested by the corporation.

(g) The corporation may require any nominee proposed by a Nominating Person to submit to one or more background checks (including through a third party investigation firm) and in-person interviews as may reasonably be requested by the corporation.

(h) The notice required by this Section 3.04 shall be updated and supplemented by each Nominating Person and Related Person so that the information provided or required to be provided in the Nomination Notice shall be true and correct (1) as of the record date for the meeting and (2) as of the date that is ten business days prior to the date of the meeting or any adjournment thereof. Each such update and supplement shall be delivered to, or mailed and received by, the Secretary of the corporation at the principal executive offices of the corporation not later than five business days after the record date for the meeting (in the case of the update and supplement required to be made as of such record date), and not later than five business days prior to the date for the meeting or, if practicable, any adjournment thereof (and, if not practicable, on the first practicable date prior to the date to which the applicable meeting of shareholders has been adjourned in the case of the update and supplement required to be made as of ten business days prior to the date of the applicable meeting of shareholders or any adjournment thereof). For the avoidance of doubt, the obligation to update and supplement as set forth in this paragraph shall not limit the corporation's rights with respect to any deficiencies in any Nomination Notice, extend any applicable deadlines or enable or be deemed to permit a Nominating Person who has previously submitted a Nomination Notice hereunder to amend or update any nomination or to submit any new nomination.

(i) This Section 3.04 shall be the exclusive means for a shareholder to make director nominations. The presiding officer of a meeting of shareholders at which directors are to be elected may refuse to permit any nomination for the election of a director to be made at any such meeting by a shareholder who has not complied with all of the foregoing procedures in this Section 3.04. Any such decision by the presiding officer of the meeting shall be final, binding, and conclusive upon all parties in interest. Notwithstanding the foregoing provisions of this Section 3.04, a shareholder shall also comply with all applicable requirements of the Exchange

Act and the rules and regulations thereunder, and compliance with such applicable requirements of the Exchange Act and the rules and regulations thereunder is not intended to, and shall not, limit the requirements applicable to nominations by a shareholder pursuant to this Section 3.04. If any Nominating Person provides notice pursuant to Rule 14a-19 promulgated under the Exchange Act, such Nominating Person shall deliver to the corporation, no later than seven business days prior to the applicable meeting, reasonable evidence that it has met the requirements of Rule 14a-19(a)(3) promulgated under the Exchange Act. Subject to complying with the substantive and procedural requirements of this Section 3.04, nothing in this Section 3.04 shall be deemed to affect any rights of shareholders to request inclusion of proposals in the corporation's proxy statement pursuant to Rule 14a-8, or any successor rule, under the Exchange Act.

Section 3.05. Notice of Shareholder Business.

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

(b) For business to be properly brought before an annual meeting by a shareholder pursuant to clause (4) of Section 3.05(a), the shareholder must have given timely notice thereof in writing to the Secretary of the corporation, and any such proposed business must constitute a proper matter for shareholder action. To be timely, a shareholder's notice given pursuant to this Section 3.05 must be received at the principal executive offices of the corporation (1) in the case of an annual meeting that is called for a date that is within 30 days before or 30 days after the anniversary date of the immediately preceding annual meeting of shareholders, not less than 120 days nor more than 150 days prior to such anniversary date, and (2) in the case of an annual meeting that is called for a date that is not within 30 days before or 30 days after the anniversary date of the immediately preceding annual meeting, not later than the close of business on the tenth day following the day on which notice of the date of the meeting was mailed or public disclosure of the date of the meeting was made, whichever occurs first,

(c) A shareholder's notice to the Secretary shall set forth as to each matter the shareholder proposes to bring before the meeting (1) a brief description of the business desired to be brought before the meeting and the reasons for conducting such business at the meeting, and if a specific action is to be proposed, the text of the resolution or resolutions which the shareholder proposes that the corporation adopt, (2) any material interest of such shareholder of record and any Related Person on whose behalf the proposal is made in such business, (3) a representation that the shareholder intends to appear in person or by proxy at the meeting to bring before the meeting the business specified in the notice, (4) the total number of shares of the corporation that will be voted by the notifying shareholder for such proposal, and (5) as it relates to such shareholder and

any Related Person, and as applicable to such proposal, the information required by Section 3.04(d)(2) other than the representation required by Section 3.04(d)(2)(C), which instead will be replaced with a representation as to whether and to what extent such shareholder and any Related Person will solicit any proxies from shareholders of the corporation with respect to such proposal. For purposes of applying this Section 3.05(c), the word "shareholder" shall be used in place of the word "Nominating Person" in Section 3.04(d)(2).

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

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

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

Section 3.06. Quorum and Adjournment, General Rule. A meeting of shareholders of the corporation duly called shall not be organized for the transaction of business unless a quorum is present. Except in the circumstances specified in Section 1756(b) of the Associations Code, a quorum for the purpose of consideration of and action on a particular matter shall consist of the presence in person or by proxy of shareholders entitled to cast at least a majority of the votes which

all shareholders are entitled to cast on the particular matter, and, if any shareholders are entitled to vote as a class on the matter, the presence of shareholders entitled to cast at least a majority of the votes entitled to be cast in the class vote. If a proxy casts a vote on behalf of a shareholder on any matter other than a procedural motion considered at a meeting of shareholders, the shares for which the proxy has so acted shall be deemed to be present during the entire meeting for purposes of determining whether a quorum is present for consideration of any other matter. Notwithstanding the withdrawal of enough shareholders to leave less than the number of votes required by the preceding sentence, the shareholders who continue to be present at a duly organized meeting shall constitute a quorum in order to continue to do business until adjournment. Only the presiding officer of the meeting (as determined under Section 3.08) shall have the power to adjourn the meeting, whether or not there is a quorum present.

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

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

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

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

his or her resignation will not participate in either the committee's or the Board of Directors' decision with respect to such resignation.

Section 3.08. Organization and Conduct. At every meeting of the shareholders, the chair of the Board of Directors, if there be one, or, in the case of vacancy in office or absence of the chair of the Board of Directors, one of the following persons present in the order stated: the vice chair of the Board of Directors (if there is one), the Chief Executive Officer, the President, the vice presidents in their order of rank and seniority, or a person chosen by vote of the shareholders present, shall act as presiding officer of the meeting. The presiding officer of the meeting, consistent with any authority, direction, restriction or limitation given to him or her by the Board of Directors, shall have any and all powers and authority necessary to conduct an orderly meeting, preserve order and determine any and all procedural matters, including the proper means of obtaining the floor, who shall have the right to address the meeting, the manner in which shareholders will be recognized to speak, imposing reasonable limits on the amount of time at the meeting taken up in remarks by any one shareholder or group of shareholders, the number of times a shareholder may address the meeting, and the person to whom questions should be addressed. The presiding officer shall announce at the meeting when the polls close for each matter voted upon. If no announcement is made, the ability to cast a vote will be deemed to have closed upon the final adjournment of the meeting. After the polls close, no ballots, proxies, or votes, nor any revocations or changes thereto, may be accepted. The Secretary or, in the absence of the Secretary, an Assistant Secretary shall act as Secretary of the meeting.

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

Section 3.10. Voting and Other Action by Proxy.

(a) General Rules.

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

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

(3) Any shareholder or other person or entity (other than the Board of Directors) directly or indirectly soliciting proxies from other shareholders of the Company must use a proxy card color other than white, which shall be reserved for the exclusive use by the Board of Directors.

(b) Execution and Filing. Every proxy shall be executed in writing by the shareholder or by the duly authorized attorney-in-fact of the shareholder and filed with the Secretary of the corporation. A proxy, unless coupled with an interest, shall be revocable at will, notwithstanding any other agreement or any provision in the proxy to the contrary, but the

revocation of a proxy shall not be effective until written notice thereof has been given to the Secretary of the corporation. An unrevoked proxy shall not be valid after three years from the date of its execution unless a longer time is expressly provided therein.

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

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

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

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

Section 3.13. Voting by Entity Shareholders; Controlled Shares.

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

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

ARTICLE IV

Board of Directors

Section 4.01. Powers; Personal Liability.

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

(b)Personal Liability of Directors.

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

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

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

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

Section 4.03. Number and Term of Office.

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

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

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

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

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

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

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

Section 4.09. Quorum of and Action by Directors.

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

(b) Action by Written Consent. Any action required or permitted to be approved at a meeting of the Board of Directors may be approved without a meeting by a consent or consents to the action in record form. Except as provided in subsection (c), the consents must

be signed before, on or after the effective time of the action, by all of the directors in office at the effective time. The consent or consents must be filed with the minutes of the proceedings of the Board of Directors.

(c) Effectiveness of Consent. A consent may provide, or a person signing a consent, whether or not then a director, may instruct in record form, that the consent will be effective at a future time, including a time determined upon the happening of an event. In the case of a consent signed by a person not a director at the time of the signing, the consent is effective at the stated effective time if the person who signed the consent is a director at the effective time and did not revoke the consent in record form prior to the effective time. A consent is effective at the stated effective time even if one or more signers are no longer directors at the effective time, unless the consent has been revoked by a signer who is a director at the effective time. A signer of a consent may revoke the signer's consent in record form until the consent becomes effective.

Section 4.10. Committees.

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

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

Section 4.12. Vacancies. Vacancies in the Board of Directors, including vacancies resulting from an increase in the number of directors, shall be filled by a majority vote of the directors then in office, though less than a quorum, except as otherwise required by the Associations Code or as provided in Section 1725(b)(3) of the Associations Code.

ARTICLE V

Officers

Section 5.01. Officers Generally.

(a) Number, Qualifications and Designation. The officers of the corporation shall be a Chief Executive Officer, a President, one or more Vice Presidents as specified by the Board of Directors or by the Chief Executive Officer and acting with authority delegated pursuant to Section 5.03, a Secretary, a Treasurer, and the holders of such other officer positions as may be created in accordance with the provisions of Section 5.03. Officers may but need not be directors or shareholders of the corporation.

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

(c) Standard of Care. The standard of care, justifiable reliance, and business judgment rule applicable to officers of the Corporation shall be those set forth in Associations Code Section 1734 or any successor provision thereto.

Section 5.02. Election, Term of Office and Resignations.

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

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

Section 5.03. Subordinate Officers, Committees and Agents. In addition to the officer positions specified in Section 5.01, the Board of Directors may from time to time create such other officer positions (and elect officers to fill such positions or delegate the election of such officers to the Chief Executive Officer) and appoint such committees, employees or other agents as the business of the corporation may require. The Board of Directors may delegate to the Chief Executive Officer or committee the power to create subordinate officer positions (and elect or appoint officers to fill such positions) and to retain or appoint employees or other agents, or committees thereof, and to prescribe the authority and duties of such subordinate officers, committees, employees or other agents.

Section 5.04. Removal of Officers and Agents. Any officer or agent of the corporation may be removed by the Board of Directors with or without cause. The removal shall be without prejudice to the contract rights, if any, of any person so removed. Election or appointment of an officer or agent shall not of itself create contract rights.

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

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

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

Section 5.07. The Vice Presidents. The Vice Presidents shall perform such duties as may from time to time be assigned to them by the Board of Directors or, to the extent not inconsistent therewith, by the Chief Executive Officer or the President.

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

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

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

Section 5.10. Personal Liability.

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

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

(c) An amendment or repeal of a provision described in this Section 5.10 shall not affect its application with respect to an act by an officer occurring before the amendment or repeal.

ARTICLE VI

Share Register

Section 6.01. Share Register. The share register or transfer books and blank share certificates shall be kept by the Secretary or by any transfer agent or registrar designated by the Board of Directors for that purpose.

ARTICLE VII

Indemnification of Directors, Officers and Other Authorized Representatives

Section 7.01. Scope of Indemnification.

(a) General Rule. The corporation shall indemnify an indemnified representative against any liability incurred in connection with any proceeding in which the indemnified representative may be involved as a party or otherwise by reason of the fact that such person is or was serving in an indemnified capacity, including, without limitation, liabilities

resulting from any actual or alleged breach or neglect of duty, error, misstatement or misleading statement, negligence, gross negligence or act giving rise to strict or products liability, except:

(1) where such indemnification is expressly prohibited by applicable law;

(2) until such time as the conduct of the indemnified representative has been finally determined:

(A) to constitute willful misconduct or recklessness within the meaning of 15 Pa. C. S. § 1746(b) or any superseding provision of law sufficient in the circumstances to bar indemnification against liabilities arising from the conduct; or (B) to be based upon or attributable to the receipt by the indemnified representative from the corporation of a personal benefit to which the indemnified representative is not legally entitled; or (C) to the extent such indemnification has been finally determined in a final adjudication to be otherwise unlawful.

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

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

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

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

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

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

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

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

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

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

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

Section 7.06. Contribution. If the indemnification provided for in this Article VII or otherwise is unavailable for any reason in respect of any liability or portion thereof, the corporation shall contribute to the liabilities to which the indemnified representative may be subject in such proportion as is appropriate to reflect the intent of this Article VII or otherwise. Contribution for the benefit of an indemnified representative under this section shall be based upon (A) the relative benefits received by the corporation and all other indemnified representatives, on the one hand, and the indemnified representative, on the other hand, from the transaction from which the proceeding arose, as further adjusted by (B) the relative fault of the corporation and all other indemnified representatives who are, or would be if joined to the proceeding, jointly liable with the indemnified representative in connection with the events that resulted in the liability and (C) any other equitable considerations that may be legally required to be considered. Relative fault of a person shall be determined by reference to, among other things, the degree to which the person's actions were motivated by intent to gain personal profit or advantage, the degree to which the person's liability is primary or secondary, and the degree to which the person's conduct is active or passive.

Section 7.07. Contract Rights; Amendment or Repeal. All rights under this Article VII shall be deemed a contract between the corporation and the indemnified representative pursuant to which the corporation and each indemnified representative intend to be legally bound. Any repeal, amendment or modification hereof shall be prospective only and shall not affect any rights or obligations then existing.

Section 7.08. Scope of Article. The rights granted by this Article VII shall not be deemed exclusive of any other rights to which those seeking indemnification, contribution or advancement of expenses may be entitled under any statute, agreement, vote of shareholders or disinterested directors or otherwise, both as to action in an indemnified capacity and as to action in any other capacity. The indemnification, contribution and advancement of expenses provided by or granted pursuant to this Article VII shall continue as to a person who has ceased to be an indemnified representative in respect of matters arising prior to such time, and shall inure to the benefit of the heirs, executors, administrators and personal representatives of such a person.

Section 7.09. Reliance on Provisions. Each person who shall act as an indemnified representative of the corporation shall be deemed to be doing so in reliance upon the rights of indemnification, contribution and advancement of expenses provided by this Article VII.

Section 7.10. Interpretation. The provisions of this Article VII are intended to constitute bylaws authorized by 15 Pa. C. S. § 1746.

ARTICLE VIII

Forum for Adjudicating Disputes

Section 8.01. Exclusive Forum. Unless the corporation consents in writing to the selection of an alternative forum, (a) an "internal corporate claim" must be brought exclusively in the state courts of the Commonwealth of Pennsylvania in and for Allegheny County or the federal

courts of the Western District of Pennsylvania and (b) a claim arising under the Securities Act of 1933 must be brought exclusively in federal court. "Internal corporate claim" shall mean (a) an action that is based upon an alleged violation by a current or former director, officer or shareholder in that capacity of a duty owed to the corporation under the laws of the Commonwealth of Pennsylvania; (b) a derivative action or proceeding brought on behalf of the corporation; (c) an action asserting a claim arising pursuant to any provision of the Associations Code or the articles of incorporation or bylaws of the corporation; or (d) any action asserting a claim regarding the internal affairs of the corporation not included in part (a), (b), or (c) of this sentence. If a court of competent jurisdiction finally determines that a shareholder has breached the provisions of this Section 8.01, then the corporation shall be entitled to recover its reasonable legal fees and costs in addition to any and all other rights and remedies that may exist at law or in equity.

Section 8.02. Submission to Jurisdiction. Without limiting the effect of 15 Pa. C. S. § 1505, any person or entity purchasing or otherwise acquiring any interest in shares of the corporation shall be deemed, to the fullest extent permitted by law, to be a "shareholder" for purposes of this Article VIII and to have notice of and consented to the provisions of this Article VIII. Any shareholder who initiates an internal corporate claim or a claim arising under the Securities Act of 1933 in a court other than a court specified in Section 8.01 (a "Foreign Action") shall be deemed to have consented to (i) the personal jurisdiction of the courts specified in Section 8.01 in an action or proceeding brought in any of those courts against the shareholder to enforce Section 8.01 (an "Enforcement Action") and (ii) having service of process in an Enforcement Action made upon the shareholder by United States mail addressed to the shareholder at the shareholder's address as it appears on the records of the corporation or upon the shareholder's counsel in the Foreign Action by United States mail addressed to such counsel.

ARTICLE IX

Miscellaneous

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

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

Section 9.03.Contracts and Other Instruments.

(a)General Rule. The Board of Directors may authorize any officer or agent to enter into any contract or to execute or deliver any instrument on behalf of the corporation, and such authority may be general or confined to specific instances, but in cases where the Associations Code requires approval or adoption thereof by the shareholders in order to be deemed adopted by the corporation, such contract or instrument shall not be binding upon the corporation unless such approval or adoption occurs.

(b)Execution of Instruments.

(1) The Chief Executive Officer, the President, any Vice President, the Secretary, any Assistant Secretary, the Treasurer and any Assistant Treasurer of the corporation, and any other person, if authorized by resolution of the Board of Directors, shall, except as otherwise provided by the bylaws, applicable law, or resolution of the Board of Directors, have the power to execute and deliver on behalf of the corporation any ballots, proxies, consents, or other instruments executed by the corporation in its capacity as holder of stock or other securities of or interests in another corporation, limited liability company, partnership, joint venture, trust, or other association, enterprise or entity.

(2) Any deeds, mortgages, bonds, contracts or other instruments or documents, or any assignment or endorsement thereof, executed or entered into between the corporation and any other person, when signed by one or more officers or agents having actual or apparent authority to sign it, or by the Chief Executive Officer, the President, any Vice President, the Secretary, any Assistant Secretary, the Treasurer or any Assistant Treasurer of the corporation, shall be held to have been properly executed for and on behalf of the corporation, except in cases where such other person knows that the officer or agent lacks authority to sign it or is acting contrary to these bylaws or a resolution of the Board of Directors or applicable law.

(3) Paragraphs (1) and (2) of this Section 9.03(b) shall not prejudice the rights of the corporation against any person who shall have executed any document or instrument in excess of his or her actual authority.

Section 9.04. Corporate Records.

(a) Required Records. The corporation shall keep complete and accurate books and records of account, minutes of the proceedings of the incorporators, shareholders and directors and a share register giving the names and addresses of all shareholders and the number and class of shares held by each, and a record of all issuances and transfers of shares. The share register shall be kept at either the registered office of the corporation in the Commonwealth of Pennsylvania or at its principal place of business wherever situated or at the office of its registrar or transfer agent. Any books, minutes or other records may be in written form or inscribed in a tangible medium or stored in an electronic or other medium and retrievable in perceivable form.

(b) Right of Inspection. Every shareholder shall, upon demand satisfying the requirements of this Section 9.04(b) and the requirements of Section 1508 of the Associations Code, have a right to examine, in person or by agent or attorney, during the usual hours for business for any proper purpose, the share register, books and records of account, and the minutes of, and consents in lieu of meetings by, the incorporators, shareholders and directors and to make copies or extracts therefrom. A proper purpose shall mean a purpose reasonably related to the interest of the person as a shareholder. In every instance where an attorney or other agent is the person who seeks the right of inspection, the demand shall be accompanied by a verified power of attorney or other writing that authorizes the attorney or other agent to so act on behalf of the shareholder. The demand shall be directed to the corporation at (i) its registered office in the Commonwealth of Pennsylvania, (ii) its principal place of business wherever situated, (iii) in care of the person in charge of an actual business office of the corporation, or (iv) in care of the Secretary of the corporation at the most recent address of the Secretary shown in the records of the Pennsylvania Department of State.

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

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

CERTIFICATIONS

I, Leroy M. Ball, certify that:

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

Date: May 3, 2024

/s/ LEROY M. BALL

Leroy M. Ball

President and Chief Executive Officer

CERTIFICATIONS

I, Jimmi Sue Smith, certify that:

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

Date: May 3, 2024

/s/ JIMMI SUE SMITH
Jimmi Sue Smith
Chief Financial Officer

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

In connection with the Quarterly Report of Koppers Holdings Inc. (the "Company") on Form 10-Q for the quarter ending March 31, 2024 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned hereby certifies in his or her 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
Leroy M. Ball
President and Chief Executive Officer

/s/ JIMMI SUE SMITH
Jimmi Sue Smith
Chief Financial Officer

May 3, 2024

May 3, 2024
