



To be recognized as the standard bearer for safely delivering customer focused solutions primarily through the development and application of technologies to enhance wood.



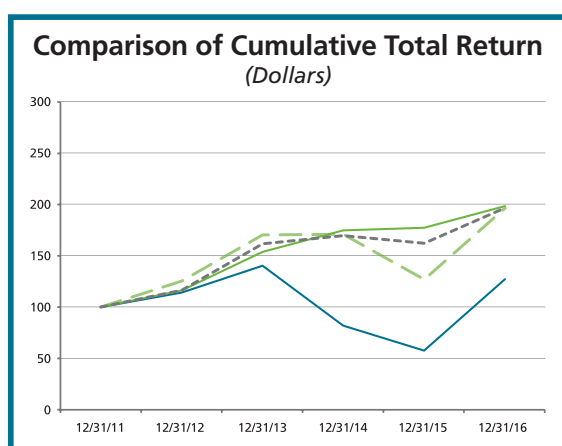
A N N U A L R E P O R T

Changing Perceptions. Advancing Our Culture.



Financial Highlights

Years Ended December 31	2016	2015	2014
(In millions, except share, per share and employee amounts)			
Operating Performance			
Net Sales	\$1,416.2	\$1,626.9	\$1,555.0
Operating Profit (Loss)	86.4	(29.6)	33.2
Income (Loss) from Continuing Operations	27.1	(75.9)	(40.0)
Net Income (Loss) Attributable to Koppers	29.3	(72.0)	(32.4)
Diluted Earnings (Loss) per Share—Continuing Operations	1.36	(3.50)	(1.61)
Financial Condition			
Total Assets	\$1,087.5	\$1,112.9	\$1,279.4
Total Debt	671.1	734.8	850.5
Cash and Cash Equivalents	20.8	21.8	51.1
Other Data			
Capital Expenditures	\$49.9	\$40.7	\$83.8
Number of Employees	1,853	2,142	2,142
Stock Information			
Market Price per Share—High	\$42.70	\$27.40	\$45.92
Market Price per Share—Low	13.58	15.78	22.52
Shares Outstanding (000s)	20,665	20,557	20,495



Value at	12/31/11	12/31/12	12/31/13	12/31/14	12/31/15	12/31/16
Koppers	\$100.00	\$114.15	\$140.18	\$81.92	\$57.55	\$127.07
S&P 500	\$100.00	\$116.00	\$153.57	\$174.60	\$177.01	\$198.18
S&P SmallCap 600 Materials	\$100.00	\$125.30	\$170.16	\$170.67	\$126.90	\$196.32
Russell 2000	\$100.00	\$116.35	\$161.52	\$169.42	\$161.95	\$196.45

Koppers
S&P 500
S&P SmallCap 600 Materials
Russell 2000

Set forth above are a line graph and table comparing the cumulative total returns (assuming reinvestment of dividends) during the period commencing December 31, 2011 and ending December 31, 2016, of \$100 invested in each of Koppers Holdings Inc.'s common stock, the Standard & Poor's 500 Index, the Standard & Poor's SmallCap 600 Materials Index and the Russell 2000 Index. Because our competitors are principally privately held concerns or subsidiaries or divisions of corporations engaged in multiple lines of business, we do not believe it is feasible to construct a peer group industry comparison. We have added the Standard & Poor's SmallCap 600 Materials Index to this graph to serve as a published industry index beginning with this 2016 Annual Report because Koppers Holdings Inc. is a constituent of the Standard & Poor's SmallCap 600 Materials Index, which includes corporations both larger and smaller than Koppers, and has an average market capitalization similar to ours. Additionally, although we have historically referenced the Russell 2000 Index in this graph as a published industry index, we have determined that the Russell 2000 Index, of which we are a constituent, is a more appropriate broad equity market index to include in this graph, rather than the Standard & Poor's 500 Index, as the Russell 2000 Index is comprised of issuers with generally similar market capitalizations to that of Koppers Holdings Inc. Accordingly, while both the Standard & Poor's 500 Index and the Russell 2000 Index have been included for this transitional year, we do not expect to include the Standard & Poor's 500 Index in future years.



Changing Perceptions. Advancing Our Culture.

We are more than halfway into our strategy to recreate Koppers, and we need to keep changing perceptions.

Dear Fellow Shareholders:

While 2016 may be remembered as one of the best performing years in Koppers history, I believe time will reveal that it was only the next step in our journey toward changing the perception of our company. We were a commodity chemical company generating uneven financial performance. We are now a high value, wood-based solutions provider serving infrastructure markets and demonstrating sustainably improving financial and safety performance. Nevertheless, perception can be difficult to change. Minds can get entrenched in defaulting to historical perspectives to support familiar narratives. Our share price increased 121 percent in 2016, outperforming peer group S&P SmallCap 600 Materials Index, which increased 55 percent. Given that our valuation is at the high end of our historical trading range, perception is already changing. However, markets can be fickle, so we need to consistently deliver high-level performance to support the higher valuation. We are more than halfway into our strategy to recreate Koppers, and we need to keep changing perceptions. Throughout this letter, I will point out the significant advancements in reinventing our company — a company well

on its way to demonstrating outperformance over the long term. The goal is to inspire more people to view us in that same light.

Transforming Our Company

While 2016 brought its share of challenges, it was an extremely rewarding year, with many accomplishments that transformed our company financially, operationally and culturally. We strengthened our balance sheet, reduced risk and volatility within our business, improved our profitability, positioned ourselves for further growth and established a solid foundation for sustaining a safety-first culture with a goal of Zero Harm. We also had the privilege of celebrating Koppers 10th Anniversary of Listing on the New York Stock Exchange (NYSE) by ringing the NYSE Closing Bell® on December 20, 2016.

Advancing Our Zero Harm Culture

Throughout 2016, we advanced Zero Harm as the company's overarching value, placing the care and protection of our people, environment and communities above all else. We are making a significant long-term investment in additional resources for process improvement and behavioral safety training for employees at all locations worldwide.

We strengthened our balance sheet, reduced risk and volatility within our business, improved our profitability, positioned ourselves for further growth and established a solid foundation for sustaining a safety-first culture with a goal of Zero Harm.

Even in the early stages of our Zero Harm efforts, I'm proud to say that we finished 2016 with the best safety performance yet in our company's history. Our recordable incidents saw a reduction of more than 15 percent year-over-year with nine of our 31 operating facilities proving that zero is possible.

These statistics validate that our employees truly embrace the Zero Harm mindset as a culture change that is here to stay. We still have

a demanding journey to get to zero, but we remain steadfast in our commitment. A company focused on doing the right thing will serve all its stakeholders well. As we enhance our Zero Harm efforts, I'm confident that we'll continue to see improved safety and operating outcomes.



Establishing Operational Excellence

At present, we are in the fifth inning of executing our company's strategy, with greater upside ahead. Some significant milestones from the past two years that have helped transform Koppers and put us on the path to sustained excellence include:

- We have consistently focused on Zero Harm through our mission statement of creating safe and environmentally responsible solutions that solve our customer's most important challenges and result in superior performance for shareholders. More importantly, from a human perspective, we have reduced injuries suffered on the job, lessened the environmental impact of our business processes, and engaged our communities in new and different ways.
- We have extensively realigned our portfolio through our vision of striving to be recognized as the standard bearer for safely delivering customer-focused solutions primarily through the development and application of

technologies to enhance wood. We believe Koppers is now the leading global producer of wood preservatives and #1 in most major wood preservative markets across the globe. Wood-related revenues made up 67 percent of our top line in 2016 compared to 47 percent in 2014, and our profitability has increased by 50 percent over that same time frame.

- We leveraged historically strong relationships in our Railroad and Utility Products and Services (RUPS) and Performance Chemicals (PC) segments to extend sales commitments by several years, thus solidifying a critical base business. We have extended crosstie contracts with the four largest U.S. Class I railroads into or through 2021 while gaining commitment for over a third of our expected PC volumes in 2018 and one-fifth of our expected PC volumes in 2019. We refocused efforts on serving our repair-and-replacement end markets, which are inherently more stable through an economic cycle.
- We de-emphasized the Carbon Materials and Chemicals (CMC) business and drastically cut our fixed costs by ceasing coal tar distillation activities or selling seven of 11 CMC global operating facilities. We are making meaningful progress toward exceeding our 2018 goal of CMC earning a minimum EBITDA margin of 9 percent despite lower crude oil prices, lower average end market pricing and much lower end market sales volumes.
- We significantly reduced our exposure in China by ceasing distillation at our majority-held joint venture, KCCC, in February 2016, and closing on the sale of our minority-held joint venture, TKK, in November 2016. In the last two years, our China sales declined by more than half, while profitability has now moved into positive territory.
- Including the joint ventures in China, we divested six operating units or facilities that were not focused on wood preservation or were underperforming without a clear path

We believe Koppers is now the leading global producer of wood preservatives and #1 in most major wood preservative markets across the globe.

Our financial performance demonstrates that our prospects are bright and the strategic shift to focus on more fundamentally stable and healthier end markets was right for our company.

toward growth or improvement. We gave up less than \$100 million of consolidated sales that reported a collective operating loss, while receiving net cash proceeds of \$11 million in 2015 and 2016, securing a \$10 million repayment of principal and accrued interest, and greatly reducing future environmental uncertainties.

- We improved our balance sheet considerably. We reduced debt to \$671 million, a decrease of \$179 million over the past two years, bringing our net leverage ratio down from 4.7 on a pro-forma basis at year-end 2014 to 3.7 at year-end 2016.

Delivering Strong Results

Our financial performance demonstrates that our prospects are bright and the strategic shift to focus on more fundamentally stable and healthier end markets was right for our company. In 2016, our profitability showed significant improvement, while operating cash flow of \$119 million was only slightly lower than the prior year's record cash flow generation of \$128 million.

Our PC segment generated substantially higher profitability in 2016 compared with the prior year, benefiting from a strong market position. We had higher demand in North America for copper-based wood preservatives brought on by the U.S. wood treating standards-driven change to move more residential treated wood products from 'above ground' to 'ground contact' to improve product quality, plus continued strength in the building material markets. Both trends are expected to continue in 2017 before moderating somewhat in 2018. Overall, repair and remodeling trends should remain favorable, and as a leader in its industry, the PC business is well-positioned to deliver strong results.

In our RUPS segment, we saw a year-over-year sales and profit decline as all served markets experienced cyclical weakness due to a reduction in crosstie volumes related to Class I rail customers, competitive pricing in

the commercial crosstie market and reduced demand in the Australian utility pole market. Despite these headwinds, RUPS profit margins held relatively steady. The weakness faced in our RUPS business in the second half of 2016 will likely continue throughout 2017. There are already signs of improvement in rail traffic in early 2017, and given the typical lag, we do not expect to see increased demand until 2018.

For our CMC business, it was all about further aligning with RUPS to better serve the North American rail industry. Consistent with that strategy, sales volumes declined for carbon pitch and carbon black feedstock, so that we can direct more production aimed at the higher-value wood preservatives market. CMC operating profitability was substantially higher than the prior year as we consolidated our manufacturing footprint and reduced average raw material costs. We solidified our raw material sourcing by securing or extending supply agreements with three steel companies in North America and Europe for most of our future needs. These five-to-10 year agreements should provide a long-term stable supply of creosote for the North American rail industry while vastly reducing our pricing exposure to ancillary markets. Looking ahead, we expect RUPS and CMC to become even more integrated to yield greater overall efficiencies.

Additionally, in August 2016 we resumed the construction project to add naphthalene production capability at our Stickney, Illinois, location to create one fully integrated chemical processing facility. The remaining \$30-\$35 million of capital spending for that project should be completed by early 2018, which will allow us to use our Follansbee, West Virginia, location as a distribution terminal while we lease our remaining assets to a third party. Thus, we expect step changes to CMC profitability of approximately \$10 million per year in 2017 and 2018, which should bring segment EBITDA margins back to its goal of double digits.

We now have greater flexibility to pursue the next step in our strategy, which is to execute on selective acquisition opportunities in a disciplined manner to enhance our business portfolio.

Strengthening Our Balance Sheet

The reduction in balance sheet leverage in the past two years positioned us to successfully complete our bond tender and subsequent bond offering of \$500 million of Senior Unsecured Notes at a fixed interest rate of 6.0 percent in early 2017. Because of the new notes offering, we've lowered our overall cost of borrowing and shifted our long-term debt repayment date from 2019 to 2025. Also, we entered into a new five-year credit agreement with our lending group providing for a \$400 million revolving credit facility that matures on February 17, 2022, and we eliminated our term-loan debt.

Due to these financing transactions, we now have greater flexibility to pursue the next step in our strategy, which is to execute on selective acquisition opportunities in a disciplined manner to enhance our business portfolio. While growing our wood preservation presence remains our focus, we will also entertain strategic investments in maintenance-of-way opportunities. We have a track record of successfully executing on acquisitions, and we expect to continue that tradition.

Believing In Our Potential

The myriad of achievements could not have happened without the ingenuity, resilience and commitment of our 1800-plus employees worldwide. They were faced with the need for enormous change, and instead of making excuses, our people took the challenges presented as opportunities for growth and innovation to move our company forward. I am incredibly proud of the progress we have made in a short time and grateful to the people who made it happen.

The myriad of achievements could not have happened without the ingenuity, resilience and commitment of our 1800-plus employees worldwide.

Likewise, I appreciate the support and insight of our Board of Directors, who challenged the senior management team to develop a compelling value creation strategy and then enabled us to take it to its full potential. With their valued assistance, we have evolved into a market-leading, global wood-based solutions provider — and we are far from finished.

Finally, I have received many well wishes and much enthusiasm over the past year from shareholders who have recognized and acknowledged our early success of becoming a high-performing global leader centered on wood preservation technologies. All I can say is, thank you for your continued support and belief in our ability to succeed. It's what keeps us going. We will continue to do everything we can to reward your commitment to our company and add some new believers along the way.

Sincerely,



Leroy M. Ball
President and Chief Executive Officer

Unaudited Reconciliations of Non-GAAP Financial Measures

This report contains certain non-GAAP financial measures. Koppers believes that adjusted EBITDA, adjusted EBITDA margin and net leverage ratio provide information useful to investors in understanding the underlying operational performance of the company, its business and performance trends, and facilitates comparisons between periods and with other corporations in similar industries. The exclusion of certain items permits evaluation and a comparison of results for ongoing business operations, and it is on this basis that Koppers management internally assesses the company's performance. In addition, the Board of Directors and executive management team use adjusted EBITDA and adjusted earnings per share as performance measures under the company's annual incentive plans.

Although Koppers believes that these non-GAAP financial measures enhance investors' understanding of its business and performance, these non-GAAP financial measures should not be considered an alternative to GAAP basis financial measures and should be read in conjunction with the relevant GAAP financial measure. Other companies in a similar industry may define or calculate these measures differently than the company, 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.

See the attached tables for the following reconciliations of non-GAAP financial measures referenced in this report: Unaudited Reconciliation of Net Income to Adjusted EBITDA and Pro Forma Adjusted EBITDA, and Unaudited Reconciliation of Net Debt to Net Leverage Ratio.

For the company's guidance, adjusted EBITDA and adjusted EBITDA margin excludes restructuring, impairment, non-cash LIFO charges, and non-cash mark-to-market commodity hedging. The forecasted amounts for these items cannot be reasonably estimated due to their nature. For that reason, the company is unable to provide GAAP earnings estimates at this time.

UNAUDITED RECONCILIATION OF NET INCOME TO ADJUSTED EBITDA AND PRO FORMA ADJUSTED EBITDA

	<i>Year ended December 31,</i>	
	2016	2014
<i>(In millions)</i>		
Net income (loss)	\$ 27.7	\$ (39.4)
Interest expense	50.8	39.1
Depreciation and amortization	60.5	44.0
Income taxes	11.4	34.1
Income from discontinued operations	(0.6)	(0.6)
EBITDA with noncontrolling interests	149.8	77.2
Items impacting net income		
Impairment, restructuring and plant closure costs	33.2	30.8
Non-cash LIFO (benefit) expense	(9.5)	1.2
Net loss on sale of business	1.7	—
Reimbursement of environmental costs	(2.7)	—
Escrow recovery	(1.0)	—
Mark-to-market commodity hedging (non-cash)	(1.7)	—
Pension settlement charge	4.4	—
Osmose acquisition costs	—	7.1
Total adjustments	24.4	39.1
Adjusted EBITDA with noncontrolling interests	\$174.2	116.3
Osmose pre-acquisition pro-forma EBITDA		40.0
Osmose acquisition costs		10.8
Pro forma adjusted EBITDA with noncontrolling interests		\$167.1

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UNAUDITED RECONCILIATION OF NET DEBT TO NET LEVERAGE RATIO

	<i>Year ended December 31,</i>	
	2016	2014
<i>(In millions, except for net leverage ratio)</i>		
Total debt, net of debt issuance costs	\$662.4	\$836.0
Less: cash	20.8	51.1
Net debt	641.6	784.9
Adjusted EBITDA with noncontrolling interests	\$174.2	
Pro forma adjusted EBITDA with noncontrolling interests		\$167.1
Net leverage ratio	3.7	4.7

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

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2016

Commission file number 1-32737

KOPPERS HOLDINGS INC.

(Exact name of registrant as specified in its charter)

Pennsylvania
(State of incorporation)

20-1878963
(IRS Employer Identification No.)

436 Seventh Avenue
Pittsburgh, Pennsylvania 15219
(Address of principal executive offices)

(412) 227-2001
(Registrant's telephone number, including area code)

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

Common Stock, par value \$0.01 per share
Title of Each Class

New York Stock Exchange
Name of Exchange on which registered

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act: Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes No

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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer", "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

The aggregate market value of Common Stock held by non-affiliates of the registrant, based on the closing sales price of the Common Stock on the New York Stock Exchange on June 30, 2016 was \$617.9 million (affiliates, for this purpose, have been deemed to be Directors and executive officers of Koppers Holdings Inc.).

As of January 31, 2017, 20,664,898 shares of Common Stock of the registrant were issued and outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement for the 2017 Annual Meeting of Shareholders are incorporated by reference into Part III of this Annual Report on Form 10-K.

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FORWARD-LOOKING STATEMENTS

This report and the 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, restructuring, profitability and anticipated synergies, 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”, “intends”, “likely” or other similar words or phrases are generally intended to identify forward-looking statements. Any forward-looking statement contained herein, regarding expectations with respect to sales, earnings, cash flows, operating efficiencies, product introduction or expansion, the benefits of acquisitions and divestitures or other matters, 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;
- demand for our goods and services;
- competitive conditions in the industries in which we operate;
- interest rate and foreign currency rate fluctuations;
- potential difficulties in protecting 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 limitations of our debt covenants;
- interest rate fluctuations and other changes in borrowing costs;
- other capital market conditions, including foreign currency rate fluctuations;
- availability of and fluctuations in the prices of key raw materials, including coal tar, timber and scrap copper;
- economic and political conditions in international markets, including governmental changes and restrictions on the ability to transfer capital across countries;
- potential impairment of our goodwill and/or long-lived assets;
- parties who are obligated to indemnify us for liabilities, including legal and environmental liabilities fail to perform under their legal obligations;
- changes in laws, including increased tax rates, regulations or accounting standards, third-party relations and approvals, and decisions of courts, regulators and governmental bodies;
- the effects of competition, including locations of competitors and operating and market competition;
- unfavorable resolution of litigation against us;
- the other factors set forth under “Risk Factors”;
- as well as those discussed more fully elsewhere in this Form 10-K.

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. We undertake no obligation to publicly update or revise any forward looking statement as a result of new information, future events or otherwise, except as otherwise required by law.

PART I

ITEM 1. BUSINESS

General

In this report, unless otherwise noted or the context otherwise requires, (i) the term “Koppers”, “Koppers Holdings”, the “Company”, “we” or “us” refers to Koppers Holdings Inc. and its consolidated subsidiaries, (ii) the term “KH” refers to Koppers Holdings Inc. and not any of its subsidiaries and (iii) the term “KI” refers to Koppers Inc. and not any of its subsidiaries. Koppers Inc. is a wholly-owned subsidiary of Koppers Holdings Inc. Koppers Holdings Inc. has substantially no operations independent of Koppers Inc. and its subsidiaries. The use of these terms is not intended to imply that Koppers Holdings and Koppers Inc. are not separate and distinct legal entities from each other and from their respective subsidiaries.

Koppers Holdings Inc. was incorporated in November 2004 as a holding company for Koppers Inc. We are a leading integrated global provider of treated wood products, wood treatment chemicals, and carbon compounds. Our products and services are used in a variety of niche applications in a diverse range of end-markets, including the railroad, specialty chemical, utility, residential lumber, agriculture, aluminum, steel, rubber, and construction industries. We serve our customers through a comprehensive global manufacturing and distribution network, with manufacturing facilities located in North America, South America, Australasia, China and Europe.

Business Segments and Products

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

We believe our three business segments command leading market positions. Through our RUPS business, we believe that we are the largest supplier of railroad crossties to the North American railroads. Through our CMC business, we believe we are the largest global supplier of creosote to the North American railroad industry. Through our PC business, we believe that we are the largest global manufacturer and supplier of water-based wood preservatives and wood specialty additives to treaters who supply the residential, agricultural and industrial pressure-treated wood markets.

Our RUPS and CMC operations are, to a substantial extent, vertically integrated. Through our CMC business, we process coal tar into a variety of products, including creosote, which is an intermediate material necessary in the pressure treatment of wood crossties and other related railroad products. The majority of the creosote we produce in North America and Europe is sold internally to our RUPS business for treating railroad crossties.

Railroad and Utility Products and Services

Our RUPS business sells treated and untreated wood products, rail joint bars and services primarily to the railroad markets in the United States and Canada and the utility market in Australia. We also operate a railroad services business that conducts engineering, design, repair and inspection services for railroad bridges, serving the same customer base as our North American railroad business.

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. Railroad products also include manufacturing and selling rail joint bars, which are steel bars used to join rails together for railroads. Utility products, located in Australia, include the pressure treatment of transmission and distribution poles for electric and telephone utilities. The RUPS business operates 13 wood treating plants and one rail joint bar manufacturing facility located throughout the United States, Canada and Australia. Our network of plants is strategically located near timber supplies to enable us to access raw materials and service customers effectively. In addition, our crosstie treating plants are typically adjacent to our largest railroad customers’ rail lines.

Our RUPS business manufactures its primary products and sells them directly to our customers through long-term contracts and purchase orders negotiated by our regional sales personnel and coordinated through our marketing group at corporate headquarters.

Hardwoods, such as oak and other species, are the major raw materials in wood crossties. Hardwood prices, which account for more than 50 percent of a finished crosstie’s cost, fluctuate with the demand from other hardwood lumber markets, such as oak flooring, pallets and other specialty lumber products. Weather conditions can be a factor in the supply of raw material, as unusually wet or inclement conditions may make it difficult to harvest timber.

In the United States, hardwood lumber for crossties is procured by us from hundreds of small sawmills throughout the northeastern, midwestern and southern areas of the country. The crossties are shipped via rail car or trucked directly to one of our crosstie treating plants, all of which are on line with a major railroad. The crossties are either air-stacked for a period of six to nine months or artificially dried by a process called boultonizing. Once dried, the crossties are pressure treated with creosote, a product of our CMC business. A substantial portion of our crossties are treated with borate, which is purchased from PC, in combination with creosote.

We believe we are the largest supplier of railroad crossties in North America. We have one principal competitor, Stella-Jones Inc., and several smaller regional competitors in the North American market. Competitive factors in the railroad crosstie market include price, quality, location, service and security of supply. We believe we have a competitive advantage due to our ability to obtain internally-sourced creosote and borate and our national network of treating plants which have direct access to our major customers' rail lines. These advantages provide for security of supply and logistics advantages for our customers. We believe our Australian utility pole business is the largest producer of utility poles for the electrical communications utilities in Australia.

Our RUPS business' largest customer base is the North American Class I railroad market, which buys approximately 74 percent of all crossties produced in the United States and Canada. Approximately 70 percent of our North American RUPS sales are under long-term contracts and we currently supply all North American Class I railroads. We also have relationships with many of the approximately 550 short-line and regional rail lines. This also forms the customer base for our rail joint bar products. The railroad crosstie market is a mature market with approximately 20 million replacement crossties (both wood and non-wood) purchased during 2016.

Demand for railroad crossties may decline during winter months due to inclement weather conditions which make it difficult to harvest lumber and to install railroad crossties. As a result, operating results may vary from quarter to quarter depending on the severity of weather conditions and other variables affecting our products.

Utility poles are produced mainly from the eucalyptus species in Australia. Most of these poles are purchased from large timber owners and individual landowners and shipped to one of our pole-peeling facilities. In Australia, in addition to utility poles, we market smaller poles to the agricultural landscape and vineyard markets. We treat poles with a variety of preservatives, including copper chromated arsenates, which we produce internally, and pentachlorophenol.

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Performance Chemicals

Our PC business maintains sales and manufacturing operations in the United States, Canada, Europe, South America, Australia and New Zealand. The primary products supplied by PC are copper-based wood preservatives, including micronized copper quaternary and micronized copper azole ("MicroPro®"), micronized pigments (MicroShades®), alkaline copper quaternary, amine copper azole and chromated copper arsenate. The primary applications for these products include decking, fencing, utility poles, construction lumber and timbers, and vineyard stakes. Because we are a global supplier of wood preservatives, we face various competitors in all the geographic regions in which we participate.

PC supplies nine of the ten largest lumber treating companies in the United States, the largest treated wood market in the world, in addition to the three largest lumber treating companies in Canada. In North America, our PC business is vertically integrated through the manufacturing of copper compounds for our copper-based wood preservatives. We purchase and process approximately 25 million pounds of scrap copper, our key raw material, to meet the annual demand of this major market. Once the scrap copper is purchased, it is shipped to our manufacturing plants in Hubbell, Michigan and Millington, Tennessee for further processing into other copper compounds. During 2016 and 2015, scrap copper pricing followed the London Metal Exchange and the Comex trend by falling in price by approximately 25 percent from 2014 levels. We experienced some copper supply pressures as a result of scrap copper suppliers' reducing available supply due to low prices. We utilize swap contracts to hedge our exposure to copper price risk.

We believe that being vertically integrated in copper manufacturing provides PC with an important competitive advantage and also provides our customers with the security of a continuous supply of wood preservatives. Likewise, we believe that our marketing, engineering, and technical support services provide added value to our customer base, who supply pressure-treated wood products to large retailers and independent lumber dealers. We believe another competitive advantage is provided by our strategic sourcing group who procure scrap copper and other raw materials, such as chromic acid, tebuconazole, arsenic trioxide, dispersants and various biocides and co-biocides through the global market.

Carbon Materials and Chemicals

Our CMC business manufactures its primary products and sells them directly to our global customer base under long-term contracts or through purchase orders negotiated by our regional sales personnel and coordinated through our global marketing group in the United States. Our four coal tar distillation facilities and five carbon materials terminals give us the ability to offer customers multiple sourcing and a consistent supply of high quality products.

In 2014, we embarked on a plan to restructure our CMC operating footprint that reduced our global number of coal tar distillation facilities from the 11 that existed as of January 1, 2014 to four in total as of December 31, 2016. Our CMC business has experienced challenges over the past few years due to the closure of aluminum smelters that has occurred in North America, Western Europe and Australia. The smelting of aluminum requires significant amounts of energy, which is a major cost component for the aluminum industry. As a result, new production facilities are being built in regions with low energy costs such as the Middle East, while regions with higher energy costs such as North America, Western Europe and Australia have seen significant amounts of smelting capacity idled or closed over the last several years.

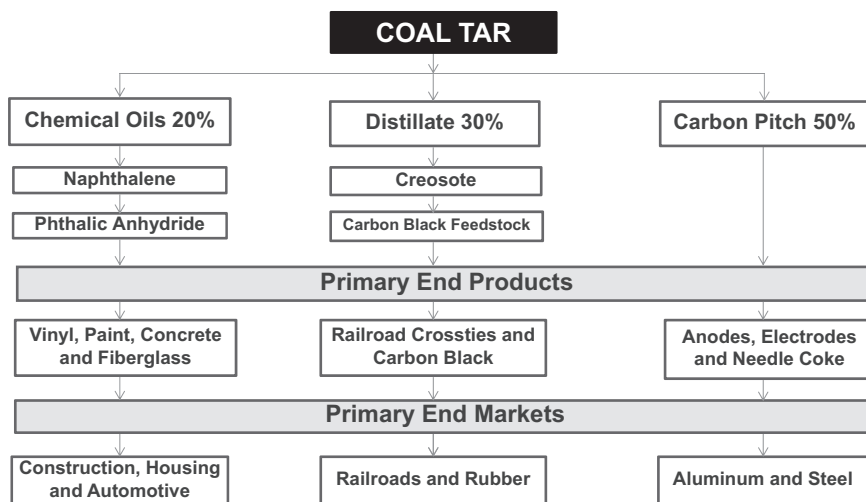
Our CMC business manufactures the following principal products:

- creosote, used in the treatment of wood or as a feedstock in the production of carbon black;
- carbon pitch, a critical raw material used in the production of aluminum and steel;
- naphthalene, used as a feedstock in the production of phthalic anhydride and as a surfactant in the production of concrete, and
- phthalic anhydride, used in the production of plasticizers, polyester resins and alkyd paints, respectively.

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Creosote, carbon pitch, naphthalene, and carbon black feedstock are produced through the distillation of coal tar, a by-product generated through the processing of coal into coke for use in steel and iron manufacturing. Coal tar distillation involves the conversion of coal tar into a variety of intermediate chemical products in processes beginning with distillation. During the distillation process, heat and vacuum are utilized to separate coal tar into three primary components: chemical oils (approximately 20 percent), distillate (approximately 30 percent), and carbon pitch (approximately 50 percent).

The following diagram shows the streams derived from coal tar distillation:



In the United States, our primary coal tar raw material supply contracts generally have terms ranging from three to ten years, and most provide options for renewal. Pricing under these contracts is either formula-based or negotiated on a quarterly or semi-annual basis. Our primary European tar supply contract has a remaining term of approximately eight years and thereafter extends indefinitely unless terminated by a one-year advance notice and contains formula-based tar pricing. Our primary Australian supply contracts have terms ranging from five to ten years and contain formula-based pricing which is adjusted on an

annual or semi-annual basis. Finally, in China, we have a raw material contract in place with our joint venture partner. This contract is coterminous with the applicable joint venture arrangement and provides for formula-based pricing adjusted on a monthly or quarterly basis.

Research and Development

PC's global research group is located in the United States, with supplemental resources in the United Kingdom. We believe our investment in research and development keeps us on the leading edge of new wood preservation technologies. The wood preserving intellectual property that the PC research group has developed and patented remains a very important part of our wood preservative portfolio. This intellectual property includes micronizing various chemical and additive formulations and the methods of treating wood with these formulations. In particular, one of our patented technologies, MicroPro® wood preservative, has been adopted since its commercialization by many of our wood treating customers and the industry's retailers and lumber dealers. The earliest expiration date for patents relating to micronized wood preservative compositions is April 9, 2024.

Research activities related to our CMC business are directed toward new product development regarding alternate uses for coal tar and technical service efforts to promote the use of creosote and vacuum-distilled carbon pitch.

Expenditures for research and development were \$6.6 million, \$5.2 million and \$3.4 million, for the years ended December 31, 2016, 2015 and 2014, respectively.

Technology and Licensing

In 1988, we acquired the "Koppers" trademark from Koppers Company, Inc. The association of the name with the chemical, building, wood preservation and coke industries is beneficial to our company, as it represents long-standing, high quality products. Trademarks relating to our PC business, such as "MicroPro®", "Protim" and "Solignum" are important in this segment of our business, and as long as we continue to use the name "Koppers" and the trademarks associated with our wood preservation business and comply with applicable registration requirements, our right to use the name "Koppers" and the other trademarks should continue without expiration. The expiration of other trademark rights is not expected to materially affect our business.

Backlog

Generally, Koppers does not manufacture its products against a backlog of orders. Inventory and production levels are typically driven by expectations of future demand based on contractual obligations.

Seasonality

Demand for residential, commercial, and agricultural treated lumber may decline during winter months due to weather conditions. As a result, operating results may vary from quarter to quarter depending on the severity of weather conditions and other variables affecting our products.

Segment Information

Please see Note 9, "Segment Information," under Item 8 of this Form 10-K for financial information relating to business segments and geographic areas. See also "Item 1A. Risk Factors – Risks Related to Our Business – Demand for our products is cyclical and we may experience prolonged depressed market conditions for our products."

Non-U.S. Operations

Koppers has a significant investment in non-U.S. operations. Therefore, we are subject to certain risks that are inherent to foreign operations, including complying with applicable laws relating to foreign practices, the laws of foreign countries in which we operate, political and economic conditions in international markets and fluctuations in foreign exchange rates. See also "Item 1A. Risk Factors – Risks Related to Our Business – We are subject to risks inherent in foreign operations, including additional legal regulation, changes in social, political and economic conditions."

Environmental Matters

Our operations and properties are subject to extensive federal, state, local and foreign environmental laws and regulations relating to protection of the environment and human health and safety, including those concerning the treatment, storage and disposal of wastes, the investigation and remediation of contaminated soil and groundwater, the discharge of effluents into waterways, the emission of substances into the air, as well as various health and safety matters. Environmental laws and regulations are subject to frequent amendment and have historically become more stringent over time. We have incurred and could incur in the future significant costs if we fail to comply with liabilities under environmental laws and regulations, including cleanup costs, civil and criminal penalties, injunctive relief and denial or loss of, or imposition of significant restrictions on, environmental permits. In addition, we have been and could in the future be subject to suit by private parties in connection with alleged violations of, or liabilities under, environmental laws and regulations. See “Item 1A. Risk Factors – Risks Related to Our Business – We are subject to extensive environmental laws and regulations and may incur significant costs as a result of continued compliance with, violations of or liabilities under environmental laws and regulations” and Note 20 of the Notes to Consolidated Financial Statements, “Commitments and Contingent Liabilities.”

Employees and Employee Relations

As of December 31, 2016, we had 742 salaried employees and 1,111 non-salaried employees. Listed below is a breakdown of employees by our businesses, including administration.

<i>Business</i>	<i>Salaried</i>	<i>Non-Salaried</i>	<i>Total</i>
Railroad and Utility Products and Services	213	639	852
Carbon Materials and Chemicals	298	244	542
Performance Chemicals	125	223	348
Administration	106	5	111
Total Employees	742	1,111	1,853

Events subsequent to December 31, 2016

In January 2017, Koppers Inc. completed a private placement offering of \$500.0 million 6.00 percent Senior Notes due 2025 (the “2025 Notes”). The proceeds of the new offering were used to repay our outstanding \$300.0 million senior secured term loan and to fund a tender offer to repurchase our \$300.0 million 7.875 percent Senior Notes due 2019 (the “2019 Notes”), which was completed in February 2017. The 2025 Notes will mature on February 15, 2025 unless earlier redeemed or repurchased. The 2025 Notes are unsecured and are guaranteed by Koppers Holdings Inc. and certain of Koppers Inc.’s domestic subsidiaries.

In February 2017, the Company entered into a new \$400.0 million revolving credit facility (the “New Senior Secured Credit Facility”) which replaced our existing \$300.0 million senior secured revolving credit facility. The maturity date of the New Senior Secured Credit Facility is February 2022. The interest rate on the New Senior Secured Credit Facility is variable and is based on LIBOR. Terms under the New Senior Secured Credit Facility are substantially consistent with the prior senior secured revolving credit facility.

Internet Access

Our Internet address is www.koppers.com. Our recent filings on Form 10-K, 10-Q and 8-K and any amendments to those documents can be accessed without charge on our website under Investor Relations – SEC Filings as soon as reasonably practicable after such filings are made with the Securities and Exchange Commission. The contents of our internet site are not incorporated by reference into this document.

ITEM 1A. RISK FACTORS

You should carefully consider the risks described below before investing in our publicly traded securities. Our business is subject to the risks that affect many other companies, such as competition, technological obsolescence, labor relations, general economic conditions, geopolitical events and international operations.

Risks Related to Our Business

Fluctuations in the price, quality and availability of our primary raw materials could reduce our profitability.

Our operations depend on an adequate supply of quality raw materials being available on a timely basis. The loss of a key source of supply or a delay in shipments could cause a significant increase in our operating expenses. For example, our operations are highly dependent on a relatively small number of freight transportation services. We are also dependent on specialized ocean-going transport vessels that we lease to deliver raw materials to our facilities and finished goods to our customers. Interruptions in such freight services could impair our ability to receive raw materials and ship finished products in a timely manner. We are also exposed to price and quality risks associated with raw material purchases. Such risks include the following:

- The availability and cost of lumber are critical elements in our production of railroad crossties and pole products for our RUPS business. Historically, the supply and cost of hardwood for railroad crossties have been subject to availability and price pressures. We may not be able to obtain wood raw materials at economical prices in the future.
- The availability of scrap copper is a critical element in our production of copper-based wood preservation chemicals for our PC business. Our purchase price for scrap copper is based upon spot prices in the copper market, which may be subject to sudden price changes. We may not be able to obtain scrap copper at prices that match underlying pricing commitments to our customers.
- The primary raw material used by our CMC business is coal tar, a by-product of furnace coke production. A shortage in the supply of domestic coal tar or a reduction in the quality of coal tar could require us to increase coal tar or creosote imports to meet future creosote demand. This could cause a significant increase in our operating expenses and we may be unable to pass some or all of these costs on to our customers.
- In certain circumstances coal tar may also be used as an alternative to fuel. In the past, increases in energy prices have resulted in higher coal tar costs which we have attempted to pass through to our customers. If these increased costs cannot be passed through to our customers, it could result in margin reductions for our coal tar-based products.
- Our price realizations and profit margins for phthalic anhydride have historically fluctuated with the price of orthoxylene and its relationship to our cost to produce naphthalene; however, during periods of excess supplies of phthalic anhydride, margins may be reduced despite high levels for orthoxylene prices.
- Our price realizations and profit margins for phthalic anhydride, naphthalene and carbon black feedstock have historically fluctuated with the market price of crude oil, market prices for chemicals derived from crude oil, such as orthoxylene, or market indices derived from crude oil. In addition, the market price of phthalic anhydride, naphthalene and carbon black feedstock may be negatively impacted from decreasing market prices for crude oil. Our business was negatively affected by the decreasing market price of oil beginning in the fourth quarter of 2014.

If the costs of raw materials increase significantly and we are unable to offset the increased costs with higher selling prices, our profitability will decline.

We face risks related to our substantial indebtedness.

As of December 31, 2016, we had total outstanding debt of \$662.4 million, and an additional approximately \$159.6 million of unused borrowing capacity under our revolving credit facility. Our substantial leverage could adversely affect our ability to raise additional capital to fund our operations, limit our ability to react to changes in the economy or our industry, expose us to interest rate risk associated with our variable rate debt and prevent us from meeting our obligations under the 2025 Notes and the New Senior Secured Credit Facility as described in Note 16 of the Notes to Consolidated Financial Statements. Our high degree of leverage could have important consequences to us, including:

- making it more difficult for us to make payments on our debt;

- increasing our vulnerability to general economic and industry conditions;
- requiring a substantial portion of cash flow from operations to be dedicated to the payment of principal and interest on our debt, thereby reducing our ability to use our cash flow to fund our operations, capital expenditures, and future business opportunities;
- exposing us to the risk of increased interest rates as certain of our borrowings under our New Senior Secured Credit Facility are at variable rates;
- restricting us from making strategic acquisitions or causing us to make non-strategic divestitures;
- limiting our ability to obtain additional financing for working capital, capital expenditures, product development, debt service requirements, acquisitions, and general corporate or other purposes; and
- limiting our ability to adjust to changing market conditions and placing us at a competitive disadvantage compared to our competitors who may be less highly leveraged.

We and our subsidiaries may be able to incur substantial additional indebtedness in the future, subject to the restrictions contained in our New Senior Secured Credit Facility and the indenture governing the 2025 Notes. If new indebtedness is added to our current debt levels, the related risks that we now face could intensify.

Our debt agreements contain restrictions that limit our flexibility in operating our business.

Our New Senior Secured Credit Facility and the indenture governing the 2025 Notes contain various covenants that limit our ability to engage in specified types of transactions. These covenants limit our ability and the ability of our restricted subsidiaries to, among other things:

- incur additional debt;
- pay dividends or distributions on our capital stock or repurchase our capital stock;
- issue stock of subsidiaries;
- make certain investments;
- create liens on our assets to secure debt;
- enter into transactions with affiliates;
- merge or consolidate with another company; and
- sell or otherwise transfer assets.

In addition, under the New Senior Secured Credit Facility, we are required to meet specified financial ratios in order to undertake certain actions, and we are required to maintain a specified minimum fixed charge coverage ratio and a maximum total secured leverage ratio. Our ability to meet those tests can be affected by events beyond our control, and we cannot assure you that we will meet them. A breach of any of these covenants could result in a default under our New Senior Secured Credit Facility. Upon the occurrence of an event of default under our New Senior Secured Credit Facility, the lenders could elect to declare all amounts outstanding under our New Senior Secured Credit Facility to be immediately due and payable and terminate all commitments to extend further credit. If we were unable to repay those amounts, the lenders under our New Senior Secured Credit Facility could proceed against the collateral granted to them to secure such indebtedness. We have pledged substantially all of our assets as collateral under our New Senior Secured Credit Facility. If the lenders under our New Senior Secured Credit Facility accelerate the repayment of borrowings, we cannot assure you that we will have sufficient assets to repay our New Senior Secured Credit Facility, as well as our unsecured indebtedness, including notes.

Conditions in the global economy and global capital markets may adversely affect our results of operations, financial condition and cash flows.

The U.S. and global economy and capital markets have experienced significant uncertainties and volatility in the past few years. Our business and operating results for the last six years were significantly affected by these global economic issues. Many of our customers have experienced deterioration of their business during the latest business cycle. They may experience cash flow

shortages and may have difficulty obtaining financing. As a result, our customers may delay or cancel plans to purchase our products and may not be able to fulfill their payment obligations to us in a timely fashion. Our suppliers may be experiencing similar conditions which could impact their ability to supply us with raw materials and otherwise fulfill their obligations to us. If global economic conditions deteriorate significantly, there could be a material adverse effect to our results of operations, financial condition and cash flows.

In addition, we rely on our \$400.0 million New Senior Secured Credit Facility with a consortium of banks to provide us with liquidity to meet our working capital needs. Our ability to fund our liquidity needs and working capital requirements could be impacted in the event that disruptions in the credit markets result in the banks being unable to lend to us under our New Senior Secured Credit Facility.

Global economic issues could prevent us from accurately forecasting demand for our products, which could have a material adverse effect on our results of operations and our financial condition.

Adverse global economic issues, market instability and volatile commodity price fluctuations make it increasingly difficult for us, our customers and our suppliers to accurately forecast future product demands and sales prices, which could cause us to procure raw materials in excess of end-product demand. This could cause a material increase to our inventory carrying costs and, in the event of falling market prices for our end products, result in significant charges to write-down inventory to market prices.

Intellectual property rights are important to our business. If our patents are declared invalid or our trade secrets become known to our competitors, our ability to compete may be adversely affected.

Proprietary protection of our processes, apparatuses and other technology is important to our business, particularly in our PC business. Consequently, we may have to rely on judicial enforcement of our patents and other proprietary rights, which is generally a time consuming and expensive process. While a presumption of validity exists with respect to patents issued to us in the U.S., there can be no assurance that any of our patents will not be challenged, invalidated, circumvented or rendered unenforceable. Furthermore, if any pending patent application filed by us does not result in an issued patent, or if patents are issued to us, but such patents do not provide meaningful protection of our intellectual property, or if patents issued to us expire, then our ability to compete may be adversely affected. Additionally, our competitors or other third parties may obtain patents that restrict or preclude our ability to lawfully produce or sell our products in a competitive manner, which could have a material adverse effect on our business, cash flow and financial condition. The growth of our business also depends on our ability to develop new intellectual property rights, including patents, and the successful implementation of innovation initiatives. There can be no assurance that our efforts to do so will be successful and the failure to do so could negatively impact our results of operations.

We also rely upon unpatented proprietary know-how and continuing technological innovation and other trade secrets to develop and maintain our competitive position, particularly in our PC business. While it is our policy to enter into confidentiality agreements with our employees and third parties to protect our intellectual property, these confidentiality agreements may be breached or may not provide meaningful protection for our trade secrets or proprietary know-how, and adequate remedies may not be available in the event of an unauthorized use or disclosure of our trade secrets and know-how. In addition, others could obtain knowledge of our trade secrets through independent development or other access by legal means. The failure of our patents or confidentiality agreements to protect our processes, apparatuses, technology, trade secrets or proprietary know-how could have a material adverse effect on our business, cash flow and financial condition.

We may be required to recognize impairment charges for our long-lived assets.

At December 31, 2016, the net carrying value of long-lived assets (property, plant and equipment, goodwill, other intangible assets and equity investments) totaled \$609.1 million. In accordance with generally accepted accounting principles, we periodically assess these assets to determine if they are impaired. In 2016, we recognized fixed asset impairment charges of \$3.5 million due to the discontinuation of coal tar distillation activities. In 2015 we recognized a goodwill impairment charge of \$67.2 million related to our CMC business segment. Also in 2015, we recognized fixed asset impairment charges of \$12.8 million related to the decision to discontinue coal tar distillation activities at two of our CMC plants located in the United States and two of our CMC plants located in the United Kingdom. The remaining 2015 fixed asset impairment charges of \$1.9 million were related to the closure of our RUPS wood treating plant in Green Spring, West Virginia. Significant negative industry or

economic trends, disruptions to our business, unexpected significant changes or planned changes in use of the assets, divestitures and market capitalization declines may result in impairments to goodwill and other long-lived assets. Future impairment charges could significantly affect our results of operations in the periods recognized. Impairment charges would also reduce our shareholders' equity and could affect compliance with the covenants in our debt agreements.

We may not be able to compete successfully in any or all of the industry segments in which we operate.

The markets in which we operate are highly competitive, and this competition could harm our business, results of operations, cash flow and financial condition. If we are unable to respond successfully to changing competitive conditions, the demand for our products could be affected. We believe that the most significant competitive factor for our products is selling price. Some of our competitors have greater financial resources and larger capitalization than we do and, as a result, they may be better positioned to compete in a declining market.

Demand for our products is cyclical and we may experience prolonged depressed market conditions for our products.

Our products are sold primarily into markets which historically have been cyclical, such as wood preservation, aluminum and specialty chemicals.

- The principal use of our wood preservation chemicals is in the manufacture of treated lumber, which is used mainly for residential applications, such as wood decking, and also industrial applications, such as the treating of railroad crossties and utility poles. Therefore, a decline in remodeling and construction could reduce demand for wood preservation chemicals for residential applications and a decline in the capital spending requirements for railroads and utility companies could reduce demand for wood preservation chemicals for industrial applications.
- The principal consumers of our carbon pitch are primary aluminum smelters. Although the global aluminum industry has experienced growth on a long-term basis, the aluminum industry has experienced a shift in primary aluminum production from the mature geographies where we have historically enjoyed high market shares into emerging economies. For example, at the beginning of 2015 there were a total of nine smelters and anode plants operating in the United States. By the end of 2016, only five remained operating and three of these were operating at reduced capacity.
- The principal use of our phthalic anhydride is in the manufacture of plasticizers and flexible vinyl, which are used mainly in the housing and automobile industries. Therefore, a decline in remodeling and construction or global automobile production could reduce the demand for phthalic anhydride.

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We are dependent on major customers for a significant portion of our net sales, and the loss of one or more of our major customers could result in a significant reduction in our profitability as a whole or the profitability of a particular product.

Although no one customer accounts for more than eight percent of our net sales for the year ended December 31, 2016, our top ten customers accounted for approximately 41 percent of our net sales. The loss of a significant customer could have a material adverse effect on our business, cash flow and financial condition.

Our products may be rendered obsolete or less attractive by changes in regulatory, legislative or industry requirements.

Changes in regulatory, legislative or industry requirements may render certain of our products obsolete or less attractive. Our ability to anticipate changes in these requirements, especially changes in regulatory standards, will be a significant factor in our ability to remain competitive. We may not be able to comply in the future with new regulatory, legislative and/or industrial standards that may be necessary for us to remain competitive and certain of our products may, as a result, become obsolete or less attractive to our customers.

The development of new technologies or changes in our customers' products could reduce the demand for our products.

Our products are used for a variety of applications by our customers. Changes in our customers' products or processes may enable our customers to reduce consumption of the products we produce or make our products unnecessary. Customers may also find alternative materials or processes that no longer require our products.

As a producer of wood preservatives, we may incur additional costs under our warranties or otherwise for claims related to treated-wood products.

We provide limited warranties on certain treated-wood products. These limited warranties cover treated-wood products that are produced by certain of our customers who use wood preservatives supplied by us. The limited warranties generally provide for replacement of properly treated-wood (or refund of the purchase price for the treated-wood product) that prematurely fails due to fungal decay or termite attack. From time to time, we (or our customers) receive claims under these warranties or other claims relating to alleged failures of treated-wood products. To date, amounts paid for such claims have not been material. However, should the costs of such claims become material, our profitability could be adversely affected.

Hazards associated with chemical manufacturing may cause suspensions or interruptions of our operations.

Due to the nature of our business, we are exposed to the hazards associated with chemical manufacturing and the related use, storage and transportation of raw materials, products and wastes in our manufacturing facilities and our distribution centers, such as fires, explosions and accidents that could lead to a suspension or interruption of operations. Any disruption could reduce the productivity and profitability of a particular manufacturing facility or of our company as a whole. Other hazards include the following:

- piping and storage tank leaks and ruptures;
- mechanical failure;
- exposure to hazardous substances; and
- chemical spills and other discharges or releases of toxic or hazardous wastes, substances or gases.

These hazards, among others, may cause personal injury and loss of life, damage to property and contamination of the environment, which could lead to government fines or work stoppage injunctions, cleanup costs and lawsuits by injured persons. While we are unable to predict the outcome of such matters, if determined adversely to us, we may not have adequate insurance to cover related costs or liabilities and, if not, we may not have sufficient cash flow to pay for such costs or liabilities. Such outcomes could harm our customer goodwill and reduce our profitability and could have a material adverse effect on our business, financial condition, cash flow and results from operations.

We are subject to extensive environmental laws and regulations and may incur significant costs as a result of continued compliance with, violations of or liabilities under environmental laws and regulations.

Like other companies involved in environmentally sensitive businesses, our operations and properties are subject to extensive federal, state, local and foreign environmental laws and regulations, including those concerning the following, among other things:

- the treatment, storage and disposal of wastes;
- the investigation and remediation of contaminated soil and groundwater;
- the discharge of effluents into waterways;
- the emission of substances into the air;
- the marketing, sale, use and registration of our chemical products, such as creosote and MicroPro®;
- the European Union's regulation under the Registration Evaluation Authorization and Restriction of Chemicals, which requires manufacturers or importers of substances manufactured or imported into the European Union in quantities of one tonne per year or more to register with a central European Chemicals Agency; and
- other matters relating to environmental protection and various health and safety matters.

We have incurred, and expect to continue to incur, significant costs to comply with environmental laws and regulations and as a result of remedial obligations. We could incur significant costs, including cleanup costs, fines, civil and criminal sanctions and claims by third parties for property damage and personal injury, as a result of violations of or liabilities under environmental laws and regulations. We accrue for environmental liabilities when a determination can be made that they are probable and reasonably estimable. Total environmental reserves at December 31, 2016 were \$12.9 million, which include provisions primarily for environmental remediation. In addition, we incur significant annual operating expenses related to environmental matters

and significant capital expenditures related to environmental control facilities. Capital expenditures related to environmental control facilities in 2017 are expected to total approximately \$6.1 million, funded by operations. Contamination has been identified and is being investigated and remediated at many of our sites by us or other parties. We believe that we will have continuing significant expenditures associated with compliance with environmental laws and regulations and, to the extent not covered by insurance or available recoveries under third-party indemnification arrangements, for present and future remediation efforts at plant sites and third-party waste sites and other liabilities associated with environmental matters. There can be no assurance that these expenditures will not exceed current estimates and will not have a material adverse effect on our business, financial condition, cash flow and results of operations.

Actual costs and liabilities to us may exceed forecasted amounts. Moreover, currently unknown environmental issues, such as the discovery of additional contamination or the imposition of additional sampling or cleanup obligations with respect to our sites or third party sites, may result in significant additional costs, and potentially significant expenditures could be required in order to comply with future changes to environmental laws and regulations or the interpretation or enforcement thereof. We also are involved in various litigation and proceedings relating to environmental matters and toxic tort claims.

Future climate change regulation could result in increased operating costs and reduced demand for our products.

Although the United States has not ratified the Kyoto Protocol, a number of federal laws related to “greenhouse gas,” or “GHG,” emissions have been considered by Congress. Additionally, various federal, state and regional regulations and initiatives have been enacted or are being considered.

Member States of the European Union each have an overall cap on emissions which are approved by the European Commission and implement the European Union Emissions Trading Directive as a commitment to the Kyoto Protocol. Under this Directive, organizations apply to the Member State for an allowance of GHG emissions. These allowances are tradable so as to enable companies that manage to reduce their GHG emissions to sell their excess allowances to companies that are not reaching their emissions objectives. Failure to purchase sufficient allowances will require the purchase of allowances at a current market price.

Any laws or regulations that may be adopted to restrict or reduce emissions of GHGs could cause an increase to our raw material costs, could require us to incur increased operating costs and could have an adverse effect on demand for our products.

Beazer East and Beazer Limited may not continue to meet their obligations to indemnify us.

Under the terms of the asset purchase agreement between us and Koppers Company, Inc. (now known as Beazer East, Inc.) upon the formation of Koppers Inc. in 1988, subject to certain limitations, Beazer East and Beazer Limited assumed the liability for and indemnified us against, among other things, certain clean-up liabilities for contamination occurring prior to the purchase date at sites acquired from Beazer East and certain third-party claims arising from such contamination (the “Indemnity”). Beazer East and Beazer Limited (which are indirect subsidiaries of Heidelberg Cement AG) may not continue to meet their obligations. In addition, Beazer East could in the future choose to challenge its obligations under the Indemnity or our satisfaction of the conditions to indemnification imposed on us thereunder. The government and other third parties may have the right under applicable environmental laws to seek relief directly from us for any and all such costs and liabilities. In July 2004, we entered into an agreement with Beazer East to amend the December 29, 1988 asset purchase agreement to provide, among other things, for the continued tender of pre-closing environmental liabilities to Beazer East under the Indemnity through July 2019. As consideration for the agreement, we, among other things, paid Beazer East \$7.0 million and agreed to share toxic tort litigation defense costs arising from sites acquired from Beazer East. Qualified expenditures under the Indemnity are not subject to a monetary limit.

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. Periodically, issues have arisen between Koppers Inc. and Beazer East and/or other indemnitors that have been resolved without arbitration. From time to time, Koppers Inc. and Beazer East have engaged in discussions that involve, among other things, the allocation of environmental costs related to certain operating and closed facilities.

Without reimbursement under the Indemnity, the obligation to pay the costs and assume the liabilities relating to these matters would have a significant impact on our net income. Furthermore, without reimbursement, we could be required to record a

contingent liability on our balance sheet with respect to environmental matters covered by the Indemnity, which could result in our having significant negative net worth. Finally, the Indemnity does not afford us indemnification against environmental costs and liabilities attributable to acts or omissions occurring after the closing of the acquisition of assets from Beazer East under the asset purchase agreement, nor is the Indemnity applicable to liabilities arising in connection with other acquisitions by us after that closing.

The insurance that we maintain may not fully cover all potential exposures.

We maintain property, casualty, general liability, workers' compensation, pollution legal liability and other insurance, but such insurance may not cover all risks associated with the hazards of our business and is subject to limitations, including deductibles and maximum liabilities covered. We may incur losses beyond the limits, or outside the coverage, of our insurance policies, including liabilities for environmental compliance and remediation. In addition, from time to time, various types of insurance for companies in our industry have not been available on commercially acceptable terms or, in some cases, have not been available at all. In the future, we may not be able to obtain coverage at current levels, and our premiums may increase significantly on coverage that we maintain.

Adverse weather conditions may reduce our operating results.

Our quarterly operating results fluctuate due to a variety of factors that are outside our control, including inclement weather conditions, which in the past have caused a decline in our operating results. For example, adverse weather conditions have at times negatively impacted our supply chain as wet conditions impacted logging operations, reducing our ability to procure cross-ties. In addition, adverse weather conditions have had a negative impact on our customers in our pavement sealer and wood preservation businesses, resulting in a negative impact on our sales of these products. Moreover, demand for many of our products declines during periods of inclement weather.

We are subject to risks inherent in foreign operations, including additional legal regulation, changes in social, political and economic conditions.

We have operations in the United States, Australia, Denmark, the United Kingdom, New Zealand, China, South America Canada, among others, and sell our products in many foreign countries. For the year ended December 31, 2016, net sales from products sold by our foreign subsidiaries accounted for approximately 33 percent of our total net sales.

Doing business on a global basis requires us to comply with the laws and regulations of the U.S. government and various international jurisdictions. These regulations place restrictions on our operations, trade practices and partners and investment decisions. In particular, our international operations are subject to U.S. and foreign anti-corruption laws and regulations, such as the Foreign Corrupt Practices Act, and economic sanction programs administered by the U.S. Treasury Department's Office of Foreign Assets Control. Violations of these laws and regulations may result in civil or criminal penalties, including fines.

In addition, as a global business, we are also exposed to market risks relating to fluctuations in interest rates and foreign currency exchange rates. Our international revenues could be reduced by currency fluctuations or devaluations. Changes in currency exchange rates could lower our reported revenues and could require us to reduce our prices to remain competitive in foreign markets, which could also reduce our profitability. We have not historically hedged our financial statement exposure and, as a result, we could incur unanticipated losses. We are also subject to potentially increasing transportation and shipping costs associated with international operations. Furthermore, we are also exposed to risks associated with changes in the laws and policies governing foreign investments in countries where we have operations as well as, to a lesser extent, changes in U.S. laws and regulations relating to foreign trade and investment.

Our strategy to selectively pursue complementary acquisitions may present unforeseen integration obstacles or costs.

Our business strategy includes the potential acquisition of businesses and entering into joint ventures and other business combinations that we expect would complement and expand our existing products and the markets where we sell our products. We may not be able to successfully identify suitable acquisition or joint venture opportunities or complete any particular acquisition, combination, joint venture or other transaction on acceptable terms. We cannot predict the timing and success of our efforts to acquire any particular business. Also, efforts to acquire other businesses or the implementation of other elements of this business strategy may divert managerial resources away from our business operations. In addition, our ability to engage in strategic acquisitions may depend on our ability to raise substantial capital and we may not be able to raise the funds

necessary to implement our acquisition strategy on terms satisfactory to us, if at all. Our failure to identify suitable acquisition or joint venture opportunities may restrict our ability to grow our business. In addition, we may not be able to successfully integrate businesses that we acquire in the future or have recently acquired, which could lead to increased operating costs, a failure to realize anticipated operating synergies, or both.

Litigation against us could be costly and time-consuming to defend, and due to the nature of our business and products, we may be liable for damages arising out of our acts or omissions, which may have a material adverse effect on us.

We are a defendant in a significant number of lawsuits in which the plaintiffs claim they have suffered a variety of illnesses (including cancer) and/or property damage as a result of exposure to coal tar pitch, benzene, wood treatment chemicals and other chemicals. In addition, we are regularly subject to legal proceedings and claims that arise in the ordinary course of business, such as workers' compensation claims, governmental investigations, employment disputes, and customer and supplier disputes arising out of the conduct of our business. We also are involved in various litigation and proceedings relating to environmental matters. Litigation could result in substantial costs and may divert management's attention and resources away from the day-to-day operation of our business.

We are indemnified for certain product liability exposures under the Indemnity with Beazer East related to products sold prior to the closing of the acquisition of assets from Beazer East. Beazer East and Beazer Limited may not continue to meet their indemnification obligations. In addition, Beazer East could choose to challenge its indemnification obligations or our satisfaction of the conditions to indemnification imposed on us thereunder. 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 us having significant negative net worth.

Labor disputes could disrupt our operations and divert the attention of our management and may cause a decline in our production and a reduction in our profitability.

Many of our employees are represented by a number of different labor unions and are covered under numerous labor agreements. Typically, a number of our labor agreements are scheduled to expire each year. We may not be able to reach new agreements without union action or on terms satisfactory to us. Any future labor disputes with any such unions could result in strikes or other labor protests, which could disrupt our operations and divert the attention of our management from operating our business. If we were to experience a strike or work stoppage, it may be difficult for us to find a sufficient number of employees with the necessary skills to replace these employees. Any such labor disputes could cause a decline in our production and a reduction in our profitability.

Our post-retirement obligations are currently underfunded. We may be required to make significant cash payments to our pension and other post-retirement plans, which will reduce the cash available for our business.

As of December 31, 2016, our benefit obligation under our defined benefit pension plans exceeded the fair value of plan assets by \$42.7 million. Our pension asset funding to total pension obligation ratio was 82 percent as of December 31, 2016. The underfunding was caused, in large part, by fluctuations in the financial markets that have caused the value of the assets in our defined benefit pension plans to be significantly lower than anticipated and by fluctuations in interest rates which increased the discounted pension liabilities. In addition, our obligations for other post-retirement benefit obligations are unfunded and total \$10.0 million at December 31, 2016.

During the years ended December 31, 2016 and December 31, 2015, we contributed \$5.3 million and \$4.0 million, respectively, to our post-retirement benefit plans. Management expects that any future obligations under our post-retirement benefit plans that are not currently funded will be funded from our future cash flow from operations. If our contributions to our post-retirement benefit plans are insufficient to fund the post-retirement benefit plans adequately to cover our future obligations, the performance of the assets in our pension plans does not meet our expectations or other actuarial assumptions or mandatory funding laws are modified, our contributions to our post-retirement benefit plans could be materially higher than we expect, thus reducing the cash available for our business.

We may incur significant charges in the event we close all or part of a manufacturing plant or facility.

We periodically assess our manufacturing operations in order to manufacture and distribute our products in the most efficient manner. Based on our assessments, we may make capital improvements to modernize certain units, move manufacturing or distribution capabilities from one plant or facility to another plant or facility, discontinue manufacturing or distributing certain products or close all or part of a manufacturing plant or facility, any of which could cause us to incur significant charges. The actual costs to close a manufacturing facility may exceed our original cost estimate and may have a material adverse effect on our financial condition, cash flow from operations and results from operations.

We depend on our senior management team and other key employees and the loss of these employees could adversely affect our business.

Our success is dependent on the management, experience and leadership skills of our senior management team and key employees. The loss of any of these individuals or an inability to attract, retain and maintain additional personnel with similar industry experience could prevent us from implementing our business strategy. We cannot assure you that we will be able to retain our existing senior management and key personnel or to attract additional qualified personnel when needed. Senior management or key personnel may retire from time to time, and our employment agreements with these individuals may expire from time to time.

We may be subject to information technology systems failures, network disruptions and breaches of data security.

We depend on integrated information systems to conduct our business. Information technology systems failures, including risks associated with upgrading our systems or in successfully integrating information technology and other systems in connection with the integration of businesses we acquire, network disruptions and breaches of data security could disrupt our operations by impeding our processing of transactions, our ability to protect customer or company information and our financial reporting. Our computer systems, including our back-up systems, could be damaged or interrupted by power outages, computer and telecommunications failures, computer viruses, internal or external security breaches, events such as fires, earthquakes, floods, tornadoes and hurricanes, and/or errors by our employees. Although we have taken steps to address these concerns, there can be no assurance that a system failure or data security breach will not have a material adverse effect on our financial condition and results of operations.

Risks Related to Our Common Stock**Our stock price may be extremely volatile.**

There has been significant volatility in the market price and trading volume of equity securities, which is unrelated to the financial performance of the companies issuing the securities. These types of broad market fluctuations may negatively affect the market price of our common stock.

Some specific factors that may have a significant effect on our common stock market price include the following:

- actual or anticipated fluctuations in our operating results or future prospects;
- the public's reaction to our press releases, our other public announcements and our filings with the Securities and Exchange Commission, (the "SEC");
- strategic actions by us or our competitors, such as acquisitions or restructurings;
- new laws or regulations or new interpretations of existing laws or regulations applicable to our business;
- changes in accounting standards, policies, guidance, interpretations or principles;
- adverse conditions in the financial markets or general economic conditions, including those resulting from war, incidents of terrorism and responses to such events;
- sales of common stock by us, members of our management team or a significant shareholder;
- changes in stock market analyst recommendations or earnings estimates regarding our common stock, other comparable companies or the railroad industry generally; and
- changes in our current dividend policy.

We cannot predict the extent to which investor interest in our company will continue to support an active trading market for our common stock on the New York Stock Exchange (the "NYSE") or otherwise or how liquid that market will continue to be. If there does not continue to be an active trading market for our common stock, you may have difficulty selling any of our common stock that you buy.

Future sales, or the perception of future sales, of a substantial amount of our common stock may depress the price of the shares of our common stock.

Future sales, or the perception or the availability for sale in the public market, of substantial amounts of our common stock could adversely affect the prevailing market price of our common stock and could impair our ability to raise capital through future sales of equity securities at a time and price that we deem appropriate.

We may issue shares of our common stock, or other securities, from time to time as consideration for future acquisitions and investments. We may also issue shares of our common stock, or other securities, in connection with employee stock compensation programs, employee stock purchase programs and board of directors' compensation. In addition, we may issue shares of our common stock or other securities in public or private offerings as part of our efforts to raise additional capital. In the event any such acquisition, investment, issuance under stock compensation programs or offering is significant, the number of shares of our common stock or the number or aggregate principal amount, as the case may be, of other securities that we may issue may in turn be significant. We may also grant registration rights covering those shares or other securities in connection with any such acquisitions and investments. Any additional capital raised through the sale of our equity securities may dilute your percentage ownership in us.

We have suspended our dividend and do not expect to pay any dividends for the foreseeable future.

We are not required to pay dividends, and our shareholders are not guaranteed, and do not have contractual rights, to receive dividends. Our board of directors may decide at any time, in its discretion, to change or revoke our dividend policy. In February 2015 our board of directors made the decision to suspend our dividend. We currently intend to use the annual cash savings from such dividend suspension to preserve financial flexibility while funding our strategic growth initiatives and debt repayments. Accordingly, we do not anticipate that we will pay any dividends on shares of our common stock for the foreseeable future. Any determination to pay dividends in the future will be at the discretion of our board of directors and will depend upon results of operations, financial condition, contractual restrictions, restrictions imposed by applicable law and other factors our board of directors deems relevant.

The ability of Koppers Inc. and its subsidiaries to pay dividends or make other payments or distributions to us will depend on our operating results and may be restricted by, among other things, the covenants in Koppers Inc.'s New Senior Secured Credit Facility. Our ability to pay dividends is also limited by the indenture governing the 2025 Notes as well as Pennsylvania law and may in the future be limited by the covenants of any future outstanding indebtedness we or our subsidiaries incur. If a dividend is paid in violation of Pennsylvania law, each director approving the dividend could be liable to the corporation if the director did not act with such care as a person of ordinary prudence would use under similar circumstances. Directors are entitled to rely in good faith on information provided by employees of the corporation and experts retained by the corporation. Directors who are held liable would be entitled to contribution from any shareholders who received an unlawful dividend knowing it to be unlawful. Furthermore, we are a holding company with no operations, and unless we receive dividends, distributions, advances, transfers of funds or other payments from our subsidiaries, we will be unable to pay dividends on our common stock.

Provisions of our charter documents may inhibit a takeover, which could negatively affect our stock price.

Provisions of our charter documents and the Business Corporation Law of Pennsylvania, the state in which we are incorporated, could discourage potential acquisition proposals or make it more difficult for a third party to acquire control of our company, even if doing so might be beneficial to our shareholders. Our Amended and Restated Articles of Incorporation (our "Articles of Incorporation") and our Amended and Restated Bylaws (our "Bylaws") provide for various procedural and other requirements that could make it more difficult for shareholders to effect certain corporate actions. For example, our Articles of Incorporation authorize our board of directors to determine the rights, preferences, privileges and restrictions of unissued series of preferred stock without any vote or action by our shareholders. Our board of directors can therefore authorize and issue shares of

preferred stock with voting or conversion rights that could adversely affect the voting or other rights of holders of our common stock. The following additional provisions could make it more difficult for shareholders to effect certain corporate actions:

- Our shareholders will be able to remove directors only for cause by the affirmative vote of the holders of a majority of the outstanding shares of our capital stock entitled to vote in the election of directors. Vacancies on our board of directors may be filled only by our board of directors.
- Under Pennsylvania law, cumulative voting rights are available to the holders of our common stock if our Articles of Incorporation have not negated cumulative voting. Our Articles of Incorporation provide that our shareholders do not have the right to cumulative votes in the election of directors.
- Our Articles of Incorporation do not permit shareholder action without a meeting by consent except for the unanimous consent of all holders of our common stock. The Articles of Incorporation also provide that special meetings of our shareholders may be called only by the board of directors or the chairman of the board of directors.
- Our Bylaws provide that shareholders seeking to nominate candidates for election as directors or to bring business before an annual meeting of shareholders must provide timely notice of their proposal in writing to the corporate secretary.

These provisions may discourage acquisition proposals and may make it more difficult or expensive for a third party to acquire a majority of our outstanding voting stock or may delay, prevent or deter a merger, acquisition, tender offer or proxy contest, which may negatively affect our stock price.

Risks Related to the 2025 Notes and Other Indebtedness

We may not be able to generate sufficient cash to service all of our indebtedness, including the 2025 Notes, and may be forced to take other actions to satisfy our obligations under our indebtedness, which may not be successful.

Our ability to make scheduled payments on or to refinance our debt obligations depends on our financial condition and operating performance, which are subject to prevailing economic and competitive conditions and to certain financial, business and other factors beyond our control. We cannot assure you that we will maintain a level of cash flows from operating activities sufficient to permit us to pay the principal, premium, if any, and interest on our indebtedness, including the 2025 Notes.

If our cash flows and capital resources are insufficient to fund our debt service obligations, we may be forced to reduce or delay investments and capital expenditures, or to sell assets, seek additional capital or restructure or refinance our indebtedness, including the 2025 Notes. These alternative measures may not be successful and may not permit us to meet our scheduled debt service obligations. In the absence of such operating results and resources, we could face substantial liquidity problems and might be required to dispose of material assets or operations to meet our debt service and other obligations. Our New Senior Secured Credit Facility restricts our ability to dispose of assets and use the proceeds from the disposition. We may not be able to consummate those dispositions or to obtain the proceeds that we could realize from them and these proceeds may not be adequate to meet any debt service obligations then due.

The covenants in Koppers Inc.'s New Senior Secured Credit Facility impose restrictions that may limit our ability to take certain actions. Our failure to comply with these covenants could result in the acceleration of our outstanding indebtedness.

Koppers Inc.'s New Senior Secured Credit Facility contains minimum fixed charge coverage and maximum total secured leverage ratios. Additionally, the New Senior Secured Credit Facility includes covenants limiting liens, mergers, asset sales, dividends and the incurrence of debt. Our ability to borrow under Koppers Inc.'s New Senior Secured Credit Facility will depend upon satisfaction of these covenants. Events beyond our control can affect our ability to meet those covenants.

If we are unable to meet the terms of our financial covenants, or if we breach any of these covenants, a default could occur. A default, if not waived, would entitle our lenders to declare all amounts borrowed immediately due and payable, which could also cause the acceleration of obligations under certain other agreements. In the event of acceleration of our outstanding indebtedness, there can be no assurance that we would be able to repay our debt or obtain new financing to refinance our debt. Even if new financing is made available to us, it may not be on terms acceptable to us.

The 2025 Notes are unsecured and are effectively subordinated to our current and future secured indebtedness.

The 2025 Notes are unsecured, and are effectively subordinated to all our current secured indebtedness and any future secured indebtedness that we may incur to the extent of the assets securing such indebtedness. The New Senior Secured Credit Facility

permits borrowings of up to \$400.0 million. The New Senior Secured Credit Facility and indenture governing the 2025 Notes permit us to incur a substantial amount of additional indebtedness. The 2025 Notes do not have the right to any security interests in any collateral.

In the event of our insolvency, bankruptcy, liquidation, reorganization, dissolution or winding up, we may not have sufficient assets to pay amounts due on any or all of the 2025 Notes then outstanding. Holders of the 2025 Notes will participate ratably with all holders of our unsecured indebtedness that are deemed to be of the same class as the 2025 Notes, and potentially with all of our other general creditors, based upon the respective amounts owed to each holder or creditor, in our remaining assets. In any of the foregoing events, we cannot assure holders of our 2025 Notes that there will be sufficient assets to pay amounts due on the 2025 Notes. As a result, holders of the 2025 Notes may receive less, ratably, than holders of our secured indebtedness.

We may not have the ability to raise the funds necessary to finance the change of control offer required by the indenture or may be prohibited from making a repurchase offer required by the indenture.

Upon the occurrence of certain specific kinds of change of control events, we will be required to offer to repurchase all outstanding 2025 Notes at 101 percent of the principal amount thereof plus accrued and unpaid interest, if any, to the date of repurchase. The source of funds for that purchase of 2025 Notes will be available cash or cash generated from Koppers Inc. or its subsidiaries, operations or other potential sources, including borrowings, sales of assets or equity financing. It is possible that we will not have sufficient funds at the time of the change of control to make the required repurchase of 2025 Notes or that restrictions in our other indebtedness will not allow such repurchases. In addition, certain important corporate events, such as leveraged recapitalizations that would increase the level of our indebtedness, would not constitute a change of control under the 2025 Notes indenture.

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Holders of 2025 Notes may not be able to determine when a change of control giving rise to their right to require us to repurchase the 2025 Notes has occurred following a sale of “substantially all” of our assets.

A change of control, as defined in the indenture governing the 2025 Notes, requires us to make an offer to repurchase all outstanding 2025 Notes. The definition of change of control includes a phrase relating to the sale, lease or transfer of “all or substantially all” of our assets. There is no precise established definition of the phrase “substantially all” under applicable law. Accordingly, the ability of a holder of 2025 Notes to require us to repurchase its 2025 Notes as a result of a sale, lease or transfer of less than all of our assets to another individual, group or entity may be uncertain.

The claims of holders of 2025 Notes will be structurally subordinated to claims of creditors of any of Koppers Inc.’s subsidiaries that do not guarantee the notes.

Only Koppers Holdings and the wholly-owned domestic restricted subsidiaries of Koppers Inc. guarantee the 2025 Notes. The 2025 Notes are not guaranteed by any of our non-U.S. subsidiaries. Subject to certain limitations, the indenture governing the 2025 Notes permits the non-guarantor subsidiaries to acquire additional assets and incur additional indebtedness. Holders of 2025 Notes would not have any claim as a creditor against any of the non-guarantor subsidiaries to the assets and earnings of those subsidiaries. The claims of the creditors of those subsidiaries, including their trade creditors, banks and other lenders, will have priority over any of Koppers Inc.’s claims or those of Koppers Inc.’s other subsidiaries as equity holders of the non-guarantor subsidiaries. Consequently, in any insolvency, liquidation, reorganization, dissolution or other winding-up of any of the non-guarantor subsidiaries, creditors of those subsidiaries would be paid before any amounts would be distributed to Koppers Inc. or to any of the other guarantors as equity and thus be available to satisfy the obligations under the 2025 Notes and the guarantees. Accordingly, there can be no assurance that any of the assets of the non-guarantor subsidiaries will be available to satisfy the obligations under the 2025 Notes and the guarantees. In addition, Koppers Holdings has substantially no operations independent of Koppers Inc. and its subsidiaries, and there can be no assurance that Koppers Holdings will have any assets available to satisfy the obligations under its guarantee. As of December 31, 2016, the non-guarantor subsidiaries had approximately \$222 million of liabilities (including trade payables but excluding intercompany indebtedness).

Our subsidiaries that do not guarantee the 2025 Notes accounted for approximately \$459 million, or 32 percent of our net sales and approximately \$51 million, or 59 percent of our operating profit, for the year ended December 31, 2016, and approximately \$432 million, or 36 percent of our total assets as of December 31, 2015. Amounts are presented after giving effect to intercompany eliminations.

Federal or state laws allow courts, under specific circumstances, to void debts, including guarantees, and could require holders of 2025 Notes to return payments received from guarantors.

The 2025 Notes are guaranteed by Koppers Holdings and the wholly-owned domestic restricted subsidiaries of Koppers Inc. If a bankruptcy proceeding or lawsuit were to be initiated by unpaid creditors, the 2025 Notes and the guarantees of the 2025 Notes could come under review for federal or state fraudulent transfer violations. Under federal bankruptcy law and comparable provisions of state fraudulent transfer laws, obligations under the 2025 Notes or a guarantee of the 2025 Notes could be voided, or claims in respect of the 2025 Notes or a guarantee of the 2025 Notes could be subordinated to all other debts of the debtor or that guarantor if, among other things, the debtor or the guarantor, at the time it incurred the debt evidenced by such 2025 Notes or guarantee:

- received less than reasonably equivalent value or fair consideration for the incurrence of such debt or guarantee; and
- one of the following applies:
 - it was insolvent or rendered insolvent by reason of such incurrence;
 - it was engaged in a business or transaction for which its remaining assets constituted unreasonably small capital; or
 - it intended to incur, or believed that it would incur, debts beyond its ability to pay such debts as they mature.

In addition, any payment by the debtor or guarantor under the 2025 Notes or guarantee of the 2025 Notes could be voided and required to be returned to the debtor or guarantor, as the case may be, or deposited in a fund for the benefit of the creditors of the debtor or guarantor.

The measure of insolvency for purposes of these fraudulent transfer laws will vary depending upon the law applied in any proceeding to determine whether a fraudulent transfer has occurred. Generally, however, a debtor or a guarantor would be considered insolvent if:

- the sum of its debts, including contingent liabilities, was greater than the fair saleable value of all its assets;
- the present fair saleable value of its assets was less than the amount that would be required to pay its probable liability on its existing debts, including contingent liabilities, as they become absolute and mature; or
- it could not pay its debts as they become due.

We cannot be sure as to the standards that a court would use to determine whether or not a guarantor was solvent at the relevant time, or, regardless of the standard that the court uses, that the issuance of the guarantees of the 2025 Notes would not be voided or subordinated to the guarantor's other debt. If a guarantee was legally challenged, it could also be subject to the claim that, because it was incurred for our benefit, and only indirectly for the benefit of the guarantor, the obligations of the guarantor were incurred for less than fair consideration. A court could thus void the obligations under a guarantee or subordinate a guarantee to a guarantor's other debt or take other action detrimental to holders of the 2025 Notes.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

The following chart sets forth information regarding our production facilities. Generally, our production and port facilities are suitable and adequate for the purposes for which they are intended and overall have sufficient capacity to conduct business in the upcoming year.

<i>Primary Product Line</i>	<i>Location</i>	<i>Description of Property Interest</i>
Railroad and Utility Products and Services		
Railroad crossties	Ashcroft, British Columbia, Canada	Owned
Utility poles	Bunbury, Western Australia, Australia	Owned/Leased
Railroad crossties	Denver, Colorado	Owned
Railroad crossties	Florence, South Carolina	Owned
Railroad crossties	Galesburg, Illinois	Leased
Utility poles	Grafton, New South Wales, Australia	Owned
Railroad crossties	Guthrie, Kentucky	Owned
Rail joint bars	Huntington, West Virginia	Leased
Utility poles	Longford, Tasmania, Australia	Owned
Railroad structures	Madison, Wisconsin	Owned
Railroad crossties	Muncy, Pennsylvania	Owned
Railroad crossties	North Little Rock, Arkansas	Owned
Railroad crossties	Roanoke, Virginia	Owned
Railroad crossties	Somerville, Texas	Owned
Pine products	Takura, Queensland, Australia	Leased
Performance Chemicals		
Wood preservation chemicals	Auckland, New Zealand	Owned
Wood preservation chemicals	Christchurch, New Zealand	Owned
Wood preservation chemicals	Darlington, United Kingdom	Owned
Wood preservation chemicals	Geelong, Victoria, Australia	Owned
Intermediate copper products	Hubbell, Michigan	Leased
Wood preservation chemicals	Millington, Tennessee	Owned
Wood preservation chemicals	Mt. Gambier, South Australia, Australia	Owned
Wood preservation chemicals	Rock Hill, South Carolina	Owned
Carbon Materials and Chemicals		
Coal tar chemicals	Follansbee, West Virginia	Owned
Carbon products	Jingtang, Hebei Province, China	Leased
Carbon products	Mayfield, New South Wales, Australia	Owned
Carbon products	Nyborg, Denmark	Owned/Leased
Carbon products	Pizhou, Jiangsu Province, China	Leased
Carbon products, phthalic anhydride	Stickney, Illinois	Owned

Our corporate offices are located in leased office space in Pittsburgh, Pennsylvania. The lease term expires on December 31, 2023. We also own office space in Griffin, Georgia.

ITEM 3. LEGAL PROCEEDINGS

We are involved in litigation and various proceedings relating to environmental laws and regulations, toxic tort, product liability and other matters. An adverse outcome for certain of these cases could result in a material adverse effect on our business, cash flows and results of operations. The information related to legal matters set forth in Note 20 to the Consolidated Financial Statements of Koppers Holdings Inc. is hereby incorporated by reference.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

EXECUTIVE OFFICERS OF THE COMPANY

The following table sets forth the names, ages and positions of our and Koppers Inc.'s executive officers as of February 17, 2017. Our executive officers hold their positions until the annual meeting of the board of directors or until their respective successors are elected and qualified.

<i>Name</i>	<i>Age</i>	<i>Position</i>
Leroy M. Ball	48	President, Chief Executive Officer, and Director of Koppers Holdings Inc. and Koppers Inc.
Joseph P. Dowd	56	Global Vice President, Safety, Health, Environmental and Process Excellence, Koppers Inc.
Daniel R. Groves	50	Vice President, Human Resources, Koppers Inc.
Leslie S. Hyde	56	Vice President, Risk Management and Deputy General Counsel, Koppers Inc.
Steven R. Lacy	61	Senior Vice President, Administration, General Counsel and Secretary, Koppers Holdings Inc. and Koppers Inc., and Director of Koppers Inc.
Thomas D. Loadman	62	Senior Vice President, Railroad Products and Services, Koppers Inc.
Mark R. McCormack	57	Vice President, Australasian Operations, Koppers Inc.
Christian A. Nielsen	54	Vice President, North American and European Carbon Materials and Chemicals, Koppers Inc.
Stephen C. Reeder	64	Senior Vice President, Performance Chemicals, Koppers Inc.
James A. Sullivan	53	Senior Vice President, Global Carbon Materials and Chemicals, Koppers Inc.
Louann E. Tronsberg-Deihle	53	Treasurer, Koppers Holdings Inc. and Koppers Inc.
J. Robin Zhu	52	Vice President, China Operations, Koppers Inc.
Michael J. Zugay	65	Chief Financial Officer, Koppers Holdings Inc. and Koppers Inc., and Director of Koppers Inc.

Mr. Ball was elected President and Chief Executive Officer of Koppers Holdings Inc. and Koppers Inc. in January 2015. From May 2014 through December 2014, Mr. Ball served as Chief Operating Officer of Koppers Holdings Inc. and Koppers Inc. From May 2014 until August 2014, Mr. Ball served as both Chief Operating Officer and Chief Financial Officer of Koppers Holdings Inc. and Koppers Inc. He served as Vice President and Chief Financial Officer of Koppers Holdings Inc. and Koppers Inc. from September 2010 to May 2014. Mr. Ball has served as a Director of Koppers Holdings Inc. since February 2015 and as a Director of Koppers Inc. since May 2013.

Mr. Dowd was elected Global Vice President of Safety, Health, Environmental, and Process Excellence, Koppers Inc. in January 2016. From July 2012 to December 2015, Mr. Dowd served as Vice President, North American Carbon Materials and Chemicals, Koppers Inc.

Mr. Groves joined Koppers Inc. and was elected Vice President, Human Resources in May 2011.

Ms. Hyde was elected Vice President, Risk Management and Deputy General Counsel, Koppers Inc. in January 2016. From January 2005 to December 2015, Ms. Hyde served as Vice President, Safety and Environmental Affairs of Koppers Inc.

Mr. Lacy was elected Senior Vice President, Administration, General Counsel and Secretary of Koppers Holdings Inc. in November 2004 and has been Senior Vice President, Administration, General Counsel and Secretary of Koppers Inc. since January 2004. Mr. Lacy has served as a Director of Koppers Inc. since May 2013.

Mr. Loadman was elected Senior Vice President, Railroad Products and Services, Koppers Inc. in February 2015. Mr. Loadman had previously served as Vice President, Railroad and Utility Products and Services of Koppers Inc. since May 2011.

Mr. McCormack was elected Vice President, Australasian Operations of Koppers Inc. in May 2014. Prior to that, Mr. McCormack served as Vice President, Australian Operations of Koppers Inc. from November 2006 to May 2014.

Mr. Nielsen was elected Vice President, North American and European Carbon Materials and Chemicals, Koppers Inc. in January 2016. Prior to that, Mr. Nielsen served as Vice President, European Operations of Koppers Inc. from February 2014 to December 2015. Prior to that, Mr. Nielsen served as Operations Manager, European Operations of Koppers Inc. from October 2010 to January 2014.

Mr. Reeder was elected Senior Vice President, Performance Chemicals, Koppers Inc. in January 2016. Mr. Reeder served as Senior Vice President of Americas Wood Preserving and Assistant Secretary of Koppers Performance Chemicals Inc. (formerly known as Osmose, Inc.) from our acquisition of Osmose, Inc. in August 2014 until December 2015. Prior to our acquisition of Osmose, Inc., Mr. Reeder served as Senior Vice President of U.S. Wood Preserving for Osmose, Inc. since 2010.

Mr. Sullivan was elected Senior Vice President, Global Carbon Materials & Chemicals, Koppers Inc. in April 2014. Mr. Sullivan had been elected Vice President of Business Development, Koppers Inc. in June 2013. Prior to joining Koppers, from March 2012 through May 2013, Mr. Sullivan was Senior Vice President, Americas of Calgon Carbon Corporation ("Calgon Carbon") (granulated activated carbon products and treatment systems). During January and February 2012, he was Vice President, Americas of Calgon Carbon and from March 2010 to January 2012, he was the Vice President of Operations of Calgon Carbon.

Ms. Tronsberg-Deihle was elected Treasurer of Koppers Holdings Inc. and Koppers Inc. in August 2008.

Mr. Zhu has served as Vice President, China Operations of Koppers Inc. since March 2011.

Mr. Zugay was elected Chief Financial Officer of Koppers Holdings Inc. and Koppers Inc. in August 2014. Prior to joining Koppers, Mr. Zugay was Co-Chief Executive Officer for Michael Baker Corporation (engineering and other consulting services) from December 2012 to October 2013. Mr. Zugay served as Chief Financial Officer of Michael Baker Corporation from February 2009 to January 2014. Mr. Zugay has served as a Director of Koppers Inc. since May 2015.

PART II

ITEM 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common shares are listed and traded on the NYSE under the symbol "KOP".

The number of registered holders of Koppers common shares at January 31, 2017 was 87.

See Note 21 to the consolidated financial statements below for information concerning dividends and high and low market prices of our common shares during the past two years.

Dividend Policy

In 2006, our board of directors adopted a dividend policy that provided for quarterly dividends, payable at the discretion of our board of directors. Dividends will be considered if cash generated by our business is in excess of our expected cash needs. Our expected cash needs include operating expenses and working capital requirements, interest and principal payments on our indebtedness, capital expenditures, incremental costs associated with being a public company, taxes and certain other costs. On an annual basis we expect to pay dividends, if declared, with cash flow from operations, but, due to seasonal or other temporary fluctuations in cash flow, we may from time to time use temporary short-term borrowings to pay quarterly dividends.

We are not required to pay dividends, and our shareholders will not be guaranteed, or have contractual or other rights, to receive dividends. Nevertheless, our board of directors may decide, in its discretion, at any time, to otherwise modify or repeal the dividend policy. We historically had issued a quarterly cash dividend of \$0.25 per share of our common stock every quarter for the past two years ended December 31, 2014. In February 2015, our board of directors decided to suspend our quarterly cash dividend and no dividends were declared in 2015 or 2016. We currently intend to use the annual cash savings from such dividend suspension to preserve financial flexibility while funding our strategic growth initiatives and debt repayments. Any future determination to declare and pay dividends will be made at the discretion of our board of directors, after taking into account our financial results, capital requirements and other factors it may deem relevant.

Because we are a holding company, substantially all the assets shown on our consolidated balance sheet are held by our subsidiaries. Accordingly, our earnings and cash flow and our ability to pay dividends are dependent upon the earnings and cash flows of our subsidiaries and the distribution or other payment of such earnings to us in the form of dividends. Our ability to pay dividends is restricted by limitations on the ability of our only direct subsidiary, Koppers Inc., to pay dividends, as a result of limitations imposed by Koppers Inc.'s credit agreement, the indenture governing Koppers Inc.'s Senior Notes due 2025 and by Pennsylvania law. See "Management's Discussion and Analysis of Financial Condition and Results of Operations – Liquidity and Capital Resources – Restrictions on Dividends to Koppers Holdings."

Issuer Purchases of Equity Securities

No shares were repurchased in the quarter ended December 31, 2016 under the current \$75 million share repurchase program approved in November 2011. The approximate dollar value of common shares that may yet be purchased under this program is \$52.8 million. The repurchase program has no expiration date.

ITEM 6. SELECTED FINANCIAL DATA

The following table contains our selected historical consolidated financial data for the five years ended December 31, 2016. The selected historical consolidated financial data for each of the years ended December 31, 2016, 2015, 2014, 2013 and 2012 have been derived from our audited consolidated financial statements. This selected financial data should be read in conjunction with Koppers' Consolidated Financial Statements and related notes included elsewhere in this Annual Report on Form 10-K as well as Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

	Year Ended December 31,				
	2016	2015	2014	2013	2012
<i>(Dollars in millions, except share and per share amounts)</i>					
Statement of Operations Data:					
Net sales	\$1,416.2	\$1,626.9	\$1,555.0	\$1,478.3	\$1,555.0
Depreciation and amortization	52.9	59.0	44.0	29.7	27.6
Impairment and restructuring charges ⁽¹⁾	20.1	42.2	17.9	11.9	0.6
Goodwill impairment ⁽²⁾	0.0	67.2	0.0	0.0	0.0
Operating profit (loss)	86.4	(29.6)	33.2	100.3	126.6
Interest expense	50.8	50.7	39.1	26.8	27.9
Income (loss) from continuing operations	27.1	(75.9)	(40.0)	40.2	67.3
Income (loss) from discontinued operations	0.6	(0.1)	0.6	(0.1)	(0.1)
Net income (loss) ⁽³⁾	27.7	(76.0)	(39.4)	40.1	67.2
Net income (loss) attributable to Koppers	29.3	(72.0)	(32.4)	40.4	65.6
Earnings (loss) from Continuing Operations Per Common Share Data:					
Share Data:					
Basic – continuing operations	\$ 1.39	\$ (3.50)	\$ (1.61)	\$ 1.96	\$ 3.18
Diluted – continuing operations	1.36	(3.50)	(1.61)	1.94	3.14
Weighted average common shares outstanding <i>(in thousands)</i> :					
Basic	20,636	20,541	20,463	20,575	20,681
Diluted	21,055	20,541	20,463	20,815	20,927
Balance Sheet Data:					
Cash and cash equivalents ⁽⁴⁾	\$ 20.8	\$ 21.8	\$ 51.1	\$ 82.2	\$ 66.7
Total assets ⁽⁵⁾	1,087.5	1,125.4	1,293.9	784.9	780.0
Total debt ⁽⁵⁾	662.4	734.8	850.5	303.1	296.1
Other Data:					
Capital expenditures	\$ 49.9	\$ 40.7	\$ 83.8	\$ 72.9	\$ 28.9
Cash dividends declared per common share	\$ 0.00	\$ 0.00	\$ 1.00	\$ 1.00	\$ 0.96

(1) Includes plant closure and severance costs totaling \$13.2 million related to the decision to discontinue coal tar distillation activities at two CMC plants located in the United States and two CMC plants located in the United Kingdom and plant closure and severance costs totaling \$6.9 million related to the restructuring of three RUPS wood treating plants in the United States for the year ended December 31, 2016. Includes plant closure and severance costs totaling \$36.5 million related to the decision to discontinue coal tar distillation activities at two CMC plants located in the United States and two CMC plants located in the United Kingdom and plant closure and severance costs totaling \$5.7 million related to the closure of the RUPS wood treating plant in Green Spring, West Virginia for the year ended December 31, 2015. Includes plant closure and severance costs totaling \$13.2 million related to the closure of the Company's coal tar distillation facility in Uithoorn, the Netherlands and fixed asset impairment charges totaling \$4.7 million related to the Company's coal tar distillation facility located in Tangshan China for the year ended December 31, 2014. Includes impairment charges of \$11.9 million primarily consisting of write-downs related to facilities located in Uithoorn, the Netherlands; Tangshan, China; and Follansbee, West Virginia for the year ended December 31, 2013.

(2) In 2015, the Company recorded a \$67.2 million impairment charge related to goodwill for the CMC business segment.

(3) Income tax (benefit) expense for 2015 and 2014 was impacted by \$(16.1) million related to Carbon Materials and Chemicals' goodwill impairment and \$24.3 million related to a legal entity restructuring project, respectively.

(4) Includes cash of discontinued operations.

(5) The acquisition of the Osmose entities materially affect the comparability of these amounts for years prior to December 31, 2014.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Overview

We are a leading integrated global provider of treated wood products, wood preservation chemicals, and carbon compounds. Our products and services are used in a variety of niche applications in a diverse range of end-markets, including the railroad, specialty chemical, utility, residential lumber, agriculture, aluminum, steel, rubber, and construction industries. We serve our customers through a comprehensive global manufacturing and distribution network, with manufacturing facilities located in North America, South America, Australasia, China and Europe.

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

Through our RUPS business, we believe that we are the largest supplier of railroad crossties to the North American railroads. Our other treated wood products include utility poles for the electric and telephone utility industries in Australia. We also provide rail joint bar products as well as various services to the railroad industry. Through our PC business, we believe that we are the global leader in developing, manufacturing and marketing wood preservation chemicals and wood treatment technologies for use in the pressure treating of lumber for residential, industrial and agricultural applications. Our CMC business processes coal tar into a variety of products, including carbon pitch, creosote, carbon black feedstock, naphthalene and phthalic anhydride, which are intermediate materials necessary in the pressure treatment of wood, the production of aluminum, the production of carbon black, the production of high-strength concrete, and the production of plasticizers and specialty chemicals, respectively.

Outlook

Trend Overview

Our businesses and results of operations are affected by various competitive and other factors including (i) the impact of global economic conditions on demand for our products, including the impact of imported products from competitors in certain regions where we operate; (ii) raw materials pricing and availability, in particular the cost and availability of hardwood lumber for railroad crossties, scrap copper prices, and the cost and amount of coal tar available in global markets, which is negatively affected by reductions in steel production; (iii) volatility in oil prices, which impacts the cost of coal tar and certain other raw materials, as well as selling prices and margins for certain of our products including carbon black feedstock, phthalic anhydride, and naphthalene; (iv) competitive conditions in global carbon pitch markets; and (v) changes in foreign exchange rates.

Railroad and Utility Products and Services

The primary end-market for RUPS is the North American railroad industry, which has a significant installed base of approximately 700 million wood crossties that require periodic replacement. As a result, demand has historically been relatively stable in the range of 22-25 million wood crossties annually. We sell treated and untreated wood products, rail joint bars and services primarily to the railroad markets in the United States and Canada, and utility poles to the utility sector in Australia. We also operate a railroad services business that conducts engineering, design, repair and inspection services primarily for railroad bridges in the U.S. and Canada.

The supply of untreated crossties can vary at times based upon weather conditions in addition to other factors. We have a nationwide wood procurement team that maintains close working relationships with a network of hardwood crosstie concentration yards. The first component of our revenue stream occurs when we procure the untreated crossties, on behalf of our customers, at a nominal markup. This practice provides the railroad customers with an assured level of inventory and minimizes our working capital usage as untreated crossties go through a six- to nine-month air seasoning process before they are ready to be pressure treated. Subsequent to the air seasoning period, the next phase involves the RUPS segment providing value-added services to customers through treating crossties, switch ties and various types of lumber used for railroad bridges and crossings. The processes include creosote-only treatment as well as a combination of creosote and borate treatments. During any given year, there is a seasonal effect in the winter months on our crosstie business depending on weather conditions for harvesting lumber and installation.

Over the past twelve months, rail freight has declined due to lower shipments of coal, oil and gas, durable goods, and related products. As a result of their declining revenue base, the major companies in the rail industry have substantially reduced both operating and capital spending in 2016 from the prior year's peak spending level, which had a negative short-term impact on sales of various products and services that we provide to that industry. Also, we expect that 2017 revenues and profitability will again reflect a decline year-over-year due to the effects of lower demand caused by continued reductions in capital budgets for most North American Class I railroads. The lower demand has caused the market to reduce raw material purchase prices primarily in the Eastern U.S. which, due to certain cost pass-through conditions, will further reduce our revenues in the near term, but have a minimal impact on our profitability. Furthermore, the lower demand has also resulted in price reductions for the products we supply the commercial railroad business as competition has increased to replace the lower Class I demand.

Earlier in the year, we extended a contract with Norfolk Southern Railway Company, one of our largest railroad customers, to 2021. We currently supply all seven of the North American Class I railroads and have had long-standing relationships with these customers. We have approximately 70 percent of North American sales under long-term contracts and believe that we will continue to grow our market position. We also signed long-term rail joint agreements with two of our largest railroad customers, representing market share gains for a critical maintenance-of-way part of the RUPS business. These rail joint contracts have terms of three years and five years.

Overall, the long-term prognosis for the railroad industry and the products and services that we provide to it remains favorable. Currently, the railroad industry is managing the cyclical downturn in the oil and gas industry, while looking to replace demand lost to what is likely a long-term reduction in coal production. At the same time, the railroads are building their revenue base of shipments of non-energy related products. We believe that with our vertical integration capabilities in wood treatment, our products and services will continue to provide value to our railroad customers.

Performance Chemicals

The largest geographic market for wood treating chemicals sold by our PC business is in North America, and the largest application for our products is the residential remodeling market. We also have a market presence in Europe, South America, Australia and New Zealand. Product demand for our PC business has historically been influenced by existing home sales, which is a leading indicator of consumer spending on remodeling projects. The National Association of Realtors estimates that existing home sales will increase two percent in 2017 which we expect will favorably impact repair and remodeling activity. According to the Leading Indicator of Remodeling Activity ("LIRA"), strong gains in home renovation and repair is expected to continue into mid-2017 before moderating somewhat later in the year.

We believe that PC is the largest global manufacturer and supplier of water-based wood preservatives and wood specialty additives to treaters who supply pressure treated wood products to large retailers and independent lumber dealers. These retailers and dealers, in turn, serve the residential, agricultural and industrial pressure-treated wood market. Our primary products are copper-based wood preservatives, including micronized copper azole ("MicroPro®") and micronized pigments ("MicroShades®"). Applications for these products include decking, fencing, utility poles, construction lumber and other outdoor structures. We continue to invest in research and development activities at various locations around the world, particularly in areas that have high fungal decay and termite activity, in order to assess the performance and efficacy of various wood preservation systems.

As most of the products sold by PC are copper-based products, changes in the price and availability of copper can have a significant impact on product pricing and margins. We attempt to moderate the variability in copper pricing through entering into hedging transactions for the majority of our copper needs, which primarily range from six months up to 30 months. Those hedges typically match expected customer purchases and receive hedge accounting treatment. From time to time, we enter into forward transactions based upon long-term forecasted needs of copper. Those forward positions are typically marked to market on a quarterly basis.

In North America, we are vertically integrated through the manufacturing of copper compounds for our copper-based wood preservatives. We believe our vertical integration is part of our proprietary processes and reflects an important competitive advantage. In addition, we believe this provides our customers with the security of a continuous supply of wood preservative chemicals.

The National Association of Realtors ("NAR") reported that existing home sales continue to show healthy demand due to the highest percentage of first-time buyers in more than four years and is likely to be sustained into at least the spring of 2017. The NAR cited consistent job gains and affordable mortgage rates as economic underpinnings that are helping consumers to gain

additional confidence. This is consistent with what the Conference Board reported, which is that consumer confidence remains relatively strong and is on a positive trend. We have seen favorable market trends in the repair and remodeling markets and existing home sales in 2016. In addition, starting in the second quarter of 2016, we have observed that large retailers and lumber dealers are opting for a product mix with higher levels of preservative retention driven primarily by changes in treated wood product application standards. This shift towards a higher retention product mix simplifies the treating and stocking processes for the treaters that purchase PC products and their end-customers, as well as provides for higher quality products that will better withstand the effects of insects and fungal decay. Even though it is difficult to predict competitive trends and to quantify the total impact it will have on PC sales, operating profit, and cash flow, we believe the shift to higher retention product mix will continue into 2017 but will begin to moderate as the market completes this transition.

Carbon Materials and Chemicals

The primary products produced by CMC are creosote, which is a registered pesticide in the U.S. and used primarily in the pressure treatment of railroad crossties, and carbon pitch, which is sold primarily to the aluminum industry for the production of carbon anodes. The smelting of aluminum requires significant amounts of energy, which is a major cost component for the aluminum industry. As a result, new production facilities are being built in regions with low energy costs such as the Middle East, while regions with higher energy costs such as the United States, Australia and Western Europe have seen significant amounts of smelting capacity idled or closed over the past decade. This geographic shift accelerated during the past 12 to 24 months with further curtailments and closures in the U.S. Accordingly, we have experienced significantly lower sales volumes due to the reduction in aluminum production in parts of the world where the majority of our production facilities are located.

Some of our CMC products, particularly carbon black feedstock, phthalic anhydride and naphthalene, have end market pricing that is linked to oil. Historically, when oil prices increase we have benefited in terms of revenues and profitability from the higher pricing for these products as the cost of coal tar has not increased proportionally with oil. Conversely, the recent significant decline in oil prices has resulted in lower selling prices and profitability for carbon black feedstock, phthalic anhydride and naphthalene. However, the unfavorable impact to sales and margins is partially offset by increased sales volumes of phthalic anhydride due to increased market share and lower input costs, because a significant portion of our coal tar in certain regions is also affected by the price of oil, resulting in lower raw material and finished product costs.

Historically, CMC results have been closely linked to aluminum demand and production, as well as the price of oil, and we seek to lessen our exposure to these commodity markets going forward. We believe that the economic environment related to these factors will not meaningfully improve, and as such, we have undertaken a strategy to reduce our reliance on the aluminum industry. In 2014, we began our multi-year restructuring plan and are in the process of streamlining the CMC business to address overcapacity and greatly reduce fixed costs in our operations. When completed, we expect the profitability for this segment to improve substantially as we fully realize the benefit of our cost savings initiatives.

The availability of coal tar, the primary raw material for our CMC business, is linked to levels of metallurgical coke production. As the global steel industry, excluding Asia, has reduced the production of steel using metallurgical coke, the volumes of coal tar have also been reduced. Over the past years, the coal tar distillation industry has operated in an excess capacity mode, which further increased the competition for a limited amount of coal tar in North America. Our ability to obtain coal tar and the price we are able to negotiate for coal tar has a significant impact on the level of profitability of our business. Significant increases in raw material costs can result in margin dilution if the increased cost of the raw material cannot be passed on to the customer. Additionally, in regions where the available supply of our products exceeds demand and the pricing is competitive, we may not be able to recover raw material cost increases in the selling prices for our end products. As our CMC business consolidates its operating footprint and lowers production levels, we anticipate that our raw material needs will be significantly less than historically required and we will continue to evaluate potential opportunities to lower our overall input costs.

In January 2017, we entered into new long-term coal tar supply agreements with a leading global steelmaker, which have initial terms of 10 years. Under these agreements, we will purchase a contracted volume of coal tar from this supplier which will satisfy a significant portion of our North American raw material needs for the CMC business. We also entered into a five-year extension through 2025 of our primary coal tar supply agreement for our facility in Europe.

We believe that the restructuring initiatives that we have implemented thus far are beginning to lessen the impact of oil prices on our business. As we shift our focus to producing only the needed amount of creosote, we are distilling lower volumes of coal tar and thereby, have fewer products exposed to the price of oil. In addition, we believe our overall profitability will improve due to a more streamlined and efficient cost structure as well as our ability to secure lower raw material costs through key long-term supply agreements.

CMC Restructuring Initiatives

Our CMC business and results of operations have been negatively affected in recent years by difficult economic conditions in North America, Europe and China. Certain key end markets experienced significant reductions in demand that have negatively affected the profitability for most of our products produced and sold in the geographical regions we operate, and we expect this to continue for at least the foreseeable future. Additionally, over the last several years, our profitability in North America has been negatively impacted from increased levels of imports from competitors in Europe due to weak end-market demand there. The geographic shift in end-market demand has resulted in a trend of declining utilization rates in North America and Europe over that same period.

As a result, we embarked on a plan to restructure our CMC operating footprint that reduced our global number of coal tar distillation facilities from the 11 that existed as of January 1, 2014 to four in total. The remaining facilities are located in regions where we believe we hold key competitive advantages that allow us to better serve our global customers: Stickney, Illinois; Nyborg, Denmark; Mayfield, Australia; and Jiangsu Province, China.

The reduction in operating capacity at the seven closed or sold coal tar distillation we have incurred substantial restructuring and impairment costs over the last three years. As a result of these initiatives, we expect additional restructuring and related charges to earnings of between \$9 million to \$17 million through 2020. The overall expected future cash requirements for the CMC plant closures are estimated to be approximately \$40 million through 2020. There may be additional curtailments or closures at our other CMC facilities as part of our efforts to reduce our cost structure and improve capacity utilization in our business.

In January 2017, we entered into a transaction to lease our Follansbee, West Virginia facility to a third party. It is anticipated that we will relocate our naphthalene refining activities at the Follansbee facility to our Stickney facility in early 2018 and will continue to utilize the site as a distribution terminal during the lease period.

We believe that, through these restructuring initiatives, we are significantly transforming our CMC business model by streamlining the operating footprint and reducing reliance on and exposure to the carbon pitch markets.

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 Years Ended December 31, 2016 and December 31, 2015

Consolidated Results

Net sales for the years ended December 31, 2016 and 2015 are summarized by segment in the following table:

	Year Ended December 31,		Net
	2016	2015	Change
<i>(Dollars in millions)</i>			
Railroad and Utility Products and Services	\$ 586.5	\$ 657.0	-11%
Carbon Materials and Chemicals	436.3	613.4	-29%
Performance Chemicals	393.4	356.5	10%
	\$1,416.2	\$1,626.9	-13%

Railroad and Utility Products and Services net sales for the year ended December 31, 2016 decreased by \$70.5 million or 11 percent compared to the prior year. The sales decrease was primarily due to lower sales volumes of treated crossties and utility products. Sales of treated crossties declined by \$52.2 million or ten percent. The reduction in treated crossties is attributed to lower spending in the rail industry due to the impact of reduced freight car loadings and rail traffic across both the

Class I and commercial markets. In addition, commercial pricing has been reduced due to an over-supply of crossties in the railroad market.

The decrease in sales of utility products was due to reduced demand in the Australian utility pole market combined with the Company's decision in 2015 to exit the utility pole business in the United States. Approximately \$9.6 million or 14 percent of the sales decline from prior year is due to the Company's exit from non-core businesses in the United States, including the utility pole business and a dimensional lumber treating plant.

Carbon Materials and Chemicals net sales for the year ended December 31, 2016 decreased by \$177.1 million or 29 percent compared to the prior year due mainly to lower sales volumes for carbon pitch, carbon black feedstock and other coal tar products with lower sales prices for carbon pitch and phthalic anhydride, partially offset by higher phthalic anhydride volumes. The reduction in carbon black feedstock sales volumes was driven by our strategy to reduce total distillate production and direct as much production as possible to the higher value wood preservative market. Carbon pitch sales volumes were lower in the United States and China. Reduced volume of carbon pitch in the United States is due to the reduction of aluminum manufacturing capacity. Sales of coal tar chemicals increased over the prior year period due to an increase in sales volumes of phthalic anhydride. The increase in volume was partially offset by a reduction in pricing driven by the effect of lower orthoxylene pricing on phthalic anhydride.

Performance Chemicals net sales increased by \$36.9 million or 10 percent compared to the prior year. The sales increase was due primarily to higher North American sales volumes for some copper-based wood preservatives and additives. Higher sales volumes were driven primarily by favorable market trends in the repair and remodeling markets and existing home sales as well as treated wood dealers stocking and selling treated wood with higher preservative retention levels. These gains were offset in part by higher customer development costs, which are reflected as a reduction of net sales, compared to the prior year period.

Cost of sales as a percentage of net sales was 80 percent for the year ended December 31, 2016, compared to 84 percent in the prior year due mainly to a sales mix shift as higher gross margins for PC driven by increased sales volumes and lower costs more than offset lower sales volumes and gross margins from CMC due to restructuring activities.

Depreciation and amortization charges for the year ended December 31, 2016 were \$6.1 million lower when compared to the prior year period due mainly to a reduction in assets related to our shutdown of distillation facilities in the United States and United Kingdom as well as accelerated depreciation and asset retirement obligation amortization in the prior year period related to the closure of our wood treating facility in Green Spring, West Virginia.

Gain on sale of business of \$2.1 million for the year ended December 31, 2016 reflected the sale of our CMC tar distillation properties and assets in the United Kingdom in July 2016. Gain on sale of business of \$3.2 million for the year ended December 31, 2015 reflected the sale of our North American utility pole business in January 2015.

Impairment and restructuring charges were \$22.1 million lower for the year ended December 31, 2016 primarily related to the decision in the prior year to discontinue coal tar distillation activities at two CMC plants located in the United States and two CMC plants located in the United Kingdom. The remaining 2015 charges were related to the RUPS closure of a wood treating plant in Green Spring, West Virginia. The \$20.1 million of impairment and restructuring charges incurred for the year ended December 31, 2016 was due mainly to an accrual for future real estate lease obligations, net of estimated sublease revenue, at our closed coal tar distillation facility in Uithoorn, the Netherlands, as well as severance charges related to our closed coal tar distillation CMC facilities in the United Kingdom and impairment charges for the remaining fixed assets at our coal tar distillation facility in Clairton, Pennsylvania. The remaining 2016 charges were related to the exit of three non-core RUPS businesses in the United States.

Goodwill impairment charges were \$67.2 million for the prior year. The 2015 charges reflected the complete write-down of goodwill for the Carbon Materials and Chemicals business. There was no goodwill impairment in the current year.

Selling, general and administrative expenses for the year ended December 31, 2016 were \$6.4 million higher when compared to the prior year due mainly to a pension settlement charge of \$4.4 million and increases in short-term incentive expense and stock compensation expense in the current year period.

Interest expense for the year ended December 31, 2016 was \$0.1 million higher when compared to the prior year as a result of the write-off of debt issuance costs totaling \$2.0 million in 2016 due to the reduction of borrowing capacity under our revolving credit agreement was partially offset by reduced average debt levels as compared to the prior year period.

Income taxes for the year ended December 31, 2016 were \$15.6 million higher when compared to the prior year period. This increase is primarily due to significantly higher pre-tax earnings when compared to the prior year period. The effective tax rate for the year ended December 31, 2016 was 29.6 percent. The primary reason the effective tax rate differs from the United States federal statutory tax rate of 35.0 percent is the higher amount of pre-tax earnings in jurisdictions that have a statutory tax rate less than the United States federal statutory tax rate. The effective tax rate for the year ended December 31, 2015 was 5.3 percent. The effective tax rate in the prior year period differed from the United States federal statutory tax rate of 35.0 percent primarily due to goodwill impairment charges that were not deductible in certain foreign jurisdictions along with recording a valuation allowance for certain state and foreign net operating losses and temporary differences.

Segment Results

Segment operating profit for the years ended December 31, 2016 and 2015 is summarized by segment in the following table:

	Year Ended December 31,		% Change
	2016	2015	
<i>(Dollars in millions)</i>			
Operating profit (loss):			
Railroad and Utility Products and Services	\$ 51.1	\$ 62.2	-18%
Carbon Materials and Chemicals	(25.1)	(125.0)	80%
Performance Chemicals	62.0	39.0	59%
Corporate	(1.6)	(5.8)	-72%
	\$ 86.4	\$ (29.6)	392%
Operating profit (loss) as a percentage of net sales:			
Railroad and Utility Products and Services	8.7%	9.5%	-0.8%
Carbon Materials and Chemicals	-5.8%	-20.4%	14.6%
Performance Chemicals	15.8%	10.9%	4.9%
	6.1%	-1.8%	7.9%

Railroad and Utility Products and Services operating profit for the year ended December 31, 2016 decreased by \$11.1 million or 18 percent compared to the prior year. Operating profit as a percentage of sales decreased to 8.7 percent from 9.5 percent. The decrease in operating profit is due primarily to costs related to the Company's decision to exit a utility pole business and a dimensional lumber plant in the United States. The combined reduction in operating profit due to exiting these businesses was \$7.5 million.

In addition, operating profit declined due to reduced sales volumes of crossties, utility poles, and rail joints combined with reduced margins in the commercial crosstie market as a result of inventory over-supply in the railroad market. The negative impact from these factors was partially offset by a favorable sales mix of higher margin products and services including increased crosstie treatment and bridge services. Cost savings related to the closure of the Green Spring, West Virginia facility provided an additional benefit in the second half of 2016.

Carbon Materials and Chemicals operating loss for the year ended December 31, 2016 decreased by \$99.9 million or 80 percent compared to the prior year. Operating loss in the prior year included a goodwill impairment charge of \$67.2 million and other asset impairment charges and restructuring charges of \$34.7 million. Operating loss was positively affected by lower raw material costs and restructuring cost savings in North America. Lower sales prices in most product lines, accelerated depreciation, costs to restructure operations and unabsorbed fixed costs partially offset the positive impacts.

Performance Chemicals operating profit increased by \$23.0 million compared to the prior year. Operating profit as a percentage of net sales for PC increased to 15.8 percent from 10.9 percent in the prior year. Operating profit for the year ended December 31, 2016 was positively impacted due primarily to higher North American sales volumes for copper-based wood preservatives. Higher sales volumes were driven primarily by changes in treated wood product application standards resulting in treated wood dealers stocking and selling more high retention ground contact treated wood.

Sales volumes have also improved due to favorable market trends in the repair and remodeling markets and existing home sales. Favorable non-recurring items, including the reversal of an environmental liability, resulted in approximately \$3.7 million of operating profit in the current year.

Results of Operations – Comparison of Years Ended December 31, 2015 and December 31, 2014

Consolidated Results

Net sales for the years ended December 31, 2015 and 2014 are summarized by segment in the following table:

	Year Ended December 31,		Net Change
	2015	2014	
<i>(Dollars in millions)</i>			
Railroad and Utility Products and Services	\$ 657.0	\$ 597.8	10%
Carbon Materials and Chemicals	613.4	833.7	-26%
Performance Chemicals	356.5	123.5	189%
	\$1,626.9	\$1,555.0	5%

Railroad and Utility Products and Services net sales for the year ended December 31, 2015 increased by \$59.2 million or ten percent compared to the prior year. The sales increase was due primarily to higher sales volumes for railroad crossties combined with incremental sales of \$35.7 million from certain businesses acquired from Osmose Holdings, Inc. (“Osmose”) that are a part of RUPS. The higher sales volume for crossties were due to strong industry demand combined with inventory restocking by railroad customers who reduced inventory levels over the past several years due to competitive market conditions for hardwood lumber.

Carbon Materials and Chemicals net sales for the year ended December 31, 2015 decreased by \$220.3 million or 26 percent compared to the prior year due mainly to lower volumes of carbon pitch and lower sales prices for carbon black feedstock, phthalic anhydride and naphthalene, all of which have been impacted by lower oil prices.

Distillate sales decreased by 11 percent compared to the prior year due mainly to lower prices for carbon black feedstock, with the lower prices driven by lower oil prices.

Coal tar chemicals sales declined by six percent compared to the prior year due primarily to decreases in sales prices for phthalic anhydride and naphthalene, which were driven by lower oil prices.

Foreign exchange translation as a result of the strong U.S. dollar resulted in a reduction of six percent of sales compared to the prior year.

Performance Chemicals net sales increased by \$233.0 million compared to the prior year. The sales increase was due primarily to the PC business being consolidated for a full 12-month period in 2015 versus a 4.5 month period in 2014. This segment consists of the wood preservation business that was acquired from Osmose in August 2014. Sales for this business, which produces various copper-based wood preservatives used in decking, fencing and other residential, commercial, and agricultural applications are driven primarily by residential remodeling and existing home sales. Operating results for PC for the first and fourth quarters are typically lower than results for the second and third quarters due to seasonality related to winter weather conditions.

Cost of sales as a percentage of net sales was 84 percent for the year ended December 31, 2015, compared to 86 percent in the prior year due mainly to the acquisition of the higher margin PC business and higher gross margins for RUPS driven by increased sales volumes and improved cost performance, which more than offset lower gross margin for CMC.

Depreciation and amortization charges for the year ended December 31, 2015 were \$15.0 million higher when compared to the prior year due mainly to a full year of depreciation and amortization for the PC business that was acquired in August 2014.

Gain on sale of business of \$3.2 million for the year ended December 31, 2015 reflected the sale of our North American utility pole business in January 2015.

Impairment and restructuring charges were \$42.2 million for the year ended December 31, 2015 primarily related to the decision to discontinue coal tar distillation activities at two CMC plants located in the United States and two CMC plants located in the United Kingdom. The remaining 2015 charges were related to the RUPS closure of a wood treating plant in Green Spring, West Virginia. The \$17.9 million of impairment and restructuring charges incurred for the year ended December 31, 2014 was due to the closure of the Uithoorn, Netherlands CMC facility for \$13.2 million combined with impairment charges related to the KCCC facility of \$4.7 million.

Goodwill impairment charges of \$67.2 million for the year ended December 31, 2015 reflected the complete write-down of goodwill for the Carbon Materials and Chemicals business.

Selling, general and administrative expenses for the year ended December 31, 2015 were \$8.4 million higher when compared to the prior year mainly due to the PC business that was acquired in August 2014. Additionally, \$1.4 million of costs were incurred in 2015 related to CMC restructuring and reorganization projects.

Interest expense for the year ended December 31, 2015 was \$11.6 million higher when compared to the prior year as a result of higher debt levels due to financing for the acquisition of the PC business from Osmose in August 2014.

Income taxes for the year ended December 31, 2015 were \$38.3 million lower when compared to the prior year period. Our effective income tax rate for the year ended December 31, 2015 was 5.3 percent as compared to (578.0) percent in the prior year. The change in the effective income tax rate is primarily due to a significant decrease in pre-tax earnings in addition to the absence of the one-time tax charges related to the legal entity restructuring project that we completed at the end of 2014. The effective income tax rate is negatively affected by goodwill impairment charges that are not deductible in certain foreign jurisdictions along with setting up a valuation allowance for certain state and foreign net operating losses and temporary differences.

Segment Results

Segment operating profit for the years ended December 31, 2015 and 2014 is summarized by segment in the following table:

	Year Ended December 31,		% Change
	2015	2014	
<i>(Dollars in millions)</i>			
Operating (loss) profit:			
Railroad and Utility Products and Services	\$ 62.2	\$ 53.6	16%
Carbon Materials and Chemicals	(125.0)	(5.3)	—
Performance Chemicals	39.0	1.6	—
Corporate	(5.8)	(16.7)	-65%
	\$ (29.6)	\$ 33.2	-189%
Operating (loss) profit as a percentage of net sales:			
Railroad and Utility Products and Services	9.5%	9.0%	0.5%
Carbon Materials and Chemicals	-20.4%	-0.6%	-19.8%
Performance Chemicals	10.9%	1.3%	9.6%
	-1.8%	2.1%	-3.9%

Railroad and Utility Products and Services operating profit for the year ended December 31, 2015 increased by \$8.6 million or 16 percent compared to the prior year. Operating profit as a percentage of sales increased to 9.5 percent from 9.0 percent in the prior year due to higher sales volumes for crossties caused by strong commercial industry demand and inventory restocking by railroad customers and the contribution from the August 2014 acquisition of the railroad structures business from Osmose.

Carbon Materials and Chemicals operating profit for the year ended December 31, 2015 decreased by \$119.7 million compared to the prior year. CMC recorded a goodwill impairment charge of \$67.2 million in 2015 and other asset impairment

charges and restructuring charges of \$34.7 million. CMC operating profit as a percent of sales decreased to (20.4) percent from (0.6) percent in the prior year due mainly to these charges, lower volumes for carbon pitch and lower sales prices for carbon black feedstock, phthalic anhydride and naphthalene, which were driven by lower oil prices.

Performance Chemicals operating profit increased by \$37.4 million compared to the prior year. Operating profit as a percentage of net sales for PC increased to 10.9 percent from 1.3 percent in the prior year. Operating profit for the year ended December 31, 2015 was positively impacted due primarily to the PC business being consolidated for a full 12-month period in 2015 versus 4.5 months in 2014.

Cash Flow

Net cash provided by operating activities was \$119.5 million for the year ended December 31, 2016 as compared to net cash provided by operating activities of \$127.7 million for the year ended December 31, 2015. The net decrease of \$8.2 million in cash from operations was due primarily to higher working capital usage compared to the prior year period principally as a result of an increase in inventory in the current year period and the receipt of a cash advance payment of \$30.0 million to Koppers (Jiangsu) Carbon Chemical Company Limited ("KJCC") due to the amendment of a soft pitch supply agreement with its customer in the prior year period.

Net cash provided by operating activities was \$127.7 million for the year ended December 31, 2015 as compared to net cash provided by operating activities of \$35.5 million for the year ended December 31, 2014. The net increase of \$91.9 million in cash from operations was due primarily to lower working capital usage compared to the prior year period principally as a result of a decrease in accounts receivable and inventories coupled with an increase in accounts payable. Also contributing was the receipt of a cash advance payment of \$30 million to KJCC due to the amendment of a soft pitch supply agreement with its customer.

Net cash used in investing activities was \$53.7 million for the year ended December 31, 2016 as compared to net cash used in investing activities of \$41.1 million for the year ended December 31, 2015. The increase in net cash used by investing activities of \$12.6 million is due to an increase in capital expenditures of \$9.2 million and cash transferred to the acquirer of our CMC coal tar distillation facilities in the United Kingdom in exchange for the buyer assuming historical environmental and asset retirement obligations. The prior year period reflected \$12.5 million for the acquisition of the KMG creosote business which was partially offset by \$12.3 million of cash proceeds from the sale of the North American utility pole business in the first quarter of 2015.

Net cash used in investing activities was \$41.1 million for the year ended December 31, 2015 as compared to net cash used in investing activities of \$580.0 million for the year ended December 31, 2014. The decrease in net cash used by investing activities of \$538.9 million is due to a reduction of \$43.1 million for capital expenditures, additional proceeds of \$14.6 million from asset sales, and a \$481.2 million reduction in acquisition expenditures compared to the prior year period.

Net cash used in financing activities was \$62.7 million for the year ended December 31, 2016 as compared to net cash used in financing activities of \$123.4 million for the year ended December 31, 2015. The difference is due mainly to net debt repayments totaling \$61.4 million in 2016 as compared to repayments of \$113.4 million in the prior year. The remaining offset is due to \$8.7 million of dividends paid in the prior year compared to no dividends paid in the current year.

Net cash used in financing activities was \$123.4 million for the year ended December 31, 2015 as compared to net cash provided by financing activities of \$516.1 million for the year ended December 31, 2014. The difference is due mainly to net debt repayments totaling \$113.4 million in 2015 as compared to borrowings of \$547.5 million in the prior year used to finance the Osmoste acquisition, the acquisition of a wood treating plant in Ashcroft, British Columbia and construction costs at the KJCC facility in China.

Dividends paid were \$8.7 million for the year ended December 31, 2015. Dividends paid in 2015 include \$3.5 million of dividends paid to the non-controlling interest shareholder of KCCC, our 60-percent owned subsidiary, and \$5.2 million in dividends to Koppers Holdings shareholders relating to dividends declared on November 5, 2014. There were no dividends paid during 2016.

Liquidity and Capital Resources

As of December 31, 2016, Koppers Inc. had a \$300.0 million senior secured revolving credit facility and a \$232.5 million senior secured term loan (the "Prior Senior Secured Credit Facilities") and \$298.1 million principal value outstanding of senior notes due 2019 (the "2019 Notes").

In January 2017, Koppers Inc. completed a private placement offering of \$500.0 million 6.00 percent Senior Notes due 2025 (the "2025 Notes"). The 2025 Notes will pay interest semi-annually in arrears on February 15 and August 15 beginning on August 15, 2017 and will mature on February 15, 2025 unless earlier redeemed or repurchased. The 2025 Notes are unsecured and are guaranteed by Koppers Holdings Inc. and certain of Koppers Inc.'s domestic subsidiaries.

Koppers Inc. used the proceeds from the offering of the 2025 Notes to repay its outstanding term loan under the Prior Senior Secured Credit Facilities and to fund a tender offer to repurchase the 2019 Notes. The tender offer for the 2019 Notes was completed in early February 2017. Any 2019 Notes remaining outstanding following the tender offer were called for redemption and Koppers Inc. concurrently satisfied and discharged its remaining obligations under the indenture governing the 2019 Notes.

In February 2017, the Company entered into a new \$400.0 million senior secured revolving credit facility (the "New Senior Secured Credit Facility") which replaced the Prior Senior Secured Credit Facilities. The maturity date of the New Senior Secured Credit Facility is February 2022. The interest rate on the New Senior Secured Credit Facility is variable and is based on LIBOR. Terms under the New Senior Secured Credit Facility are substantially consistent with the Prior Senior Secured Credit Facilities.

Expenses associated with the redemption of the 2019 Notes and replacement of the Prior Senior Secured Credit Facilities are estimated to be \$16.0 million in the first quarter of 2017. These costs consist of tender offer premiums, fees and write off of unamortized debt issuance costs.

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. As with the Prior Senior Secured Credit Facilities, the New Senior Secured Credit Facility prohibits Koppers Inc. from making dividend payments to Koppers Holdings unless (1) such dividend payments are permitted by the indenture governing Koppers Inc.'s 2025 Notes, (2) no event of default or potential default has occurred or is continuing under the credit agreement, and (3) we are in pro forma compliance with our fixed charge coverage ratio covenant after giving effect to such dividend. The indenture governing the 2025 Notes restrict Koppers Inc.'s ability to finance our payment of dividends if (1) a default has occurred or would result from such financing, (2) Koppers Inc., or a restricted subsidiary of Koppers Inc. which is not a guarantor under the applicable indenture, is not able to incur additional indebtedness (as defined in the applicable indenture), and (3) the sum of all restricted payments (as defined in the applicable indenture) have exceeded the permitted amount (which we refer to as the "basket") at such point in time.

The basket is governed by a formula based on the sum of a beginning amount, plus or minus a percentage of Koppers Inc.'s consolidated net income (as defined in the applicable indenture), plus the net proceeds of Koppers Inc.'s qualified stock issuance or conversions of debt to qualified stock, plus the net proceeds from the sale of or a reduction in an investment (as defined in the applicable indenture) or the value of the assets of an unrestricted subsidiary which is designated a restricted subsidiary. At December 31, 2016 the basket totaled \$136.1 million. Notwithstanding such restrictions, the indenture governing the 2025 Notes permits an additional aggregate amount of \$0.30 per share each fiscal quarter to finance dividends on the capital stock of Koppers Holdings, whether or not there is any basket availability, provided that at the time of such payment, no default in the indenture has occurred or would result from financing the dividends.

In addition, certain required coverage ratios in Koppers Inc.'s revolving credit facility may restrict the ability of Koppers Inc. to pay dividends. See "—Debt Covenants." Koppers Holdings suspended its dividend in February 2015 and does not expect to declare any dividends for the foreseeable future.

Liquidity

Borrowings under the revolving credit facility are secured by a first priority lien on substantially all of the assets of Koppers Inc., Koppers Holdings and their material domestic subsidiaries. The revolving credit facility contains certain covenants for Koppers

Inc. and its restricted subsidiaries that limit capital expenditures, additional indebtedness, liens, dividends and investments or acquisitions. In addition, such covenants give rise to events of default upon the failure by Koppers Inc. and its restricted subsidiaries to meet certain financial ratios.

As of December 31, 2016, we had \$159.6 million of unused revolving credit availability for working capital purposes after restrictions by various debt covenants and certain letter of credit commitments. As of December 31, 2016, \$43.5 million of commitments were utilized by outstanding letters of credit.

The following table summarizes our estimated liquidity as of December 31, 2016 (*dollars in millions*):

Cash and cash equivalents ⁽¹⁾	\$ 20.8
Amount available under revolving credit facility	159.6
Amount available under other credit facilities	1.1
Total estimated liquidity	\$181.5

(1) Cash includes approximately \$21 million held by foreign subsidiaries, which if repatriated to the United States, would not incur a material cash tax cost.

Our estimated liquidity was \$76.5 million at December 31, 2015.

Our need for cash in the next twelve months relates primarily to contractual obligations which include debt service, purchase commitments and operating leases, as well as working capital, capital maintenance programs and the funding of plant consolidation and rationalizations. We may also use cash to pursue potential strategic acquisitions. Capital expenditures in 2017, excluding acquisitions, if any, are expected to total approximately \$70 million to \$75 million and are expected to be funded by cash from operations.

Schedule of Certain Contractual Obligations

The following table details our projected payments for our significant contractual obligations as of December 31, 2016. The table is based upon available information and certain assumptions we believe to be reasonable.

	Payments Due by Period				
	Total	2017	2018-2019	2020-2021	Later years
<i>(in millions)</i>					
Long-term debt (including accretion) ⁽¹⁾	\$ 673.0	\$ 42.6	\$612.3	\$ 18.1	\$ 0.0
Interest on debt	113.4	40.7	71.9	0.8	0.0
Operating leases	167.3	43.9	51.4	25.2	46.8
Purchase commitments ⁽²⁾	679.9	148.6	237.7	153.3	140.3
Total contractual cash obligations	\$1,633.6	\$275.8	\$973.3	\$197.4	\$187.1

(1) Consists primarily of the maturity of the Senior Notes due 2019 and Prior Senior Secured Credit Facilities. The \$500.0 million 2025 Senior Notes mature in 2025. The \$400.0 million New Senior Secured Credit Facility entered in February 2017 will mature in 2022.

(2) Consists primarily of raw materials purchase contracts. These are typically not fixed price arrangements; the prices are based on the prevailing market prices. As a result, we generally expect to be able to hedge the purchases with sales at those future prices.

Pension and other employee benefit plan funding obligations (for defined benefit plans) are not included in the table above. We expect defined benefit plan contributions to total approximately \$5.1 million in 2017. Estimated funding obligations are determined by asset performance, workforce and retiree demographics, tax and employment laws and other actuarial assumptions which may change the annual funding obligations in addition to decisions to fund in excess of statutorily required amounts. The funded status of our defined benefit plans is disclosed in Note 15 in our consolidated financial statements.

As of December 31, 2016, there was \$9.7 million of tax liabilities related to unrecognized tax benefits. Because of the high degree of uncertainty regarding the timing of future cash outflows associated with these liabilities, we are unable to estimate the years in which settlement will occur with the respective taxing authorities. See Note 10 in our consolidated financial statements for further information.

Schedule of Certain Other Commercial Commitments

The following table details our projected payments for other significant commercial commitments as of December 31, 2016. The table is based upon available information and certain assumptions we believe to be reasonable.

	Amount of Commitment Expiration Per Period				
	Total Amounts Committed	2017	2018-2019	2020-2021	Later years
<i>(in millions)</i>					
Lines of credit (unused)	\$199.9	\$ 0.0	\$199.9	\$0.0	\$0.0
Standby letters of credit	43.5	43.5	0.0	0.0	0.0
Total other commercial commitments	\$243.4	\$43.5	\$199.9	\$0.0	\$0.0

Debt Covenants at December 31, 2016

The covenants that would affect availability of the revolving credit facility under the Prior Senior Secured Credit Facilities and which would restrict the ability of Koppers Inc. to pay dividends included the following financial ratios:

- The fixed charge coverage ratio, calculated as of the end of each fiscal quarter for the four fiscal quarters then ended, is not permitted to be less than 1.10. The fixed charge coverage ratio at December 31, 2016 was 1.68.
- The leverage ratio, calculated as of the end of each fiscal quarter for the four fiscal quarters then ended, is not permitted to exceed 5.00. The leverage ratio at December 31, 2016 was 3.82.

Under our New Senior Secured Credit Facility, we must continue to comply with the fixed charge coverage ratio and a leverage ratio not to exceed 2.75 with respect to secured debt. We are currently in compliance with all covenants governing the revolving credit facility. Our continued ability to meet those financial ratios can be affected by events beyond our control, however, we currently expect that our net cash flows from operating activities and funds available from our revolving credit facility will be sufficient to provide for our working capital needs and capital spending requirements over the next twelve months.

At December 31, 2016, Koppers Inc. had \$298.1 million principal value outstanding of 2019 Notes. We have subsequently completed a tender offer for the 2019 Notes and called for redemption all 2019 Notes that remain outstanding following the tender offer.

In January 2017, Koppers Inc. completed a private offering of \$500.0 million aggregate principal amount of 2025 Notes. The 2025 Notes include customary covenants that restrict, among other things, our ability to incur additional debt, pay dividends or make certain other restricted payments, incur liens, merge or sell all or substantially all of the assets or enter into various transactions with affiliates. We are currently in compliance with all covenants in the 2025 Notes indenture.

Other Matters

Foreign Operations and Foreign Currency Transactions

We are subject to foreign currency translation fluctuations due to our foreign operations. For the years ended December 31, 2016, 2015 and 2014, exchange rate fluctuations resulted in a decrease to comprehensive income of \$4.3 million, \$20.6 million and \$30.6 million, respectively. Foreign currency transaction gains and losses result from transactions denominated in a currency which is different from the currency used by the entity to prepare its financial statements. Foreign currency transaction (gains) losses were \$(1.3) million, \$10.4 million and \$(0.6) million for the years ended December 31, 2016, 2015 and 2014, respectively.

Recently Issued Accounting Guidance

Information regarding recently issued accounting guidance is contained in Note 3 "New Accounting Pronouncements" of the Notes to the Consolidated Financial Statements.

Critical Accounting Policies

The preparation of financial statements in conformity with generally accepted accounting principles in the United States requires management to use judgment in making estimates and assumptions that affect the reported amounts of revenues and expenses, assets and liabilities, and the disclosure of contingent liabilities. The following accounting policies are based on, among other things, judgments and assumptions made by management that include inherent risks and uncertainties. Our management's estimates are based on the relevant information available at the end of each period.

Revenue Recognition. We recognize revenue from product sales at the time of shipment or when title passes to the customer. We recognize revenue related to the procurement of certain untreated railroad crossties upon transfer of title, which occurs upon delivery to our plant and acceptance by the customer. Service revenue, consisting primarily of wood treating services, is recognized at the time the service is provided. Our recognition of revenue with respect to untreated crossties meets all the recognition criteria of the Securities and Exchange Commission's Staff Accounting Bulletin Topic 13.A.3, including transfer of title and risk of ownership, the existence of fixed purchase commitments and delivery schedules established by the customer and the completion of all performance obligations by us.

Accounts Receivable. We maintain allowances for doubtful accounts for estimated losses resulting from the inability of our customers to make required payments. In circumstances where we become aware of a specific customer's inability to meet its financial obligations, a specific reserve for bad debts is recorded against amounts due. If the financial conditions of our customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be required.

Inventories. In the United States, CMC and RUPS inventories are valued at the lower of cost, utilizing the last-in, first-out ("LIFO") basis, or market. PC inventories are valued at the lower of cost, utilizing the first-in, first-out ("FIFO") basis, or market. Market represents replacement cost for raw materials and net realizable value for work in process and finished goods. LIFO inventories constituted approximately 65 percent and 66 percent of the FIFO inventory value at December 31, 2016 and 2015, respectively. In 2016, 2015 and 2014, we recorded inventory write-downs of \$0.6 million, \$1.4 million and \$2.4 million, respectively, related to lower of cost or market conditions for our subsidiaries that value inventory on the FIFO basis.

Long-Lived Assets. Our management periodically evaluates the net realizable value of long-lived assets, including property, plant and equipment, based on a number of factors including operating results, projected future cash flows and business plans. We record long-lived assets at cost. If we determine a long-lived asset is impaired, we adjust to fair value. Fair value is based on assumptions concerning the amount and timing of estimated future cash flows. Since judgment is involved in determining the fair value of fixed assets, there is a risk that the carrying value of our long-lived assets may be overstated. During 2016 and 2015, we recorded fixed asset impairment charges of \$3.5 million and \$12.8 million, respectively, primarily related to the decision to discontinue coal tar distillation activities at CMC plants located in the United States, China and the United Kingdom. During 2015, we also recorded fixed asset impairment charges of \$1.9 million related to the RUPS wood treating plant in Green Spring, West Virginia.

Goodwill and Intangible Assets. Goodwill is not amortized but is assessed for impairment at least on an annual basis in the fourth quarter and whenever events or circumstances indicate the carrying value may not be recoverable. In making this assessment, management relies on various factors, including operating results, estimated future cash flows, and business plans. There are inherent uncertainties related to these factors and in our management's judgment in applying them to the analysis of goodwill impairment. Because management's judgment is involved in performing goodwill impairment analyses, there is risk that the carrying value of goodwill is overstated.

Goodwill valuations are performed using projected operating results of the relevant reporting units. We have four reporting units for purposes of goodwill evaluation. These units consist of our CMC operating segment, our PC operating segment, our Railroad Products and Services reporting unit and our Koppers Wood Products reporting unit. Railroad Products and Services and Koppers Wood Products are one level below our RUPS operating segment. The Railroad Products and Services reporting unit primarily serves the rail industry in the United States and the Koppers Wood Products reporting unit primarily serves the utility markets in Australia.

Goodwill remaining on our consolidated balance sheet at December 31, 2016 is \$186.4 million and is substantially all related to our PC operating segment. We determined that no impairment of goodwill at any of our reporting units was required as of December 31, 2016.

In 2015, we determined in the first step of the goodwill analysis that the carrying value of the CMC reporting unit exceeded the fair value so we performed the second step of the impairment analysis in order to determine the implied fair value of CMC's goodwill. The implied fair value of goodwill represents the excess of fair value of the reporting unit over the fair value amounts assigned to all of the assets and liabilities of the reporting unit as if it were to be acquired in a business combination and the current fair value of the reporting unit (as calculated in the first step) was the purchase price. Any amount remaining after this allocation represents the implied fair value of goodwill. Based upon this analysis and the observed negative factors including a declining market capitalization, downsizing of the global aluminum markets and continued decline in spot and forward oil pricing, we recorded a goodwill impairment charge of \$67.2 million for the CMC reporting unit in the fourth quarter of 2015. As a result of the goodwill impairment charge, there is no goodwill remaining for the CMC reporting unit.

Identifiable intangible assets that do not have indefinite lives are amortized on a straight-line basis over their estimated useful lives. We have identifiable intangible assets of \$141.9 million as of December 31, 2016. We annually evaluate the remaining useful life of the intangible asset being amortized to determine whether events or circumstances warrant a revision to the remaining period of amortization. If the estimate of an intangible asset's remaining useful life is changed, the remaining carrying amount of the intangible asset will be amortized prospectively over that revised remaining useful life. Identifiable intangible assets are also subject to testing for recoverability whenever events or changes indicate that its carrying value may not be recoverable.

Changes in economic and operating conditions impacting these assumptions could result in goodwill and intangible asset impairments in future periods. Additionally, disruptions to our business such as prolonged recessionary periods or unexpected significant declines in operating results of the relevant reporting units could result in charges for goodwill and other asset impairments in future periods.

Deferred Tax Assets. At December 31, 2016 our balance sheet included \$69.1 million of deferred tax assets, net of a \$40.2 million valuation allowance. We also had \$48.3 million of deferred tax liabilities resulting in net deferred tax assets of \$20.8 million, substantially all related to our U.S. jurisdictions. Management evaluated the ability to realize these deferred tax assets, particularly in light of the financial reporting losses reported over the preceding three years. As discussed in Note 14, "Goodwill and Other Identifiable Intangible Assets," the Company incurred a goodwill impairment charge of \$67.2 million, of which \$25.1 million related to goodwill that was not deductible, in 2015. This impairment charge was the primary factor that has contributed to the Company being in a cumulative loss for financial reporting purposes. Management considered the cumulative loss for financial reporting purposes when making this evaluation and concluded that it was more likely than not that the Company's deferred tax assets would be realized since it will generate sufficient future taxable income in periods when these deferred tax assets become deductible and concluded that no valuation allowance was required. To the extent future taxable income projections are not achieved, we could be required to record a valuation allowance against certain deferred tax assets. Item 8. Financial Statements and Supplementary Data – Note 10 includes information on deferred tax activity during the past two years.

Accrued Insurance. We are insured for property, casualty and workers' compensation insurance up to various stop-loss amounts after meeting required retention levels. Losses are accrued based upon estimates of the liability for the related retentions for claims incurred using certain actuarial assumptions followed in the insurance industry and based on our experience. In the event we incur a significant number of losses beyond the coverage retention limits, additional expense beyond the actuarial projections would be required. Item 8. Financial Statements and Supplementary Data – Note 2 includes information on expense recognized during the past two years.

Asset Retirement Obligations. We measure asset retirement obligations based upon the applicable accounting guidance, using certain assumptions including estimates regarding the recovery of residues in storage tanks. In the event that operational or regulatory issues vary from our estimates, we could incur additional significant charges to income and increases in cash expenditures related to the disposal of those residues. Certain conditional asset retirement obligations related to facilities have not been recorded in the consolidated financial statements due to uncertainties surrounding the ultimate settlement date and estimate of fair value related to a legal obligation to perform an asset retirement activity. At the date a reasonable estimate of the ultimate settlement can be made, we will record an asset retirement obligation and such amounts may be material to the consolidated financial statements in the period in which they are recorded. In 2016, we recorded additional asset retirement obligations of \$2.7 million principally related to the retirement of water containment systems and storage tank and railcar cleaning costs in the United States and the United Kingdom. Item 8. Financial Statements and Supplementary Data – Note 2 includes information on expense recognized during the past two years.

Derivative Financial Instruments. We use swap contracts to manage copper price risk associated with forecasted purchases of materials used in our manufacturing processes. Contracts are not held for trading or speculative purposes.

We recognize the fair value of the swap contracts as an asset or liability at each reporting date. We designate most swap contracts as cash flow hedges and the effective portion of the gain or loss on the derivative is reported as a component of other comprehensive (loss) earnings until it is reclassified into earnings when the hedged transaction affects earnings. We utilize the dollar offset method to retrospectively measure hedge ineffectiveness. Gains and losses from hedge ineffectiveness are recognized in current earnings. For those swap contracts not designated as a cash flow hedge, gains and losses on the derivative are recorded immediately in earnings. Because of price volatility in the market price of copper and its effect on the dollar offset hedge effectiveness test, we may be required to recognize material unrealized gains and losses as a result of this measurement in current earnings.

Pension and Postretirement Benefits. Accounting for pension and other postretirement benefit obligations involves numerous assumptions, the most significant of which relate to the following:

- the discount rate for measuring the present value of future plan obligations;
- the expected long-term return on plan assets;
- the rate of future increases in compensation levels; and
- health care cost projections.

We develop our demographics and utilize the work of third-party actuaries to assist in the measurement of these obligations. We have selected different discount rates for our pension plans and our other post-retirement benefit plans due to the different projected benefit payment patterns. In determining the assumed discount rates at December 31, 2016, we use our third party actuary's discount rate model. This model calculates an equivalent single discount rate for the projected benefit plan cash flows using a hypothetical bond portfolio to match expected cash flows under our benefit plans. The bonds used are rated AA or higher by a recognized rating agency and only non-callable bonds are included with the exception of those with a "make-whole call" feature. The actuary limited the selection to those bonds with a minimum of 100,000 outstanding issues. Outlier bonds whose yields exceeded two standard deviations from the yield curve derived from similar quality bonds were excluded.

Of the assumptions used to measure the year-end obligations and estimated annual net periodic benefit cost, the discount rate has the most significant effect on the periodic benefit cost reported for the plans. Decreasing the discount rates of 0.25 percent for our pension plans and 0.25 percent for our other postretirement benefit plans would increase pension obligations and other postretirement benefit plan obligations by \$7.9 million and would increase defined benefit pension expense and other postretirement benefit plan expense by \$0.5 million.

The asset rate of return assumption considers the asset mix of the plans (currently targeted at approximately 30 percent equity securities and 70 percent fixed income securities for the funded pension plans), past performance and other factors, including expected re-allocations of asset mix occurring within a reasonable period of time. Our asset rate of return assumption is 5.10 percent for 2017 defined benefit pension expense. Decreasing the 5.10 percent asset rate of return assumption by 0.25 percent would increase our defined benefit pension expense by \$0.5 million.

Compensation change assumptions are based on historical experience, anticipated future management actions and demographics of the benefit plans.

Health care cost trend assumptions are developed based on historical cost data, the near-term outlook and an assessment of likely long-term trends.

Item 8. Financial Statements and Supplementary Data – Note 15 includes detailed information about the assumptions used to calculate the components of our annual defined benefit pension and other postretirement plan expense, as well as the obligations and accumulated other comprehensive loss reported on the year-end balance sheets.

Litigation and Contingencies. We record liabilities related to legal matters when an adverse outcome is probable and reasonably estimable. To the extent we anticipate favorable outcomes to these matters which ultimately result in adverse outcomes, we could incur material adverse impacts on earnings and cash flows. Because such matters require significant judgments on the part of management, the recorded liabilities could be lower than what is ultimately required. Item 8. Financial Statements and Supplementary Data – Note 20 includes information about litigation and other contingencies.

Environmental Liabilities. 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 incur costs as a result of 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 they are probable and reasonably estimable. Item 8. Financial Statements and Supplementary Data – Note 20 includes information about environmental liabilities.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Like other global companies, we are exposed to market risks relating to fluctuations in commodity prices, interest rates and foreign currency exchange rates. The objective of our financial risk management is to minimize the negative impact of commodity price, interest rate and foreign exchange rate fluctuations on our earnings, cash flows and equity.

To manage commodity price risk, we enter into swap contracts for future forecasted purchases of copper. This reduces the impact of commodity price volatility on gross profit. To manage the interest rate risks, we use a combination of fixed and variable rate debt. This reduces the impact of short-term fluctuations in interest rates. To manage foreign currency exchange rate risks, we use forward exchange contracts to hedge firm commitments up to twelve months and all such contracts are marked to market with the recognition of a gain or loss at each reporting period.

The following analyses present the sensitivity of the market value, earnings and cash flows of our financial instruments and foreign operations to hypothetical changes in interest and exchange rates and market prices for copper as if these changes occurred at December 31, 2016. The range of changes chosen for these analyses reflects our view of changes which are reasonably possible over a one-year period. Market values are the present values of projected future cash flows based on the interest rate, exchange rate and copper price assumptions. These forward-looking statements are selective in nature and only address the potential impacts from financial instruments and foreign operations. They do not include other potential effects that could impact our business as a result of these changes.

Commodity Price Sensitivity Analysis. Our exposure to market risk for changes in copper prices relates primarily to the purchase price of the raw material and the fixed price sales agreements we have with customers of our PC segment. We utilize swap contracts to manage this price risk. As of December 31, 2016, we had outstanding copper swap contracts totaling 49.1 million pounds and the fair value of these contracts was a gain of \$11.6 million. A portion of the gain totaling \$10.6 million, before tax, is recognized in other comprehensive income and a portion of the gain totaling \$1.0 million is recognized in income. Holding other variables constant, if there were a 10 percent reduction in the December 31, 2016 market price of copper, other comprehensive income, before tax, would be \$0.1 million and the effect on pretax income would be a loss of \$0.6 million for the year ended December 31, 2016.

Interest Rate and Debt Sensitivity Analysis. Our exposure to market risk for changes in interest rates relates primarily to our debt obligations. We have fixed and variable rate debt and the ability to incur variable rate debt under the Koppers Inc. credit agreement.

At December 31, 2016 we had \$364.2 million of fixed rate debt and \$298.2 million of variable rate debt. Our ratio of variable rate debt to fixed rate debt at December 31, 2016 was approximately 82 percent. For fixed rate debt, interest rate changes affect the fair market value but do not impact earnings or cash flows. For variable rate debt, interest rate changes generally do not affect the fair market value but do impact future earnings and cash flows, assuming other factors are held constant.

Holding other variables constant (such as debt levels and foreign exchange rates), a one percentage point decrease in interest rates at December 31, 2016 would have increased the unrealized fair market value of the fixed rate debt by approximately \$5.8 million. The earnings and cash flows for the year ending December 31, 2016, assuming a one percentage point increase in interest rates would have decreased approximately \$3.0 million, holding other variables constant for variable rate debt.

Exchange Rate Sensitivity Analysis. Our exchange rate exposures result primarily from our investment and ongoing operations in Australia, Denmark, New Zealand, Canada, the Netherlands, China and the United Kingdom. Holding other variables constant, if there were a ten percent reduction in all relevant exchange rates, the effect on our earnings, based on actual earnings from foreign operations for the year ended December 31, 2016, would be a reduction of approximately \$2.0 million.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**Koppers Holdings Inc.****INDEX TO CONSOLIDATED FINANCIAL STATEMENTS**

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MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The management of Koppers Holdings Inc. is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external reporting purposes in accordance with accounting principles generally accepted in the United States of America.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Management has assessed the effectiveness of Koppers Holdings Inc.'s internal control over financial reporting as of December 31, 2016. In making this assessment, management has utilized the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control – Integrated Framework* (2013 Framework). Management concluded that based on its assessment, Koppers Holdings Inc.'s internal control over financial reporting was effective as of December 31, 2016.

The effectiveness of Koppers Holdings Inc.'s internal control over financial reporting as of December 31, 2016, has been audited by KPMG LLP, the independent registered public accounting firm that also audited the consolidated financial statements included in this annual report, as stated in their attestation report which appears on page 48.

February 24, 2017

/s/ LEROY M. BALL

Leroy M. Ball

President and Chief Executive Officer

/s/ MICHAEL J. ZUGAY

Michael J. Zugay

Chief Financial Officer

Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders

Koppers Holdings Inc.:

We have audited Koppers Holdings Inc.'s internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control—Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Koppers Holdings Inc.'s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying "Management's Report on Internal Control over Financial Reporting". Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Koppers Holdings Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control – Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheet of Koppers Holdings Inc. and subsidiaries as of December 31, 2016, and the related consolidated statements of operations, comprehensive income (loss), cash flows and shareholders' equity for the year then ended and our report dated February 24, 2017 expressed an unqualified opinion on those consolidated financial statements.

/s/ KPMG LLP
Pittsburgh, Pennsylvania
February 24, 2017

Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders

Koppers Holdings Inc.:

We have audited the accompanying consolidated balance sheet of Koppers Holdings Inc. and subsidiaries as of December 31, 2016 and the related consolidated statements of operations, comprehensive income (loss), cash flows and shareholders' equity for the year then ended. In connection with our audit of the consolidated financial statements, we have also audited the financial statement schedule for the year ended December 31, 2016 listed in the Index at Item 15(a)2. These consolidated financial statements and financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements and schedule based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Koppers Holdings Inc. and subsidiaries as of December 31, 2016 and the results of their operations and their cash flows for the year ended December 31, 2016, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

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We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Koppers Holdings Inc.'s internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control-Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) and our report dated February 24, 2017 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

/s/ KPMG LLP
Pittsburgh, Pennsylvania
February 24, 2017

Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders of Koppers Holdings Inc.:

We have audited the accompanying consolidated balance sheets of Koppers Holdings Inc. as of December 31, 2015, and the related consolidated statements of operations, comprehensive (loss) income, cash flows and shareholders' equity for each of the two years in the period ended December 31, 2015. These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Koppers Holdings Inc. at December 31, 2015 and the consolidated results of its operations and its cash flows for each of the two years in the period ended December 31, 2015, in conformity with U.S. generally accepted accounting principles.

/s/ ERNST & YOUNG LLP
Pittsburgh, Pennsylvania
February 29, 2016, except for the effect of
adopting ASU 2015-03 as described in Note 3,
as to which date is January 13, 2017

KOPPERS HOLDINGS INC. CONSOLIDATED STATEMENT OF OPERATIONS

	Year Ended December 31,		
	2016	2015	2014
<i>(Dollars in millions, except per share amounts)</i>			
Net sales	\$1,416.2	\$1,626.9	\$1,555.0
Cost of sales (excluding items below)	1,127.9	1,366.7	1,343.7
Depreciation and amortization	52.9	59.0	44.0
Gain on sale of business	(2.1)	(3.2)	0.0
Impairment and restructuring charges	20.1	42.2	17.9
Goodwill impairment	0.0	67.2	0.0
Selling, general and administrative expenses	131.0	124.6	116.2
Operating profit (loss)	86.4	(29.6)	33.2
Other income, net	2.9	0.2	0.0
Interest expense	50.8	50.7	39.1
Income (loss) before income taxes	38.5	(80.1)	(5.9)
Income tax provision (benefit)	11.4	(4.2)	34.1
Income (loss) from continuing operations	27.1	(75.9)	(40.0)
Income (loss) from discontinued operations, net of tax (expense) benefit of \$(0.3), \$0.1 and \$(1.0)	0.6	(0.1)	0.6
Net income (loss)	27.7	(76.0)	(39.4)
Net loss attributable to noncontrolling interests	(1.6)	(4.0)	(7.0)
Net income (loss) attributable to Koppers	\$ 29.3	\$ (72.0)	\$ (32.4)
Earnings (loss) per common share attributable to Koppers common shareholders:			
Basic -			
Continuing operations	\$ 1.39	\$ (3.50)	\$ (1.61)
Discontinued operations	0.03	(0.01)	0.03
Earnings (loss) per basic common share	\$ 1.42	\$ (3.51)	\$ (1.58)
Diluted -			
Continuing operations	\$ 1.36	\$ (3.50)	\$ (1.61)
Discontinued operations	0.03	(0.01)	0.03
Earnings (loss) per diluted common share	\$ 1.39	\$ (3.51)	\$ (1.58)
Weighted average shares outstanding (in thousands):			
Basic	20,636	20,541	20,463
Diluted	21,055	20,541	20,463
Dividends declared per common share	\$ 0.00	\$ 0.00	\$ 1.00

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

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME (LOSS)

	Year Ended December 31,		
	2016	2015	2014
<i>(Dollars in millions)</i>			
Net income (loss)	\$27.7	\$(76.0)	\$(39.4)
Changes in other comprehensive income (loss):			
Currency translation adjustment	(4.3)	(20.6)	(26.0)
Foreign currency transactions of long-term subsidiary investments	0.0	0.0	(4.6)
Derivative financial instrument net gain (loss), net of tax (expense) benefit of \$(8.0), \$1.2 and \$2.6	12.9	(2.2)	(3.8)
Unrecognized pension prior service benefit, net of tax benefit of \$0.0, \$0.4 and \$0.1	0.0	(0.7)	(0.2)
Unrecognized pension net gain (loss), net of tax (expense) benefit of \$(2.0), \$(1.0) and \$8.0	2.3	3.7	(15.9)
Total comprehensive income (loss)	38.6	(95.8)	(89.9)
Comprehensive loss attributable to noncontrolling interests	(1.9)	(4.3)	(7.4)
Comprehensive income (loss) attributable to Koppers	\$40.5	\$(91.5)	\$(82.5)

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

KOPPERS HOLDINGS INC. CONSOLIDATED BALANCE SHEET

	December 31,	
	2016	2015
<i>(Dollars in millions, except per share amounts)</i>		
Assets		
Cash and cash equivalents	\$ 20.8	\$ 21.8
Accounts receivable, net of allowance of \$3.8 and \$6.5	136.8	155.0
Income tax receivable	3.8	4.6
Inventories, net	228.7	226.4
Loan to related party	8.9	9.5
Other current assets	39.1	27.0
Total current assets	438.1	444.3
Property, plant and equipment, net	280.8	277.8
Goodwill	186.4	186.6
Intangible assets, net	141.9	156.1
Deferred tax assets	27.1	36.6
Other assets	13.2	11.5
Total assets	\$1,087.5	\$1,112.9
Liabilities		
Accounts payable	\$ 144.2	\$ 140.8
Accrued liabilities	106.3	99.8
Current maturities of long-term debt	42.6	39.9
Total current liabilities	293.1	280.5
Long-term debt	619.8	682.4
Accrued postretirement benefits	51.6	53.6
Deferred tax liabilities	6.3	5.7
Other long-term liabilities	82.1	103.1
Total liabilities	1,052.9	1,125.3
Commitments and contingent liabilities (Note 20)		
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; 22,140,680 and 22,015,994 shares issued	0.2	0.2
Additional paid-in capital	176.5	167.8
Accumulated deficit	(24.7)	(54.0)
Accumulated other comprehensive loss	(68.6)	(79.8)
Treasury stock, at cost, 1,475,792 and 1,459,164 shares	(53.0)	(52.7)
Total Koppers shareholders' equity (deficit)	30.4	(18.5)
Noncontrolling interests	4.2	6.1
Total equity (deficit)	34.6	(12.4)
Total liabilities and equity (deficit)	\$1,087.5	\$1,112.9

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

KOPPERS HOLDINGS INC.
CONSOLIDATED STATEMENT OF CASH FLOWS

	Year Ended December 31,		
	2016	2015	2014
<i>(Dollars in millions)</i>			
Cash provided by (used in) operating activities:			
Net income (loss)	\$ 27.7	\$ (76.0)	\$ (39.4)
Adjustments to reconcile net cash provided by operating activities:			
Depreciation and amortization	52.9	59.0	44.0
Impairment of long-lived assets	3.5	14.7	4.7
Goodwill impairment	0.0	67.2	0.0
Gain on sale of business	(2.1)	(3.2)	0.0
Deferred income taxes	(0.1)	(16.0)	2.5
Equity loss, net of dividends received	1.0	3.1	1.6
Change in other liabilities	(5.0)	(5.5)	(10.3)
Non-cash interest expense	5.7	3.6	4.2
Stock-based compensation	8.9	3.8	4.7
Deferred revenue	(2.9)	27.6	(0.7)
Other	8.2	5.2	1.0
Changes in working capital:			
Accounts receivable	12.7	34.1	13.4
Inventories	(3.3)	(4.3)	(14.0)
Accounts payable	5.0	25.0	(10.6)
Accrued liabilities	8.4	(19.6)	29.9
Other working capital	(1.1)	9.0	4.5
Net cash provided by operating activities	119.5	127.7	35.5
Cash (used in) provided by investing activities:			
Capital expenditures	(49.9)	(40.7)	(83.8)
Acquisitions, net of cash acquired	0.0	(15.3)	(496.5)
Net cash (used in) provided by divestitures and asset sales	(3.8)	14.9	0.3
Net cash used in investing activities	(53.7)	(41.1)	(580.0)
Cash provided by (used in) financing activities:			
Borrowings of revolving credit	595.7	612.1	572.5
Repayments of revolving credit	(625.4)	(685.9)	(368.0)
Borrowings of long-term debt	0.0	1.1	343.0
Repayments of long-term debt	(31.7)	(40.7)	0.0
Issuances of Common Stock	0.4	0.0	0.7
Proceeds from issuance of noncontrolling interest	0.0	0.0	1.4
Repurchases of Common Stock	(0.3)	(0.3)	(2.0)
Payment of deferred financing costs	(1.4)	(1.0)	(11.1)
Dividends paid	0.0	(8.7)	(20.4)
Net cash (used in) provided by financing activities	(62.7)	(123.4)	516.1
Effect of exchange rate changes on cash	(4.1)	7.5	(2.7)
Net decrease in cash and cash equivalents	(1.0)	(29.3)	(31.1)
Cash and cash equivalents at beginning of period	21.8	51.1	82.2
Cash and cash equivalents at end of period	\$ 20.8	\$ 21.8	\$ 51.1
Supplemental disclosure of cash flow information:			
Cash paid during the year for:			
Interest	\$ 42.7	\$ 43.9	\$ 32.9
Income taxes, net	11.6	26.3	16.1

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

KOPPERS HOLDINGS INC. CONSOLIDATED STATEMENT OF SHAREHOLDERS' EQUITY

	Year Ended December 31,		
	2016	2015	2014
<i>(Dollars in millions)</i>			
Senior Convertible Preferred Stock			
Balance at beginning and end of year	\$ 0.0	\$ 0.0	\$ 0.0
Common Stock			
Balance at beginning and end of year	0.2	0.2	0.2
Additional paid-in capital			
Balance at beginning of year	167.8	164.5	158.9
Employee stock plans	8.7	3.3	5.6
Balance at end of year	176.5	167.8	164.5
Accumulated (deficit) retained earnings			
Balance at beginning of year	(54.0)	18.0	71.3
Net income (loss) attributable to Koppers	29.3	(72.0)	(32.4)
Common Stock dividends	0.0	0.0	(20.9)
Balance at end of year	(24.7)	(54.0)	18.0
Accumulated other comprehensive loss			
Currency translation adjustment:			
Balance at beginning of year	(26.6)	(6.3)	24.0
Change in currency translation adjustment excluding foreign currency transactions of long-term subsidiary investments	(4.0)	(20.3)	(25.7)
Change in foreign currency transactions of long-term subsidiary investments	0.0	0.0	(4.6)
Balance at end of year	(30.6)	(26.6)	(6.3)
Unrecognized (losses) gains on cash flow hedges:			
Balance at beginning of year	(6.0)	(3.8)	0.0
Reclassification of unrealized losses on cash flow hedges to expense, net of tax expense of \$3.7, \$3.5 and \$0.2	5.6	5.4	0.3
Change in cash flow hedges, net of tax (expense) benefit of \$(4.3), \$4.7 and \$2.8	7.3	(7.6)	(4.1)
Balance at end of year	6.9	(6.0)	(3.8)
Unrecognized pension prior service benefit (cost):			
Balance at beginning of year	0.0	0.7	0.8
Reclassification of unrecognized prior service benefit to income, net of tax benefit of \$0.0, \$0.4 and \$0.1	0.0	(0.7)	(0.1)
Balance at end of year	0.0	0.0	0.7
Unrecognized pension net loss:			
Balance at beginning of year	(47.2)	(50.9)	(35.0)
Reclassification of unrecognized pension net loss to expense, net of tax benefit of \$2.3, \$2.2 and \$1.4	3.9	4.0	2.4
Revaluation of unrecognized pension net loss, net of tax benefit of \$(0.3), \$(1.2) and \$(9.4)	(1.6)	(0.3)	(18.3)
Balance at end of year	(44.9)	(47.2)	(50.9)
Total balance at end of year	(68.6)	(79.8)	(60.3)
Treasury stock			
Balance at beginning of year	(52.7)	(52.4)	(50.4)
Purchases	(0.3)	(0.3)	(2.0)
Balance at end of year	(53.0)	(52.7)	(52.4)
Total Koppers shareholders' equity (deficit) – end of year	30.4	(18.5)	70.0
Noncontrolling interests			
Balance at beginning of year	6.1	13.9	20.0
Net loss attributable to noncontrolling interests	(1.6)	(4.0)	(7.0)
Investment in noncontrolling interests	0.0	0.0	1.3
Dividends to noncontrolling interests	0.0	(3.5)	0.0
Currency translation adjustment	(0.3)	(0.3)	(0.4)
Balance at end of year	4.2	6.1	13.9
Total equity (deficit) – end of year	\$ 34.6	\$ (12.4)	\$ 83.9

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

KOPPERS HOLDINGS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Description of Business

Parent company of Koppers Inc. – In these financial statements, unless otherwise indicated or the context requires otherwise, when the terms “Koppers,” the “Company,” “we,” “our” or “us,” are used, they mean Koppers Holdings Inc. (“Koppers Holdings”) and its subsidiaries on a consolidated basis. The use of these terms is not intended to imply that Koppers Holdings and Koppers Inc. are not separate and distinct legal entities from each other and from their respective subsidiaries. Koppers Holdings has no direct operations and no significant assets other than the stock of Koppers Inc. It depends on the dividends from the earnings of Koppers Inc. and its subsidiaries to generate the funds necessary to meet its financial obligations. The terms of Koppers Inc.’s revolving credit facility prohibit Koppers Inc. from paying dividends and otherwise transferring assets except for certain limited dividends. Further, the terms of the indenture governing Koppers Inc.’s Senior Notes due 2025 significantly restrict Koppers Inc. from paying dividends and otherwise transferring assets to Koppers Holdings.

Business description – The Company is a global integrated provider of treated wood products, wood treatment chemicals and carbon compounds for use in a variety of markets including the railroad, specialty chemical, utility, residential lumber, agriculture, aluminum, steel, rubber and construction industries. The Company’s business is operated through three business segments, Railroad and Utility Products and Services (“RUPS”), Performance Chemicals (“PC”) and Carbon Materials and Chemicals (“CMC”).

The Company’s Railroad and Utility Products and Services segment sells treated and untreated wood products, rail joint bars and services primarily to the railroad industry and treated wood products to the utility industry. Railroad products include procuring and treating items such as crossties, switch ties and various types of lumber used for railroad bridges and crossings and the manufacture of rail joint bars. Utility products include transmission and distribution poles and pilings.

The Company’s Performance Chemicals segment develops, manufactures, and markets wood preservation chemicals and wood treatment technologies and services a diverse range of end-markets including infrastructure, residential and commercial construction and agriculture.

The Company’s Carbon Materials and Chemicals segment is primarily a manufacturer of creosote, carbon pitch, naphthalene, phthalic anhydride and carbon black feedstock. Creosote is used in the treatment of wood and carbon black feedstock is used in the production of carbon black. Carbon pitch is a critical raw material used in the production of aluminum and for the production of steel in electric arc furnaces. Naphthalene is used for the production of phthalic anhydride and as a surfactant in the production of concrete. Phthalic anhydride is used in the production of plasticizers, polyester resins and alkyd paints.

2. Summary of Significant Accounting Policies

Basis of presentation – The consolidated financial statements include the accounts of the Company and all majority-owned subsidiaries for which the Company is deemed to exercise control over its operations. All significant intercompany transactions have been eliminated in consolidation. The Company’s investments in 20 percent to 30 percent-owned companies in which it has the ability to exercise significant influence over operating and financial policies are accounted for using the equity method of accounting. Accordingly, the Company’s share of the earnings of these companies is included in the accompanying consolidated statement of operations. Certain prior period amounts in the notes to the consolidated financial statements have been reclassified to conform to the current period’s presentation.

Use of estimates – Accounting principles generally accepted in the U.S. require management to make estimates and judgments that affect the reported amounts of assets and liabilities and the disclosure of contingencies on the date of the financial statements as well as the reported amounts of revenues and expenses during the reporting period. Estimates have been prepared on the basis of the most current and best available information and actual results could differ materially from these estimates.

Foreign currency translation – For consolidated entities outside of the U.S. that prepare financial statements in currencies other than the U.S. dollar, results of operations and cash flows are translated at average exchange rates during the period, and assets and liabilities are translated at end-of-period exchange rates. Cumulative translation adjustments are included as a separate component of accumulated other comprehensive loss in shareholders’ equity.

Foreign currency transaction gains and losses result from transactions denominated in a currency which is different than the currency used by the entity to prepare its financial statements. Foreign currency transaction (losses) gains were \$(1.3) million, \$(10.4) million and \$0.6 million for the years ended December 31, 2016, 2015 and 2014, respectively.

Revenue recognition – The Company recognizes revenue when the risks and rewards of ownership and title to the product have transferred to the customer. Revenue recognition generally occurs at the point of shipment; however in certain circumstances as shipping terms dictate, revenue is recognized at the point of destination. Shipping and handling costs are included as a component of cost of sales.

The Company recognizes revenue related to the procurement of certain untreated railroad crossties upon transfer of title to the customer, which occurs upon delivery to the Company's plant and acceptance by the customer. Service revenue, consisting primarily of wood treating services, is recognized at the time the service is provided. Payment on sales of untreated railroad crossties and wood treating services are generally due within 30 days of the invoice date. The Company's recognition of revenue with respect to untreated crossties meets all the recognition criteria of Securities and Exchange Commission Staff Accounting Bulletin Topic 13.A.3., including transfer of title and risk of ownership, the existence of fixed purchase commitments and delivery schedules established by the customer, and the completion of all performance obligations by the Company. Revenue recognized for untreated crosstie sales for the years ended December 31, 2016, 2015 and 2014 amounted to \$129.2 million, \$129.8 million and \$93.4 million, respectively.

Research and development – Research and development costs are expensed as incurred and are included in selling, general and administrative expenses. These costs totaled \$6.6 million in 2016, \$5.2 million in 2015 and \$3.4 million in 2014.

Cash and cash equivalents – Cash and cash equivalents include cash on hand and on deposit and investments in highly liquid investments with an original maturity of 90 days or less.

Accounts receivable – The Company maintains allowances for doubtful accounts for estimated losses resulting from the inability of its customers to make required payments. In circumstances where the Company becomes aware of a specific customer's inability to meet its financial obligations to Koppers, a specific reserve for bad debts is recorded against amounts due. If the financial condition of the Company's customers were to deteriorate, resulting in an inability to make payments, additional allowances may be required.

Inventories – In the United States, CMC and RUPS inventories are valued at the lower of cost, utilizing the last-in, first-out ("LIFO") basis, or market. PC inventories and all other inventories outside of the United States are valued at the lower of cost, utilizing the first-in, first-out ("FIFO") basis, or market. Market represents replacement cost for raw materials and net realizable value for work in process and finished goods. LIFO inventories constituted approximately 65 percent and 66 percent of the FIFO inventory value at December 31, 2016 and 2015, respectively. In 2016, 2015 and 2014, we recorded inventory write-downs of \$0.6 million, \$1.4 million and \$2.4 million, respectively, related to lower of cost or market conditions for our subsidiaries that value inventory on the FIFO basis.

Property, plant and equipment – Property, plant and equipment are recorded at purchased cost and include improvements which significantly increase capacities or extend useful lives of existing plant and equipment. Depreciation expense is calculated by applying the straight-line method over estimated useful lives. Estimated useful lives for buildings generally range from 10 to 20 years and depreciable lives for machinery and equipment generally range from 3 to 15 years. Net gains and losses related to asset disposals are recognized in earnings in the period in which the disposal occurs. Routine repairs, replacements and maintenance are expensed as incurred.

The Company periodically evaluates whether current facts and circumstances indicate that the carrying value of its depreciable long-lived assets may not be recoverable. If an asset, or logical grouping of assets, is determined to be impaired, the asset is written down to its fair value using discounted future cash flows and, if available, quoted market prices. Refer to Note 4 "Plant Closures and Discontinued Operations" for additional information.

Goodwill and other intangible assets – Goodwill and other purchased intangible assets are included in the identifiable assets of the business segment to which they have been assigned. The Company performs impairment tests annually for goodwill, and more often as circumstances require. When it is determined that impairment has occurred, an appropriate charge to earnings is recorded. The Company performed its annual impairment test in the fourth quarters of 2016 and 2015. Refer to Note 14, "Goodwill and Other Identifiable Intangible Assets," for a discussion of goodwill impairment recorded during the year ended December 31, 2015.

Identifiable intangible assets, other than goodwill, are recorded at cost. Identifiable intangible assets that do not have indefinite lives are amortized on a straight-line basis over their estimated useful lives.

Deferred income taxes – Deferred tax assets and liabilities are recognized for future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. The effect on deferred tax assets and liabilities of a change in tax laws is recognized in earnings in the period the new laws are enacted. A valuation allowance is recorded to reduce the carrying amounts of deferred tax assets unless it is more likely than not that such assets will be realized. Deferred tax liabilities have not been recognized for the undistributed earnings of certain foreign subsidiaries because management intends to permanently reinvest such earnings in foreign operations.

Self-insured liabilities – The Company is self-insured for property, casualty and workers' compensation exposures up to various stop-loss coverage amounts. Losses are accrued based upon the Company's estimates of the liability for the related deductibles of claims incurred. Such estimates utilize actuarial methods based on various assumptions, which include but are not limited to, the Company's historical loss experience and projected loss development factors. In 2016 and 2015, reversals of self-insured liabilities occurred as a result of favorable loss trends related to self-insured claims.

	2016	2015
<i>(Dollars in millions)</i>		
Self-insured liabilities at beginning of year	\$ 8.0	\$ 8.2
Expense	5.1	2.6
Reserves recoverable from insurance	2.4	0.0
Reversal of self-insured liabilities	(1.7)	(1.0)
Cash expenditures	(2.9)	(1.8)
Self-insured liabilities at end of year	\$10.9	\$ 8.0

Derivative financial instruments – The Company uses swap contracts to manage copper price risk associated with forecasted purchases of materials used in the Company's manufacturing processes. The Company uses forward exchange contracts to hedge exposure to currency exchange rate changes on transactions and other commitments denominated in a foreign currency. Contracts are not held for trading or speculative purposes. The Company recognizes the fair value of the swap contracts and forward contracts as an asset or liability at each reporting date. The Company designates certain of the swap contracts as cash flow hedges and the effective portion of the gain or loss on the derivative is reported as a component of other comprehensive (loss) earnings until it is reclassified into earnings when the hedged transaction affects earnings. Gains and losses from hedge ineffectiveness are recognized in current earnings. For swap contracts that are not designated as cash flow hedges, changes in the fair value of those forward contracts are recognized immediately in earnings. Because the Company has not elected to designate the forward exchange contracts for hedge accounting treatment, changes in the fair value of the forward exchange contracts are recognized immediately in earnings.

Asset retirement obligations – Asset retirement obligations are initially recorded at fair value and are capitalized as part of the cost of the related long-lived asset when sufficient information is available to estimate fair value. The capitalized costs are subsequently charged to depreciation expense over the estimated useful life of the related long-lived asset. The fair value of the obligation is determined by calculating the discounted value of expected future cash flows and accretion expense is recorded each month to ultimately increase this obligation to full value.

The Company recognizes asset retirement obligations for the removal and disposal of residues; dismantling of certain tanks required by governmental authorities; cleaning and dismantling costs for owned rail cars; cleaning costs for leased rail cars and barges; and site demolition, when required by governmental authorities or by contract.

The following table describes changes to the Company's asset retirement obligation liabilities at December 31, 2016 and 2015:

	2016	2015
<i>(Dollars in millions)</i>		
Asset retirement obligation at beginning of year	\$ 46.5	\$ 30.5
(Divestiture) acquisition	(8.0)	0.7
Accretion expense	7.1	3.7
Revision in estimated cash flows ^(a)	2.7	24.4
Cash expenditures	(11.4)	(12.1)
Currency translation	(0.9)	(0.7)
Balance at end of period	\$ 36.0	\$ 46.5

(a) Revision in estimated cash flows for 2016 and 2015 includes \$2.7 and \$23.4 million of charges related to restructuring activities, respectively. See Note 4. "Plant Closures and Discontinued Operations" for additional information.

Litigation and contingencies – Amounts associated with litigation and contingencies are accrued when management, after taking into consideration the facts and circumstances of each matter including any settlement offers, has determined that it is probable that a liability has been incurred and the amount of loss can be reasonably estimated. Legal costs for litigation are expensed as incurred with the exception of legal fees relating to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) sites.

Other current assets – Included in other current assets are prepaid expenses totaling \$17.0 million and \$17.0 million at December 31, 2016 and 2015, respectively.

Environmental liabilities – The Company accrues for remediation costs and penalties when the responsibility to remediate is probable and the amount of related cost is reasonably estimable. If only a range of potential liability can be estimated and no amount within the range is more probable than another, the accrual is recorded at the low end of that range. Remediation liabilities are discounted if the amount and timing of the cash disbursements are readily determinable.

Deferred revenue – The Company defers revenues associated with extended product warranty liabilities based on historical loss experience and sales of extended warranties on certain products. In addition, the Company received an advance payment of \$30.0 million in 2015 related to an amendment to a 50-year supply agreement with a customer in China. The deferred revenue associated with this amendment will be amortized over the life of the underlying contract. The following table describes changes to the Company's deferred revenue at December 31, 2016 and 2015:

	2016	2015
<i>(Dollars in millions)</i>		
Deferred revenue at beginning of year	\$30.1	\$ 2.5
Advance payment	0.0	30.0
Revenue earned	(0.8)	(1.0)
Currency translation	(2.1)	(1.4)
Deferred revenue at end of year	\$27.2	\$30.1

Stock-based compensation – The Company records compensation expense for non-vested stock options over the vesting period based on the fair value at the date of grant. No compensation cost is recognized for any stock awards that are forfeited in the event the recipient fails to meet the vesting requirements.

3. New Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2014-09, "Revenue from Contracts with Customers (Topic 606)." ASU 2014-09 requires an entity to recognize revenue in a manner that depicts the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In March 2016, the FASB issued ASU No. 2016-08, "Principal versus Agent Considerations (Reporting Revenue Gross versus Net)," that amends the principal versus agent guidance in ASU 2014-09. ASU 2016-08 clarifies that the analysis must focus on whether the entity has control of the goods or services before

they are transferred to the customer. In April 2016, the FASB issued ASU 2016-10, "Identifying Performance Obligations and Licensing", which clarifies the implementation guidance in ASU 2014-09 relating to the identification of performance obligations in a contract, including how entities should account for shipping and handling services it provides after control of goods transfers to a customer. In May 2016, the FASB issued ASU 2016-12, "Narrow-Scope Improvements and Practical Expedients", which clarifies revenue recognition guidance related to the presentation of sales taxes, noncash consideration, and completed contracts and contract modifications. In December 2016, the FASB issued ASU 2016-20, "Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers", which clarifies the scope and application of the adoption of the new revenue recognition standard.

Collectively, the revenue recognition ASC updates are effective for annual reporting periods beginning after December 15, 2017 with early adoption permitted and allows for the use of either the retrospective or cumulative effect transition method. The Company intends to adopt these standards effective January 1, 2018 but has not yet determined which transition method will be used. The Company has a project team analyzing significant contracts with customers to determine the impact of the adoption of the ASU updates on the Company's financial statements and disclosures. The Company will continue to assess the impact the ASC updates will have on its revenue arrangements with a final evaluation of the impact of adopting these ASC updates expected to be completed during the third quarter of 2017.

In August 2016, the FASB issued ASU No. 2016-15, "Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments." The update clarifies how entities should classify certain cash receipts and cash payments on the statement of cash flow. The amendments in this update are effective for periods beginning after December 15, 2017. The Company is in the process of assessing the impact the adoption of this ASU will have on its consolidated financial statements.

In March 2016, the FASB issued ASU No. 2016-09, "Improvements to Employee Share-Based Payment Accounting." This ASU makes several modifications related to the accounting for forfeitures, employer tax withholding on share-based compensation and the financial statement presentation of excess tax benefits or deficiencies. The amendments in this ASU are effective for periods beginning after December 15, 2016. The Company does not expect the adoption of this ASU will have a material impact on its consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, "Leases (Topic 842)." ASU 2016-02 requires an entity to recognize a right-of-use asset and lease liability for all leases with terms of more than one year. Recognition, measurement and presentation of expenses will depend on classification as a finance or operating lease. The standard is effective January 1, 2019 and early adoption is permitted. The guidance requires a modified retrospective adoption. The Company is currently evaluating the impact the adoption of ASU 2016-02 will have on its consolidated financial statements.

In April 2015, the FASB issued ASU No. 2015-03, "Simplifying the Presentation of Debt Issuance Costs," which requires companies to present debt issuance costs associated with a debt liability as a deduction from the carrying amount of that debt liability on the balance sheet rather than being capitalized as an asset. The standard is effective for interim and annual periods beginning after December 15, 2015, and retrospective presentation is required. The Company adopted this guidance as of January 1, 2016 and the consolidated financial statements have been revised to reflect the retrospective presentation requirement. As a result, \$12.5 million and \$14.6 million of debt issuance costs have been reclassified from other assets to long-term debt as of December 31, 2015 and December 31, 2014, retrospectively. This reclassification has also been reflected within the notes to the consolidated financial statements as applicable.

In August 2014, the FASB issued ASU No. 2014-15, "Disclosure of Uncertainties About an Entity's Ability to Continue as a Going Concern", which requires management to perform interim and annual assessments of an entity's ability to continue as a going concern within one year of the date the financial statements are issued and provides guidance on determining when and how to disclose going concern uncertainties in the financial statements. The Company adopted this ASU for the year ended December 31, 2016 and the adoption did not have a material effect on the Company's consolidated financial statements.

4. Plant Closures and Discontinued Operations

On October 24, 2016, the Company agreed to a long-term lease of its wood treatment facility in Houston, Texas to a third party. This facility, owned by the Company's wholly-owned subsidiary, Wood Protection L.P., is engaged in the manufacturing and sale of pressure-treated dimensional lumber and had revenue of approximately \$8 million for the year ended December 31, 2016 and \$14 million for the year ended December 31, 2015.

In March 2016, the Company discontinued production at its 60-percent owned CMC plant located in Tangshan, China. The Company's 60-percent owned subsidiary, Koppers (China) Carbon & Chemical Company Limited ("KCCC") is located adjacent to a metallurgical coke facility owned by KCCC's minority partner, which also closed. The KCCC plant relied on the coke facility for a significant portion of raw material supply, utilities and other shared services. In 2015, the Company recorded a severance charge of \$0.9 million. For the year ended December 31, 2016, the Company has recorded inventory write-down charges of \$0.7 million in connection with the facility.

In February 2016, the Company announced plans, which were approved by management and the board in December 2015, to cease coal tar distillation operations at both of its United Kingdom CMC facilities. Accordingly, the Company recorded environmental charges, asset retirement obligations and fixed asset impairment charges totaling \$13.9 million during the year ended December 31, 2015. For the year ended December 31, 2016, the Company recorded severance charges of \$1.5 million. In July 2016, the Company sold substantially all of its tar distillation properties and assets in the United Kingdom. In exchange, the Company transferred cash to the buyer and the buyer assumed historical environmental and asset retirement obligations. The Company recognized a gain of \$2.1 million on this transaction. This gain is reported in "Gain on sale of business" on the Condensed Consolidated Statement of Operations and Comprehensive Income (Loss).

In January 2016, the Company announced its decision, which was approved by management and the board in December 2015, to discontinue coal tar distillation activities at its CMC plant located in Clairton, Pennsylvania. Accordingly, the Company recorded severance, inventory write-down, asset retirement obligation and fixed asset impairment charges totaling \$18.8 million during the year ended December 31, 2015. For the year ended December 31, 2016, the Company recorded additional plant closure costs and fixed asset impairment charges totaling \$6.4 million in connection with the closure of the facility. Coal tar distillation activities at Clairton were substantially discontinued at the end of July 2016. As of December 31, 2016, all depreciable fixed assets directly related to the facility have been impaired.

In August 2015, the Company closed its RUPS plant located in Green Spring, West Virginia. Accordingly, the Company recorded severance, asset retirement obligation and fixed asset impairment charges of \$5.7 million during the year ended December 31, 2015. For the year ended December 31, 2016, the Company has recorded additional plant closure costs of \$3.0 million in connection with the closure of the facility.

In January 2015, Koppers Inc. sold its RUPS North American utility pole business for cash of \$12.3 million and a promissory note of \$1.6 million. The Company recognized a gain of \$3.2 million on this transaction. The promissory note is repayable in three remaining equal annual installments. This gain is reported in "Gain on sale of business" on the Condensed Consolidated Statement of Operations and Comprehensive Income (Loss). The proceeds of the sale are reported within "Net cash proceeds from divestitures and asset sales" on the Condensed Consolidated Statement of Cash Flows. For the year ended December 31, 2016, the Company has recorded additional plant closure costs of \$2.7 million in connection with assets that were associated with this business line.

In April 2014, the Company ceased its coal tar distillation activities at its CMC facility located in Uithoorn, the Netherlands. In the second quarter of 2016, the Company recorded a \$3.7 million net present value accrual related to future real estate lease obligations, net of estimated sublease revenue, at the closed site. The Company determined that it met the cease-use criteria required for the accrual of these costs upon the completion of site demolition in April 2016.

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

	Severance and employee benefits	Environmental remediation	Asset retirement	Other	Total
<i>(Dollars in millions)</i>					
Reserve at December 31, 2014	\$ 0.0	\$ 4.1	\$ 3.9	\$ 0.1	\$ 8.1
Accrual	2.2	0.6	23.4	1.3	27.5
Costs charged against assets	0.0	0.0	0.0	(1.3)	(1.3)
Reversal of accrued charges	0.0	0.0	(0.3)	0.0	(0.3)
Cash paid	(0.2)	0.0	(4.8)	(0.1)	(5.1)
Currency translation	0.0	(0.4)	(0.3)	0.0	(0.7)
Reserve at December 31, 2015	\$ 2.0	\$ 4.3	\$21.9	\$ 0.0	\$ 28.2
Accrual	2.4	0.1	5.6	5.6	13.7
Costs charged against assets	0.0	0.0	0.0	(1.9)	(1.9)
Reversal of accrued charges	(1.9)	(0.5)	(8.7)	(0.1)	(11.2)
Cash paid	(1.0)	(2.4)	(8.1)	(0.2)	(11.7)
Currency translation	(0.1)	0.0	(0.7)	(0.2)	(1.0)
Reserve at December 31, 2016	\$ 1.4	\$ 1.5	\$10.0	\$ 3.2	\$ 16.1

5. Related Party Transactions

As of December 31, 2016, the Company has loaned \$9.5 million to Tangshan Koppers Kailuan Carbon Chemical Company Limited ("TKK"), a 30-percent owned tar distillation facility in the Hebei Province of China. The amount reported in the consolidated balance sheet is net of accumulated equity losses in TKK of \$1.1 million and interest receivable of \$0.5 million. In 2015, TKK defaulted on the first installment payment on the loan and each installment payment thereafter. In November 2016, the Company sold its 30-percent equity interest in TKK to TKK's controlling shareholder and agreed to a revised installment payment plan which is guaranteed by TKK's controlling shareholder. The first two installment payments totaling \$5.2 million, inclusive of accrued interest, under the revised payment plan were received in January and February 2017. The remaining installment payments are expected to be received by June 30, 2017.

6. Fair Value Measurements

Carrying amounts and the related estimated fair values of the Company's financial instruments as of December 31, 2016 and 2015 are as follows:

	<u>December 31, 2016</u>		<u>December 31, 2015</u>	
	<i>Fair Value</i>	<i>Carrying Value</i>	<i>Fair Value</i>	<i>Carrying Value</i>
<i>(Dollars in millions)</i>				
Financial assets:				
Cash and cash equivalents, including restricted cash	\$ 20.8	\$ 20.8	\$ 21.8	\$ 21.8
Investments and other assets ^(a)	1.1	1.1	1.1	1.1
Financial liabilities:				
Long-term debt (including current portion)	\$669.6	\$662.4	\$724.6	\$722.3

(a) Excludes equity method investments.

Cash and cash equivalents – The carrying amount approximates fair value because of the short maturity of those instruments.

Investments and other assets – Represents the broker-quoted cash surrender value on universal life insurance policies. This asset is classified as Level 2 in the valuation hierarchy and is measured from values received from financial institutions.

Debt – The fair value of the Company's long-term debt is estimated based on the market prices for the same or similar issues or on the current rates offered to the Company for debt of the same remaining maturities (Level 2). The fair values of the revolving credit facility approximate carrying value due to the variable rate nature of these instruments.

7. Earnings per Common Share

The computation of basic earnings per common share for the periods presented is based upon the weighted average number of common shares outstanding during the periods. The computation of diluted earnings per common share includes the effect of non-vested nonqualified stock options and restricted stock units assuming such options and stock units were outstanding common shares at the beginning of the period. The effect of antidilutive securities and performance restricted stock units that have not met vesting criteria are excluded from the computation of diluted earnings per common share.

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

	Year Ended December 31,		
	2016	2015	2014
<i>(Dollars in millions, except share amounts, in thousands, and per share amounts)</i>			
Net income (loss) attributable to Koppers	\$ 29.3	\$ (72.0)	\$ (32.4)
Less: Income (loss) from discontinued operations	0.6	(0.1)	0.6
Income (loss) from continuing operations attributable to Koppers	\$ 28.7	\$ (71.9)	\$ (33.0)
Weighted average common shares outstanding:			
Basic	20,636	20,541	20,463
Effect of dilutive securities	419	0	0
Diluted	21,055	20,541	20,463
Earnings (loss) per common share – continuing operations:			
Basic earnings (loss) per common share	\$ 1.39	\$ (3.50)	\$ (1.61)
Diluted earnings (loss) per common share	1.36	(3.50)	(1.61)
Other data:			
Antidilutive securities excluded from computation of diluted earnings per common share	415	688	362

8. Stock-based Compensation

The amended and restated 2005 Long-Term Incentive Plan (the "LTIP") provides for the grant to eligible persons of stock options, stock appreciation rights, restricted stock, restricted stock units, performance shares, performance awards, dividend equivalents and other stock-based awards, which are collectively referred to as the awards.

Restricted Stock Units and Performance Stock Units

Under the LTIP, the board of directors granted restricted stock units and performance stock units to certain employee participants (collectively, the "stock units"). For grants to employees prior to 2015, restricted stock units vest on the third anniversary of the grant date, assuming continued employment by the participant. For the March 2015 and 2016 grants to employees, the restricted stock units vest in four equal annual installments. Restricted stock units that have one-year vesting periods are also issued under the LTIP to members of the board of directors in connection with annual director compensation and, from time to time, are issued to members of management in connection with employee compensation with varying vesting periods.

Compensation expense for non-vested stock units is recorded over the vesting period based on the fair value at the date of grant. The fair value of restricted stock units and performance stock units with a performance condition is the market price of the underlying common stock on the date of grant.

Performance stock units granted prior to 2016 vest based upon a performance condition. These performance stock units generally have three-year performance objectives and all performance stock units have a three-year period for vesting (if the applicable performance objective is achieved). For awards granted prior to 2016, the applicable performance objective is based upon a multi-year cumulative value creation calculation that considers the Company's financial performance commencing on the first day of each grant year. The number of performance stock units granted represents the target award and participants have the ability to earn between zero and 150 percent or 200 percent (depending on the grant date) of the target award based upon actual performance. If minimum performance criteria are not achieved, no performance stock units will vest.

Performance stock units granted in 2016 vest based upon a market condition. These performance stock units have a three-year performance objective and a three-year period for vesting (if the applicable performance objective is achieved). The applicable performance objective is based on the Company's total shareholder return ("TSR") relative to the Standard & Poors SmallCap 600 Materials Index. The number of performance stock units granted represents the target award and participants have the ability to earn between zero and 200 percent of the target award based upon actual performance. If minimum performance criteria are not achieved, no performance stock units will vest. The Company has the discretion to settle the award in cash rather than shares, although the Company currently expects that all awards will be settled by the issuance of shares.

Compensation expense for non-vested performance stock units with a market condition is recorded over the vesting period based on the fair value at the date of grant. The Company calculated the fair value of the awards on the date of grant using the Monte Carlo valuation model and the assumptions listed below:

	<i>March 2016 Grant</i>
Grant date price per share of performance award	\$18.11
Expected dividend yield per share	0.00%
Expected volatility	40.86%
Risk-free interest rate	0.96%
Look-back period in years	2.84
Grant date fair value per share of performance award	\$23.70

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

The following table shows a summary of the performance stock units as of December 31, 2016:

<i>Performance Period</i>	<i>Minimum Shares</i>	<i>Target Shares</i>	<i>Maximum Shares</i>
2014 – 2016	0	87,262	130,893
2015 – 2017	0	203,953	407,906
2016 – 2018	0	260,588	521,176

The following table shows a summary of the status and activity of non-vested stock awards for the year ended December 31, 2016:

	<i>Restricted Stock Units</i>	<i>Performance Stock Units</i>	<i>Total Stock Units</i>	<i>Weighted Average Grant Date Fair Value per Unit</i>
Non-vested at January 1, 2016	213,208	397,399	610,607	\$27.29
Granted	178,282	264,981	443,263	\$22.25
Credited from dividends	950	1,712	2,662	\$25.47
Vested	(100,281)	0	(100,281)	\$28.77
Forfeited	(12,352)	(109,704)	(122,056)	\$36.46
Non-vested at December 31, 2016	279,807	554,388	834,195	\$23.09

Compensation expense for non-vested performance stock units with a market condition is recorded over the vesting period based on the fair value at the date of grant.

Stock Options

Prior to 2015, stock options to most executive officers vest and become exercisable upon the completion of a three-year service period commencing on the grant date. For the 2015 and 2016 grants, the stock options vest in four equal annual installments.

The stock options have a term of 10 years. In the event of termination of employment, other than retirement, death or disability, any non-vested options are forfeited. In the event of termination of employment due to retirement, death or disability, pro-rata vesting of the options over the service period will result. There are special vesting provisions for the stock options related to a change in control.

Compensation expense for non-vested stock options is recorded over the vesting period based on the fair value at the date of grant. The Company calculated the fair value of stock options on the date of grant using the Black-Scholes-Merton model and the assumptions listed below:

	March 2016 Grant	March 2015 Grant	February 2014 Grant
Grant date price per share of stock option award	\$18.11	\$17.57	\$37.93
Expected dividend yield per share	0.00%	3.40%	2.75%
Expected life in years	5.96	5.75	6.5
Expected volatility	40.86%	42.27%	52.14%
Risk-free interest rate	1.45%	1.73%	1.98%
Grant date fair value per share of option awards	\$ 7.41	\$ 5.20	\$15.26

The dividend yield is based on the Company's current and prospective dividend rate which calculates a continuous dividend yield based upon the market price of the underlying common stock. The Company suspended its dividend in February 2015 and does not expect to declare any dividends for the foreseeable future. The expected life in years for the March 2016 and 2015 grants is based on historical exercise data of options previously granted by the Company. The expected life in years for grants prior to 2015 are based on the simplified method permitted under Securities and Exchange Commission Staff Accounting Bulletin Topic 14 which calculates the average of the weighted vesting term and the contractual term of the option. This method was selected due to the lack of historical exercise data with respect to the Company at the time of those grants. Expected volatility is based on the historical volatility of the Company's common stock and the historical volatility of certain other similar public companies. The risk-free interest rate is based on U.S. Treasury bill rates for the expected life of the option.

The following table shows a summary of the status and activity of stock options for the year ended December 31, 2016:

	Options	Weighted Average Exercise Price per Option	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in millions)
Outstanding at December 31, 2015	774,249	\$28.46		
Granted	211,193	\$18.11		
Exercised	(15,901)	\$24.94		
Expired	(14,548)	\$40.38		
Forfeited	(19,539)	\$23.70		
Outstanding at December 31, 2016	935,454	\$26.10	6.46	\$6.0
Exercisable at December 31, 2016	436,582	\$33.07	4.14	\$3.3

Total stock-based compensation expense recognized and cash received from the exercise of stock options for the three years ended December 31, 2016, 2015 and 2014 are as follows:

	Year Ended December 31,		
	2016	2015	2014
<i>(Dollars in millions)</i>			
Stock-based compensation expense recognized:			
Selling, general and administrative expenses	\$8.9	\$3.8	\$4.7
Less related income tax benefit	3.6	1.5	1.9
Decrease in net income attributable to Koppers	\$5.3	\$2.3	\$2.8
Intrinsic value of exercised stock options	\$0.1	\$0.0	\$0.3
Cash received from the exercise of stock options	\$0.4	\$0.0	\$0.7

As of December 31, 2016 total future compensation expense related to non-vested stock-based compensation arrangements totaled \$12.0 million and the weighted-average period over which this expense is expected to be recognized is approximately 25 months.

9. Segment Information

The Company has three reportable segments: Railroad and Utility Products and Services, Carbon Materials and Chemicals, and Performance Chemicals. The Company's reportable segments contain multiple 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.

The Company's Railroad and Utility Products and Services segment sells treated and untreated wood products, manufactured products and services primarily to the railroad and public utility markets. Railroad products and services include procuring and treating items such as crossties, switch ties and various types of lumber used for railroad bridges and crossings and the manufacture of rail joint bars. We also operate a railroad services business that conducts engineering, design, repair and inspection services for railroad bridges. Utility products include transmission and distribution poles and pilings.

The Company's Carbon Materials and Chemicals segment is primarily a manufacturer of creosote, carbon pitch, naphthalene, phthalic anhydride and carbon black feedstock. Creosote is used in the treatment of wood and carbon black feedstock is used in the production of carbon black. Carbon pitch is a critical raw material used in the production of aluminum and for the production of steel in electric arc furnaces. Naphthalene is used for the production of phthalic anhydride and as a surfactant in the production of concrete. Phthalic anhydride is used in the production of plasticizers, polyester resins and alkyd paints.

The Company's Performance Chemicals segment develops, manufactures, and markets wood preservation chemicals and wood treatment technologies and services a diverse range of end-markets including infrastructure, residential and commercial construction, and agriculture.

The Company evaluates performance and determines resource allocations based on a number of factors, the primary measure being operating profit or loss from operations. Operating profit does not include equity in earnings of affiliates, other income, interest expense or income taxes. Operating profit also excludes the operating costs of Koppers Holdings Inc., the parent company of Koppers Inc. 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.

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

	Year Ended December 31,		
	2016	2015	2014
<i>(Dollars in millions)</i>			
Revenues from external customers:			
Railroad and Utility Products and Services	\$ 586.5	\$ 657.0	\$ 597.8
Carbon Materials and Chemicals	436.3	613.4	833.7
Performance Chemicals	393.4	356.5	123.5
Total	\$1,416.2	\$1,626.9	\$1,555.0
Intersegment revenues:			
Carbon Materials and Chemicals	\$ 90.2	\$ 86.7	\$ 84.8
Performance Chemicals	8.1	8.7	3.0
Total	\$ 98.3	\$ 95.4	\$ 87.8
Depreciation and amortization expense:			
Railroad and Utility Products and Services ^(a)	\$ 13.0	\$ 14.2	\$ 11.9
Carbon Materials and Chemicals ^(b)	21.2	25.8	25.0
Performance Chemicals	18.7	19.0	7.1
Total	\$ 52.9	\$ 59.0	\$ 44.0
Operating profit (loss):			
Railroad and Utility Products and Services ^(c)	\$ 51.1	\$ 62.2	\$ 53.6
Carbon Materials and Chemicals ^(d)	(25.1)	(125.0)	(5.3)
Performance Chemicals	62.0	39.0	1.6
Corporate ^(e)	(1.6)	(5.8)	(16.7)
Total	\$ 86.4	\$ (29.6)	\$ 33.2
Capital expenditures (including acquisitions):			
Railroad and Utility Products and Services	\$ 11.2	\$ 11.1	\$ 44.5
Carbon Materials and Chemicals	29.5	37.6	63.7
Performance Chemicals	7.9	5.8	471.1
Corporate	1.3	1.5	0.7
Total	\$ 49.9	\$ 56.0	\$ 580.0

(a) Excludes impairment charges of \$1.9 million in 2015 for a wood treating facility in the United States.

(b) Excludes impairment charges of \$3.5, \$12.8 and \$4.7 million in 2016, 2015 and 2014, respectively, for CMC.

(c) Includes asset retirement obligation and other restructuring costs of \$6.9 million for the restructuring of three facilities in the United States in 2016. Includes gain on sale of the Company's North American utility pole business of \$3.2 million and restructuring costs of \$5.7 million for a wood treating facility in the United States in 2015.

(d) Includes plant closure costs of \$13.2, \$36.5 and \$18.1 million in 2016, 2015 and 2014, respectively, for CMC. In the fourth quarter of 2015, the Company also recorded goodwill impairment charges of \$67.2 million related to this business unit.

(e) Operating loss for Corporate includes general and administrative costs for Koppers Holdings Inc., the parent company of Koppers Inc., foreign exchange revaluation related to intercompany loans in connection with a legal reorganization of the Company and acquisition and acquisition-related integration costs.

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

	<i>December 31,</i>	
	<i>2016</i>	<i>2015</i>
<i>(Dollars in millions)</i>		
Segment assets:		
Railroad and Utility Products and Services	\$ 264.2	\$ 254.1
Carbon Materials and Chemicals	333.0	368.4
Performance Chemicals	442.9	441.3
Segment assets	1,040.1	1,063.8
Cash and cash equivalents	0.0	0.1
Income tax receivable	3.8	4.6
Deferred taxes	32.5	32.6
Property, plant and equipment, net	4.9	4.7
Deferred charges	0.7	1.6
Other	5.5	5.4
Total	\$1,087.5	\$1,112.9
Goodwill:		
Railroad and Utility Products and Services	\$ 9.9	\$ 9.9
Performance Chemicals	176.5	176.7
Total	\$ 186.4	\$ 186.6

Revenues and Long-lived Assets by Geographic Area

	<i>Year</i>	<i>Revenue</i>	<i>Long-lived assets</i>
<i>(Dollars in millions)</i>			
United States	2016	\$ 929.3	\$446.6
	2015	991.2	460.3
	2014	833.0	518.8
Australasia	2016	228.4	124.3
	2015	280.9	132.9
	2014	349.0	160.3
Europe	2016	140.2	31.9
	2015	144.0	32.9
	2014	201.1	47.5
Other countries	2016	118.3	19.5
	2015	210.8	18.3
	2014	171.9	18.3
Total	2016	\$1,416.2	\$622.3
	2015	\$1,626.9	\$644.5
	2014	\$1,555.0	\$744.9

Revenues by geographic area in the above table are attributed by the destination country of the sale. Revenues from non-U.S. countries totaled \$486.9 million in 2016, \$635.7 million in 2015 and \$722.0 million in 2014.

Segment Revenues for Significant Product Lines

	Year Ended December 31,		
	2016	2015	2014
<i>(Dollars in millions)</i>			
Railroad and Utility Products and Services:			
Railroad crossties	\$ 374.0	\$ 422.0	\$ 371.4
Utility poles	34.5	52.4	96.1
Creosote	49.6	45.7	51.2
Rail joints	24.4	28.1	27.2
Railroad infrastructure services	43.4	42.7	14.8
Other products	60.6	66.1	37.1
	586.5	657.0	597.8
Carbon Materials and Chemicals:			
Carbon pitch	191.0	283.4	330.2
Phthalic anhydride	75.6	65.1	91.4
Creosote and carbon black feedstock	71.3	119.6	213.7
Other products	98.4	145.3	198.4
	436.3	613.4	833.7
Performance Chemicals:			
Wood preservative products	365.5	318.6	107.0
Other products	27.9	37.9	16.5
	393.4	356.5	123.5
Total	\$1,416.2	\$1,626.9	\$1,555.0

10. Income Taxes

Income Tax Provision

Components of the Company's income tax provision from continuing operations are as follows:

	Year Ended December 31,		
	2016	2015	2014
<i>(Dollars in millions)</i>			
Current:			
Federal	\$ (1.9)	\$ (4.2)	\$ 17.5
State	1.3	0.2	0.3
Foreign	13.3	16.0	14.6
Total current tax provision	12.7	12.0	32.4
Deferred:			
Federal	(1.6)	(19.2)	3.1
State	0.5	3.0	0.0
Foreign	(0.2)	0.0	(1.4)
Total deferred tax (benefit) provision	(1.3)	(16.2)	1.7
Total income tax (benefit) provision	\$11.4	\$ (4.2)	\$34.1

Income (loss) before income taxes for 2016, 2015 and 2014 included \$48.2 million, \$(15.2) million and \$(1.5) million, respectively, from foreign operations.

The provision for income taxes is reconciled with the federal statutory rate as follows:

	<i>Year Ended December 31,</i>		
	<i>2016</i>	<i>2015</i>	<i>2014</i>
Federal income tax rate	35.0%	35.0%	35.0%
State income taxes, net of federal tax benefit	(0.8)	2.3	(4.8)
Foreign earnings taxed at different rates	(10.1)	(8.3)	(347.6)
Domestic production activities deduction	0.0	(0.6)	40.8
Deferred tax adjustments	(0.2)	0.4	3.2
Change in tax contingency reserves	6.5	1.5	(15.2)
Legal entity tax restructuring project	0.0	0.0	(1,503.2)
Foreign tax credits	0.0	0.0	1,203.4
Changes to foreign repatriation plans	0.0	0.0	104.0
Valuation allowance charges	(1.9)	(13.0)	(92.4)
Goodwill impairment	0.0	(10.9)	0.0
Other	1.1	(1.1)	(1.2)
	29.6%	5.3%	(578.0%)

The Company has not provided a U.S. deferred tax liability on the difference between the financial reporting and tax basis of its investments in its foreign subsidiaries, except for an immaterial amount of unremitted foreign earnings that are expected to be remitted as a dividend. Where the tax basis of these investments exceeds the financial reporting basis, the Company does not anticipate it will dispose of these foreign subsidiaries in the foreseeable future and, as such, has not recognized a U.S. deferred tax asset for this excess tax basis. To the extent such foreign subsidiaries may also have unremitted earnings, such earnings have either been previously taxed in the U.S. or are considered to be indefinitely reinvested. Where the financial reporting basis of these investments exceeds its tax basis, substantially all of the basis difference is attributable to unremitted earnings that are considered to be indefinitely reinvested. At December 31, 2016, there was approximately \$85 million of such unremitted earnings which would be taxed if they were remitted as a dividend. To estimate the amount of taxes that may be payable when these earnings are remitted in the future, many assumptions, such as the tax profile of the Company at that time and the availability of potential U.S. foreign tax credits that may reduce the ultimate amount of tax, are required. Therefore, it is not practicable to estimate the amount of taxes that may be payable when these earnings are remitted in the future.

Taxes Excluded from Net Income Attributable to Koppers

The amount of income tax expense (benefit) included in comprehensive income (loss) but excluded from net income attributable to Koppers relating to adjustments to copper swap contracts is \$8.0 million, \$(1.2) million, and \$(2.6) million for the years ended December 31, 2016, 2015, and 2014, respectively.

The amount of income tax expense (benefit) included in comprehensive income (loss) but excluded from net income attributable to Koppers relating to adjustments to reflect the unfunded status of employee post-retirement benefit plans is \$2.0 million, \$0.6 million, and \$(8.1) million for the years ended December 31, 2016, 2015, and 2014, respectively.

The amount of income tax expense included in shareholders' equity but excluded from net income attributable to Koppers relating to the expense for restricted stock and employee stock options recognized differently for financial and tax reporting purposes is \$0.4 million, \$0.5 million and \$0.3 million for the years ended December 31, 2016, 2015, and 2014, respectively.

Deferred Tax Assets and Liabilities

Deferred income taxes reflect the net tax effects of differences between the carrying amounts of assets and liabilities for financial reporting purposes and for income tax purposes.

Significant components of the Company's deferred tax assets and liabilities are as follows:

	<i>December 31,</i>	
	<i>2016</i>	<i>2015</i>
<i>(Dollars in millions)</i>		
Deferred tax assets:		
Reserves, including insurance, environmental and deferred revenue	\$ 22.3	\$ 19.9
Pension and other postretirement benefits obligations	19.2	19.4
Tax credits	15.4	16.8
Asset retirement obligations	12.0	12.0
State tax losses carryforwards (expiring from 2017-2036)	11.3	10.2
Foreign tax loss carryforwards (expiring beginning in 2018)	10.1	9.3
Accrued employee compensation	8.9	6.9
Book/tax inventory accounting differences	3.5	3.2
Capital loss benefit	0.0	0.9
Book over tax depreciation and amortization	0.0	3.6
Other	6.6	10.0
Valuation allowance	(40.2)	(41.9)
Total deferred tax assets	69.1	70.3
Deferred tax liabilities:		
Tax over book depreciation and amortization	42.7	38.4
Gain on derivative contracts	4.2	0.0
Tax/book inventory accounting differences	0.0	0.3
Other	1.4	0.7
Total deferred tax liabilities	48.3	39.4
Net deferred tax assets	\$ 20.8	\$ 30.9

A valuation allowance is necessary when it is more likely than not that a deferred tax asset will not be realized. Certain deferred tax assets reflected above are not expected to be realized and a valuation allowance has been provided for them. Valuation allowances are recorded to offset the following deferred tax assets:

	<i>December 31,</i>	
	<i>2016</i>	<i>2015</i>
Federal foreign tax credits	\$14.3	\$14.9
State temporary differences, net operating losses and tax credits	13.2	11.6
Foreign temporary differences, net operating losses and capital losses	12.7	15.4
Total valuation allowances	\$40.2	\$41.9

During 2016, the Company generated additional net operating losses in certain states which require each legal entity to file a separate return. As it is not expected that certain entities will generate future taxable income to realize the benefit of these losses, the related valuation allowance was increased by \$1.6 million. Also, a valuation allowance of \$2.1 million provided in 2015 on certain United Kingdom deferred tax assets associated with the closure of manufacturing facilities was released during 2016. After the sale of assets and transfer of liabilities to a third party in 2016, it became apparent that remaining future deductions will be available to offset taxable income generated by other of our United Kingdom entities.

Management evaluated the ability to realize remaining deferred tax assets, particularly in light of the financial reporting losses reported over the preceding three years. As discussed in Note 14, "Goodwill and Other Identifiable Intangible Assets," the Company incurred a goodwill impairment charge in 2015 of \$67.2 million, of which \$25.1 million related to nondeductible goodwill which was the primary factor contributing to the three-year cumulative loss. Excluding these nonrecurring charges, Management has concluded that the Company will generate sufficient future taxable income in periods when these deferred tax assets become deductible.

Unrecognized Tax Benefits

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

	December 31,		
	2016	2015	2014
<i>(Dollars in millions)</i>			
Balance at beginning of year	\$ 7.7	\$ 7.2	\$ 6.1
Additions based on tax provisions related to the current year	0.9	1.4	0.6
Additions for tax provisions of prior years	1.5	0.0	0.1
Additions as a result of acquisitions	0.0	0.0	1.6
Reductions of tax provisions of prior years	0.0	(0.7)	(0.6)
Reductions as a result of a lapse of the applicable statute of limitations	(0.4)	(0.2)	(0.6)
Balance at end of year	\$ 9.7	\$ 7.7	\$ 7.2

As of December 31, 2016 and 2015, the total amount of unrecognized tax benefits that, if recognized, would affect the effective tax rate, was approximately \$5.7 million and \$4.1 million, respectively.

The Company recognizes interest expense (income) and any related penalties from unrecognized tax benefits in income tax expense. For the years ended December 31, 2016, 2015, and 2014, the Company recognized \$1.2 million, \$(1.5) million and \$1.5 million, respectively, in interest and penalties. As of December 31, 2016 and 2015, the Company had accrued interest and penalties of approximately \$4.2 million and \$1.2 million, respectively.

The Company believes that it is reasonably possible that the amount of unrecognized tax benefits will decrease in the next twelve months by approximately \$3 million due to the expirations of certain foreign and state statutes of limitations and potential audit resolutions. The Company does not anticipate significant increases to the amount of unrecognized tax benefits within the next twelve months.

The Company and its subsidiaries file income tax returns in U.S. federal jurisdiction, individual U.S. state jurisdictions and non-U.S. jurisdictions. With few exceptions, the Company is no longer subject to U.S. federal, U.S. state, or non-U.S. income tax examinations by tax authorities for years before 2011.

11. Inventories

Inventories as of December 31, 2016 and 2015 were as follows:

	December 31,	
	2016	2015
<i>(Dollars in millions)</i>		
Raw materials	\$157.7	\$169.8
Work in process	14.2	15.5
Finished goods	103.6	97.4
	275.5	282.7
Less revaluation to LIFO	46.8	56.3
Net	\$228.7	\$226.4

12. Equity Investments

The Company has no remaining investments in unconsolidated companies as of December 31, 2016. During 2016, the Company sold its 30 percent interest in TKK. See additional information regarding TKK in Note 5 "Related Party Transactions." During 2015, the Company sold the assets of KSA Limited Partnership for \$2.5 million to a third party resulting in a gain of \$0.3 million. KSA Limited Partnership was a 50 percent-owned concrete crosstie operation. No dividends were paid for the three years ended December 31, 2016. Equity in losses for the three years ended December 31, 2016 were as follows:

	<i>Equity loss</i>
<i>(Dollars in millions)</i>	
2016	\$(1.0)
2015	(2.2)
2014	(1.6)

13. Property, Plant and Equipment

Property, plant and equipment as of December 31, 2016 and 2015 were as follows:

	<i>December 31,</i>	
	<i>2016</i>	<i>2015</i>
<i>(Dollars in millions)</i>		
Land	\$ 17.0	\$ 17.6
Buildings	58.2	61.8
Machinery and equipment	716.0	669.0
	\$791.2	\$748.4
Less accumulated depreciation	510.4	470.6
Net	\$280.8	\$277.8

Depreciation expense, including impairment charges, for the years ended December 31, 2016, 2015 and 2014 amounted to \$41.6 million, \$58.4 million and \$38.8 million, respectively.

Impairments – Impairment charges for 2016, 2015 and 2014 were \$3.5 million, \$14.7 million and \$4.7 million, respectively. In 2016, impairment charges primarily related to the decision to discontinue coal tar distillation activities at a CMC plant located in the United States.

The 2015 impairment charges primarily related to the decision to discontinue coal tar distillation activities at CMC plants located in the United Kingdom and the United States. The remaining 2015 impairment charges were related to the RUPS wood treating plant in Green Spring, West Virginia.

The 2014 impairment charges primarily related to the CMC plant in Tangshan, China (\$2.8 million, net of non-controlling interest). These impairment charges were calculated using a probability-weighted discounted cash flow model.

14. Goodwill and Other Identifiable Intangible Assets

The change in the carrying amount of goodwill attributable to each business segment for the years ended December 31, 2016 and December 31, 2015 was as follows:

	<i>Carbon Materials and Chemicals</i>	<i>Railroad and Utility Products and Services</i>	<i>Performance Chemicals</i>	<i>Total</i>
<i>(Dollars in millions)</i>				
Balance at December 31, 2014	\$ 65.5	\$ 9.3	\$172.4	\$247.2
Acquisitions	4.1	0.0	0.0	4.1
Purchase price allocation adjustments	0.0	1.2	8.3	9.5
Impairment	(67.2)	0.0	0.0	(67.2)
Currency translation	(2.4)	(0.6)	(4.0)	(7.0)
Balance at December 31, 2015	\$ 0.0	\$ 9.9	\$176.7	\$186.6
Currency translation	0.0	0.0	(0.2)	(0.2)
Balance at December 31, 2016	\$ 0.0	\$ 9.9	\$176.5	\$186.4

Goodwill represents the excess of the cost over the fair value of acquired identifiable tangible and intangible assets and liabilities assumed from businesses acquired.

Goodwill is tested for impairment at the reporting unit level annually in the fourth quarter and whenever events or circumstances indicate the carrying value may not be recoverable. The evaluation of goodwill impairment involves using either a qualitative or quantitative approach as outlined in ASC Topic 350. In the fourth quarter of 2016 and 2014, the Company determined that the estimated fair values substantially exceeded the carrying values of all the reporting units, and accordingly, there was no impairment of goodwill for the year ended December 31, 2016 and for the year ended December 31, 2014.

During the fourth quarter of 2015, the Company completed its annual goodwill impairment evaluation using the two-step quantitative analysis. In the first step of the analysis, the Company compared the estimated fair value of each reporting unit to its carrying value, including goodwill. The fair value of the reporting units was determined based on a weighting of income and market approaches. Since the carrying value of the CMC reporting unit exceeded the fair value, the Company performed the second step of the impairment analysis in order to determine the implied fair value of the reporting unit's goodwill. The implied fair value of goodwill represents the excess of fair value of the reporting unit over the fair value amounts assigned to all of the assets and liabilities of the reporting unit as if it were to be acquired in a business combination and the current fair value of the reporting unit (as calculated in the first step) was the purchase price. Any amount remaining after this allocation represents the implied fair value of goodwill.

The implied fair value of the respective reporting unit's goodwill was then compared to the carrying value of the goodwill and any excess of carrying value over the implied fair value represents the non-cash impairment charge. The results of the second step analysis showed that the implied fair value of goodwill was zero for the CMC reporting unit. Therefore, in 2015, the Company recorded a goodwill impairment charge of \$67.2 million for the CMC reporting unit. During the fourth quarter of 2015, the Company observed certain negative factors including a declining market capitalization, downsizing of the global aluminum markets and continued decline in spot and forward oil pricing. As noted elsewhere in this Form 10-K, the Company and its board of directors approved certain strategic changes for the CMC reporting unit during the fourth quarter of 2015 reflecting the current market environment. The aforementioned negative factors all severely impact the outlook and corresponding fair value for the Company's CMC reporting unit and were the primary factors for the goodwill impairment charge recorded during the fourth quarter of 2015. As a result of the goodwill impairment charge, there is no goodwill remaining for the CMC reporting unit as of December 31, 2015.

For purposes of the income approach, fair value was determined based on the present value of estimated future cash flows, discounted at an appropriate risk-adjusted rate (DCF analysis). The Company made assumptions about the amount and timing of future expected cash flows, terminal value growth rates and appropriate discount rates. The amount and timing of future cash flows within the Company's DCF analysis was based on its most recent operational budgets, long range strategic plans and other estimates. A one half of one percent perpetual growth rate was used to calculate the value of cash flows beyond the last projected period in the Company's DCF analysis for the CMC reporting unit and reflects its best estimates for stable, perpetual

growth of its reporting unit. Actual results may differ from those assumed in the Company's forecasts. The Company used estimates of market participant weighted average cost of capital as a basis for determining the discount rate of 14 percent applied to the CMC reporting unit's future expected cash flows, adjusted for risks and uncertainties inherent in the chemical industry and in its internally developed forecasts.

The market approach is based upon an analysis of valuation metrics for companies comparable to the reporting unit. The fair value for the CMC reporting unit was estimated using an appropriate valuation multiple, as well as estimated normalized earnings and an estimated control premium.

In order to further validate the reasonableness of the estimated fair values of the reporting units as of the valuation date in the fourth quarter of 2015, a reconciliation of the aggregate fair values of all reporting units to the Company's market capitalization was performed using a reasonable control premium.

Goodwill impairment tests in years prior to December 31, 2015 indicated that goodwill was not impaired for any of the Company's reporting units. Accumulated impairment losses totaled \$67.2 million as of December 31, 2016 and 2015.

The Company's identifiable intangible assets with finite lives are being amortized over their estimated useful lives and are summarized below:

	December 31,							
	2016					2015		
	<i>Estimated life in years</i>	<i>Weighted average remaining life in years</i>	<i>Gross Carrying Amount</i>	<i>Accumulated Amortization</i>	<i>Net</i>	<i>Gross Carrying Amount</i>	<i>Accumulated Amortization</i>	<i>Net</i>
<i>(Dollars in millions)</i>								
Customer contracts	9 to 18	13.2	\$152.5	\$33.6	\$118.9	\$153.0	\$24.3	\$128.7
Technology	4 to 12	5.0	26.7	8.8	17.9	26.6	5.1	21.5
Trademarks	4 to 7	4.6	6.1	1.9	4.2	5.9	1.1	4.8
Supply contracts	10	3.2	2.2	1.5	0.7	2.3	1.4	0.9
Non-compete agreements	12	7.8	1.3	1.1	0.2	1.4	1.2	0.2
Favorable lease agreements	3	0.0	0.6	0.6	0.0	0.7	0.7	0.0
Total		11.9	\$189.4	\$47.5	\$141.9	\$189.9	\$33.8	\$156.1

In 2016, the gross carrying value of identifiable intangible assets decreased by \$0.5 million due to foreign currency translation. Total amortization expense related to these identifiable intangible assets was \$14.8 million, \$15.3 million and \$8.4 million for the years ended December 31, 2016, 2015 and 2014, respectively. Estimated amortization expense for the next five years is summarized below:

	<i>Estimated annual amortization</i>
<i>(Dollars in millions)</i>	
2017	\$14.3
2018	14.3
2019	14.3
2020	14.0
2021	12.1

15. Pensions and Post-Retirement Benefit Plans

The Company and its subsidiaries maintain a number of defined benefit and defined contribution plans to provide retirement benefits for employees in the U.S., as well as employees outside the U.S. These plans are maintained and contributions are made in accordance with the Employee Retirement Income Security Act of 1974 ("ERISA"), local statutory law or as determined by the board of directors. The defined benefit pension plans generally provide benefits based upon years of service and compensation. Pension plans are funded except for three domestic non-qualified defined benefit pension plans for certain key executives.

In the U.S., all qualified defined benefit pension plans for salaried and hourly employees have been closed to new participants and have been frozen. Accordingly, these pension plans no longer accrue additional years of service or recognize future increases in compensation for benefit purposes.

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

In the third quarter of 2016, the Company offered a cash lump sum or annuity buyout to its terminated deferred vested participants in its U.S. defined benefit pension plan. Approximately 375 participants elected either a lump sum payout or annuity from a third party provider. The total dollar amount paid out of our defined benefit plan assets was \$13.9 million and the Company recorded a pension settlement charge of \$4.4 million for the year ended December 31, 2016.

Expense related to defined contribution plans totaled \$7.8 million, \$6.0 million and \$6.9 million for the years ended December 31, 2016, 2015 and 2014, respectively.

Net periodic pension costs for 2016, 2015 and 2014 were as follows:

	<i>Year Ended December 31,</i>					
	<i>Pension Benefits</i>			<i>Other Benefits</i>		
	<i>2016</i>	<i>2015</i>	<i>2014</i>	<i>2016</i>	<i>2015</i>	<i>2014</i>
<i>(Dollars in millions)</i>						
Service cost	\$ 1.7	\$ 2.0	\$ 2.7	\$0.1	\$0.1	\$0.1
Interest cost	11.0	10.9	11.8	0.4	0.4	0.5
Expected return on plan assets	(10.5)	(12.0)	(13.9)	0.0	0.0	0.0
Amortization of prior service cost	0.0	(0.3)	(0.2)	0.0	(0.1)	(0.2)
Amortization of net loss	2.2	6.6	4.0	(0.4)	(0.3)	0.0
Settlements and curtailments	4.4	(0.8)	0.0	0.0	0.0	0.0
Net periodic benefit cost	\$ 8.8	\$ 6.4	\$ 4.4	\$0.1	\$0.1	\$0.4

Net periodic pension cost is expected to be recognized from the amortization of net loss and is estimated to total \$2.0 million for all plans in 2017.

The change in the funded status of the pension and postretirement plans as of December 31, 2016 and December 31, 2015 is as follows:

	December 31,			
	Pension Benefits		Other Benefits	
	2016	2015	2016	2015
<i>(Dollars in millions)</i>				
Change in benefit obligation:				
Benefit obligation at beginning of year	\$257.5	\$275.7	\$ 9.4	\$ 9.8
Service cost	1.7	2.0	0.1	0.1
Interest cost	11.0	10.9	0.4	0.4
Plan participants' contributions	0.1	0.2	0.0	0.0
Actuarial losses (gains)	10.7	(14.9)	1.0	(0.3)
Plan amendments	(0.1)	0.0	0.0	0.0
Settlements	(13.9)	0.0	0.0	0.0
Currency translation	(9.9)	(3.4)	0.0	0.0
Benefits paid	(13.5)	(13.0)	(0.9)	(0.6)
Benefit obligation at end of year	243.6	257.5	10.0	9.4
Change in plan assets:				
Fair value of plan assets at beginning of year	212.4	229.5	0.0	0.0
Actual return on plan assets	20.8	(4.6)	0.0	0.0
Employer contribution	4.4	3.4	0.9	0.6
Plan participants' contributions	0.1	0.2	0.0	0.0
Settlements	(13.9)	0.0	0.0	0.0
Currency translation	(9.4)	(3.1)	0.0	0.0
Benefits paid	(13.5)	(13.0)	(0.9)	(0.6)
Fair value of plan assets at end of year	200.9	212.4	0.0	0.0
Funded status of the plan	\$ (42.7)	\$ (45.1)	\$(10.0)	\$(9.4)
Amounts recognized in the balance sheet consist of:				
Noncurrent assets	\$ 0.8	\$ 0.8	\$ 0.0	\$ 0.0
Current liabilities	1.1	0.9	0.8	0.8
Noncurrent liabilities	42.4	45.0	9.2	8.6
Pension plans with projected benefit obligations in excess of plan assets:				
Benefit obligation	\$238.7	\$252.7		
Fair value of plan assets	195.3	206.9		
Pension plans with accumulated benefit obligations in excess of plan assets:				
Accumulated benefit obligation	\$238.5	\$251.2		
Fair value of plan assets	195.3	206.9		

The measurement date for all pension and postretirement assets and obligations is December 31 for each respective year.

The accumulated benefit obligation for all defined benefit pension plans as of December 31, 2016 and 2015 was \$243.3 million and \$255.8 million, respectively.

Expected Contributions for the 2017 Fiscal Year

The expected contributions by the Company for 2017 are estimated to be \$4.2 million for pension plans and \$0.8 million for other benefit plans.

Projected Benefit Payments

Benefit payments for pension benefits, which are primarily funded by the pension plan assets, and other benefits, which are funded by general corporate assets and reflecting future expected service as appropriate, are expected to be paid as follows:

	Pension Benefits	Other Benefits
<i>(Dollars in millions)</i>		
2017	\$13.0	\$0.9
2018	12.9	0.9
2019	13.2	0.8
2020	13.5	0.8
2021	13.8	0.7
Next five years	75.0	3.1

Weighted-Average Assumptions as of December 31

	December 31,			
	Pension Benefits		Other Benefits	
	2016	2015	2016	2015
Discount rate	4.09%	4.52%	4.53%	4.73%
Expected return on plan assets	5.10	5.16		
Rate of compensation increase	3.50	3.82		
Initial medical trend rate			6.30	6.50

Basis for the Selection of the Long-Term Rate of Return on Assets

The long-term rate of return on assets assumption was determined by using the plan's asset allocation as described in the plan's investment policy and modeling a distribution of compound average returns over a time horizon. The model uses asset class return, variance, and correlation assumptions to produce the expected return. The return assumptions used forward looking gross returns influenced by the current bond yields, corporate bond spreads and equity risk premiums based on current market conditions.

In general, the long-term rate of return is the sum of the portion of total assets in each asset class multiplied by the expected return for that class, adjusted for expected expenses to be paid from the assets. To develop the expected long-term rate of return on assets assumption, the Company considered the historical returns and the future expectations for returns for each asset class, as well as the target asset allocation of the pension portfolio.

Investment Strategy

The weighted average asset allocation for the Company's pension plans at December 31 by asset category is as follows:

	December 31,	
	2016	2015
Debt securities	71%	70%
Equity securities	24	26
Other	5	4
	100%	100%

The Company's investment strategy for its pension plans is to maintain an adequate level of diversification, to reduce interest rate and market risk and to provide adequate liquidity to meet immediate and future benefit payment requirements. The Company's overall investment strategy is to achieve a mix of growth seeking assets, principally U.S. and international public company equity securities and income generating assets, principally debt securities, real estate and cash. Currently, the Company targets an allocation of 30 percent to 40 percent growth seeking assets and 60 percent to 70 percent income generating assets on an overall basis. The Company utilizes investment managers to assist in identifying and monitoring investments that meet these allocation criteria. With respect to the U.S defined benefit plan, the Company has implemented a strategy of reallocating pension assets from growth seeking assets to income generating assets as certain funded status levels are reached.

The investment valuation policy of the Company is to value investments at fair value. Most of the assets are invested in pooled or commingled investment vehicles. The Company's interest in these investment vehicles is expressed as a unit of account with a value per unit that is the result of the accumulated values of the underlying investments. Equity securities held within these investment vehicles are typically priced on a daily basis using the closing market price from the exchange through which the security is traded. Debt securities held within these investment vehicles are typically priced on a daily basis by independent pricing services. The fair value of real estate investments is either priced through a listing on an exchange or are subject to periodic appraisals.

The following table sets forth by level, the Company's pension plan assets at fair value, within the fair value hierarchy, as of December 31, 2016 and December 31, 2015:

	December 31, 2016			Total
	Quoted prices in active markets for identical assets (Level 1)	Significant observable inputs (Level 2)	Significant unobservable inputs (Level 3)	
<i>(Dollars in millions)</i>				
U.S. equity securities	\$12.3	\$ 13.2	0.0	\$25.5
International equity securities	12.6	10.9	0.0	23.5
U.S. debt securities	29.7	75.2	3.2	108.1
International debt securities	8.3	24.3	1.1	33.7
Real estate and other investments	0.0	0.5	5.7	6.2
Cash and cash equivalents	0.0	3.9	0.0	3.9
	\$62.9	\$128.0	\$10.0	\$200.9

	December 31, 2015			Total
	Quoted prices in active markets for identical assets (Level 1)	Significant observable inputs (Level 2)	Significant unobservable inputs (Level 3)	
<i>(Dollars in millions)</i>				
U.S. equity securities	\$15.0	\$ 10.2	\$ 0.0	\$25.2
International equity securities	12.1	18.6	0.0	30.7
U.S. debt securities	32.3	84.8	0.0	117.1
International debt securities	7.0	25.5	0.0	32.5
Real estate and other investments	0.0	1.4	0.0	1.4
Cash and cash equivalents	0.0	5.5	0.0	5.5
	\$66.4	\$146.0	\$ 0.0	\$212.4

The table below sets forth a summary of changes in the fair value of the Level 3 pension plans' assets for the year ended December 31, 2016:

	December 31, 2016	
	Other Investments	Debt Securities
<i>(Dollars in millions)</i>		
Balance at beginning of year	\$ 0.0	\$ 0.0
Purchases, sales, issuances and settlements	4.4	6.0
Realized and unrealized gains	0.2	0.1
Foreign currency translation loss	(0.3)	(0.4)
Balance at the end of year	\$ 4.3	\$ 5.7
The amount of total gains during the period attributable to the change in unrealized gains relating to Level 3 net assets still held at the reporting date	\$ 0.2	\$ 0.1

Health Care Cost Trend Rates

The 2017 initial health care cost trend rate is assumed to be 6.3 percent and is assumed to decrease gradually to 4.5 percent in 2037 and remain at that level thereafter. The assumed health care cost trend rate has a significant effect on the amounts reported for other postretirement benefit liability. A one-percentage-point change in the assumed health care cost trend rate would have the following effects:

	1% Increase	1% Decrease
<i>(Dollars in millions)</i>		
Increase (decrease) from change in health care cost trend rates:		
Postretirement benefit expense	\$0.0	\$ 0.0
Postretirement benefit liability	0.2	(0.1)

Incentive Plan

The Company has short-term management incentive plans that pay cash bonuses if certain Company performance goals are met. The charge to operating expense for these plans was \$10.4 million in 2016, \$9.2 million in 2015 and \$3.8 million in 2014.

16. Debt

Debt at December 31, 2016 and December 31, 2015 was as follows:

	Weighted Average Interest Rate	Maturity	December 31,	
			2016	2015
<i>(Dollars in millions)</i>				
Term Loan	4.57%	2019	\$232.5	\$262.5
Revolving Credit Facility	4.57%	2019	100.1	130.0
Construction and other loans	4.87%	2020	40.4	44.8
Senior Notes due 2019	7.88%	2019	298.1	297.5
Total debt			671.1	734.8
Less short term debt and current maturities of long-term debt			42.6	39.9
Less unamortized debt issuance costs			8.7	12.5
Long-term debt			\$619.8	\$682.4

Events Subsequent to December 31, 2016

As of December 31, 2016, Koppers Inc. had a \$300.0 million senior secured revolving credit facility and a \$232.5 million senior secured term loan (the "Prior Senior Secured Credit Facilities") and \$298.1 million principal value outstanding of senior notes due 2019 (the "2019 Notes").

In January 2017, Koppers Inc. completed a private placement offering of \$500.0 million 6.00 percent Senior Notes due 2025 (the "2025 Notes"). The 2025 Notes will pay interest semi-annually in arrears on February 15 and August 15 beginning on August 15, 2017 and will mature on February 15, 2025 unless earlier redeemed or repurchased. The 2025 Notes are unsecured and are guaranteed by Koppers Holdings Inc. and certain of Koppers Inc.'s domestic subsidiaries.

Koppers Inc. used the proceeds from the offering of the 2025 Notes to repay its outstanding term loan under the Prior Senior Secured Credit Facilities and to fund a tender offer to repurchase the 2019 Notes. The tender offer for the 2019 Notes was completed in early February 2017. Any 2019 Notes remaining outstanding following the tender offer were called for redemption and Koppers Inc. concurrently satisfied and discharged its remaining obligations under the indenture governing the 2019 Notes.

In February 2017, the Company entered into a new \$400.0 million senior secured revolving credit facility ("New Senior Secured Credit Facility") which replaced the Prior Senior Secured Credit Facilities. The maturity date of the New Senior Secured Credit Facility is February 2022. The interest rate on the New Senior Secured Credit Facility is variable and is based on LIBOR. Terms under the New Senior Secured Credit Facility are substantially consistent with the Prior Senior Secured Credit Facilities.

Prior Senior Secured Credit Facilities

The interest rates on the Prior Senior Secured Credit Facilities' borrowings were variable and based on LIBOR. The senior secured term loan had quarterly principal repayment obligations of 2.5 percent of the original principal amount borrowed, or \$7.5 million.

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

The Company entered into an amendment of the Prior Senior Secured Credit Facilities in April 2016 which reduced the borrowing capacity of its senior secured revolving credit facility to \$300.0 million and also amended the leverage ratio covenant requirements. In connection with the amendment, \$2.0 million of prior deferred financing costs were required to be written off through interest expense for the year ended December 31, 2016.

As of December 31, 2016, the Company had \$159.6 million of unused revolving credit availability for working capital purposes after restrictions from certain letter of credit commitments and other covenants. As of December 31, 2016, \$43.5 million of commitments were utilized by outstanding letters of credit.

Construction Loans

On November 18, 2013, the Company's 75-percent owned subsidiary, Koppers (Jiangsu) Carbon Chemical Company Limited ("KJCC") entered into two committed loan facility agreements for a combined commitment of RMB 265 million or approximately \$44 million. The third party bank provided facility has a commitment amount of RMB 198.8 million and the other committed facility of RMB 66.2 million is provided by the 25-percent non-controlling shareholder in KJCC. Borrowings under the third party bank facility are secured by a letter of credit issued by a bank under the Koppers Inc. revolving credit facility. The committed facilities were used to finance the costs related to the construction of the coal tar distillation plant in Pizhou, Jiangsu province in China.

KJCC will repay the construction loan portion of the third party commitment in six installments every six months starting in June 2018 with a final repayment on December 21, 2020, the maturity date of the loans.

Senior Notes due 2019

The Koppers Inc. 7.88 percent Senior Notes due 2019 (the "2019 Notes") were issued on December 1, 2009 at an offering price of 98.311 percent of face value, or \$294.9 million and had a principal amount at maturity of \$300.0 million. The 2019 Notes had an effective interest rate yield of 8.13 percent per annum. The 2019 Notes were fully and unconditionally guaranteed by Koppers Holdings and certain of our wholly-owned domestic subsidiaries, and, as of August 15, 2014, were secured equally and ratably with the obligations under our Prior Senior Secured Credit Facilities. All of the 2019 Notes had been redeemed by February 24, 2017.

Debt Maturities and Deferred Financing Costs

At December 31, 2016 the aggregate debt maturities for the next five years are as follows:

(Dollars in millions)

2017	\$ 42.6
2018	37.0
2019 ⁽¹⁾	575.3
2020	18.1
Total maturities	673.0
Future accretion on 2019 Notes	(1.9)
Total debt	\$671.1

(1) Consists primarily of the maturity of the 2019 Notes and Prior Senior Secured Credit Facilities. The \$500.0 million Senior Notes offered in January 2017 mature in 2025. The \$400.0 million New Senior Secured Credit Facility entered in February 2017 will mature in 2022.

Unamortized debt issuance costs (net of accumulated amortization of \$12.0 million and \$6.9 million at December 31, 2016 and 2015, respectively) were \$8.7 million and \$12.5 million at December 31, 2016 and 2015, respectively, and are included as a deduction from the carrying amount of long-term debt. These costs will be written off in the first quarter of 2017 due to the refinancing of our Prior Senior Secured Credit Facilities and our 2019 Notes.

17. Leases

Future minimum commitments for operating leases having non-cancelable lease terms in excess of one year are as follows:

<i>(Dollars in millions)</i>	
2017	\$ 43.9
2018	34.0
2019	17.3
2020	13.6
2021	11.7
Thereafter	46.8
Total	\$167.3

Operating lease expense for 2016, 2015 and 2014 was \$50.3 million, \$46.4 million and \$36.7 million, respectively.

18. Derivative Financial Instruments

The Company utilizes derivative instruments to manage exposures to risks that have been identified and measured and are capable of being controlled. The primary risks managed by the company by using derivative instruments are commodity price risk associated with copper and foreign currency exchange risk associated with a number of currencies, principally the U.S. dollar, the Canadian dollar, the New Zealand dollar, the Euro and British pounds. Swap contracts on copper are used to manage the price risk associated with forecasted purchases of materials used in the Company's manufacturing processes. Generally, the Company will not hedge cash flow exposures for durations longer than 30 months and the Company has hedged certain volumes of copper through December 2019. The Company enters into foreign currency forward contracts to manage foreign currency risk associated with the Company's receivable and payable balances. Generally, the Company enters into master netting arrangements with the counterparties and offsets net derivative positions with the same counterparties. Currently, the Company's agreements do not require cash collateral.

ASC Topic 815-10, "Derivatives and Hedging," requires companies to recognize all derivative instruments as either assets or liabilities at fair value in the balance sheet. Derivative instruments' fair value is determined using significant other observable inputs, or Level 2 in the fair value hierarchy. In accordance with ASC Topic 815-10, the Company designates certain of its commodity swaps as cash flow hedges of forecasted purchases of commodities. For derivative instruments that are designated and qualify as cash flow hedges, the effective portion of the gain or loss on the derivative is reported as a component of other comprehensive (loss) income and is reclassified into earnings in the same period or periods during which the hedged transaction affects earnings. Gains and losses on the derivative instruments representing either hedge ineffectiveness or hedge components excluded from the assessment of effectiveness are recognized in current earnings. The amount of hedge ineffectiveness charged to profit and loss is not material for any period presented.

For those commodity swaps which are not designated as cash flow hedges, the fair value of the commodity swap is recognized as an asset or liability in the consolidated balance sheet and the related gain or loss on the derivative is reported in current earnings.

As of December 31, 2016 and December 31, 2015, the Company had outstanding copper swap contracts of the following amounts:

	Units Outstanding (in Pounds)		Net Fair Value - Asset (Liability)	
	December 31, 2016	2015	December 31, 2016	2015
<i>(Amounts in millions)</i>				
Cash flow hedges	42.6	17.3	\$10.6	\$ (9.8)
Not designated as hedges	6.5	4.0	1.0	(0.7)
Total	49.1	21.3	\$11.6	\$(10.5)

As of December 31, 2016 and December 31, 2015, the fair value of the outstanding copper swap contracts is recorded in the balance sheet as follows:

	December 31,	
	2016	2015
<i>(Dollars in millions)</i>		
Other current assets	\$12.5	\$ 0.1
Accrued liabilities	(0.9)	(10.6)
Net asset (liability) on balance sheet	\$11.6	\$(10.5)
Accumulated other comprehensive gain (loss), net of tax	\$ 6.9	\$ (6.1)

In the next twelve months the Company estimates that \$4.1 million of unrealized gains, net of tax, related to commodity price hedging will be reclassified from other comprehensive income (loss) into earnings.

See the Consolidated Statement of Comprehensive Income and Consolidated Statement of Shareholders' Equity for amounts recorded in other comprehensive income and for amounts reclassified from accumulated other comprehensive income into net income for the periods specified below. For the twelve months ended December 31, 2016 and 2015, the following amounts were recognized in earnings related to copper swap contracts:

	Year Ended December 31,	
	2016	2015
<i>(Dollars in millions)</i>		
Gain (loss) from ineffectiveness of cash flow hedges	\$(0.4)	\$(0.1)
Gain (loss) from contracts not designated as hedges	1.7	(0.7)
Net	\$ 1.3	\$(0.8)

Forward contracts related to foreign currency are not designated as hedges and fair value changes in these contracts are immediately charged to earnings and are classified in cost of sales in the Condensed Consolidated Statement of Operations and Comprehensive Income (Loss). As of December 31, 2016, the Company has outstanding foreign currency forward contracts with a net fair value totaling \$1.0 million, consisting of a gross derivative liability of \$0.9 million (recognized in accrued liabilities in the balance sheet) and a gross derivative asset of \$1.9 million (recognized in other current assets in the balance sheet.) As of December 31, 2015, the Company has outstanding currency forward contracts with a net fair value totaling \$(1.9) million, recognized as a liability in accrued liabilities in the Consolidated Balance Sheet.

As of December 31, 2016 and December 31 2015, the net currency units outstanding were:

	December 31,	
	2016	2015
<i>(In millions)</i>		
British Pounds	GBP 7.3	GBP 5.9
New Zealand Dollars	NZD 15.5	NZD 22.5
United States Dollars	USD 24.7	USD 40.0
Canadian Dollars	CAD 0.3	CAD 0.0

19. Common Stock and Senior Convertible Preferred Stock

Changes in senior convertible preferred stock, common stock and treasury stock for the three years ended December 31, 2016 are as follows:

	<i>December 31,</i>		
	<i>2016</i>	<i>2015</i>	<i>2014</i>
<i>(Shares in thousands)</i>			
Senior Convertible Preferred Stock:			
Balance at beginning and end of year	0	0	0
Common Stock:			
Balance at beginning of year	22,016	21,938	21,722
Issued for employee stock plans	125	78	216
Balance at end of year	22,141	22,016	21,938
Treasury Stock:			
Balance at beginning of year	(1,459)	(1,443)	(1,390)
Shares repurchased	(17)	(16)	(53)
Balance at end of year	(1,476)	(1,459)	(1,443)

20. Commitments and Contingent Liabilities

The Company and its subsidiaries are involved in litigation and various proceedings relating to environmental laws and regulations and toxic tort, 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 the Company or its subsidiaries fail to prevail in any of these legal matters or should several of these legal matters be resolved against the Company or its subsidiaries in the same reporting period, these legal matters could, individually or in the aggregate, be material to the consolidated financial statements.

Legal Proceedings

Coal Tar Pitch Cases. Koppers Inc. is one of several defendants in lawsuits filed in two states in which the plaintiffs claim they suffered a variety of illnesses (including cancer) as a result of exposure to coal tar pitch sold by the defendants. There were 99 plaintiffs in 55 cases pending as of December 31, 2016 as compared to 110 plaintiffs in 59 cases pending as of December 31, 2015. As of December 31, 2016, there are a total of 54 cases pending in state court in Pennsylvania, and one case pending in state court in Tennessee.

The plaintiffs in all 55 pending cases seek to recover compensatory damages. Plaintiffs in 50 of those cases also seek to recover punitive damages. The plaintiffs in the 54 cases filed in Pennsylvania state court seek unspecified damages in excess of the court's minimum jurisdictional limit. The plaintiff in the Tennessee state court case seeks damages of \$15.0 million. The other defendants in these lawsuits vary from case to case and include companies such as Beazer East, Inc. ("Beazer East"), Honeywell International Inc., Graftech International Holdings, Dow Chemical Company, UCAR Carbon Company, Inc., and SGL Carbon Corporation. Discovery is proceeding in these cases. No trial dates have been set in any of these cases.

The Company has not provided a reserve for these lawsuits because, at this time, the Company 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 the Company's business, financial condition, cash flows and results of operations.

Gainesville. Koppers Inc. operated a utility pole treatment plant in Gainesville from December 29, 1988 until its closure in 2009. The property upon which the utility pole treatment plant was located was sold by Koppers Inc. to Beazer East in 2010.

In November 2010, a class action complaint was filed in the Circuit Court of the Eighth Judicial Circuit located in Alachua County, Florida by residential real property owners located in a neighborhood west of and immediately adjacent to the former

utility pole treatment plant in Gainesville. The complaint named Koppers Holdings Inc., Koppers Inc., Beazer East and several other parties as defendants. In a second amended complaint, plaintiffs allege that chemicals and contaminants from the Gainesville plant have contaminated real properties, have caused property damage (diminution in value) and have placed residents and owners of the putative class properties at an elevated risk of exposure to and injury from the chemicals at issue. The plaintiffs presently seek a class comprised of all current property owners of single family residential properties with a polygon-shaped area extending approximately two miles from the former plant area (which area encompasses approximately 7,000 owners).

This case was removed to the United States District court for the Northern District of Florida in December 2010. Koppers Holdings Inc. was dismissed from the case by the district court for lack of personal jurisdiction. Class factual discovery closed in May 2015 and expert witness discovery was completed in August 2015. Discovery on the merits is stayed until further order of the court. Motions were subsequently filed by each side to strike or limit the testimony of the other side's experts. Plaintiffs filed a motion for class certification on September 30, 2015 and the response of Koppers Inc. was filed on October 30, 2015. A hearing on plaintiffs' motions for class certification and the parties' motions relating to experts was held in January 2016 and the parties await a ruling from the court.

The Company has not provided a reserve for this matter because, at this time, it cannot reasonably determine the probability of a loss, and the amount of loss, if any, cannot be reasonably estimated. The timing of resolution of this case cannot be reasonably determined. Although the Company is vigorously defending this case, an unfavorable resolution of this matter may have a material adverse effect on the Company's business, financial condition, cash flows and results of operations.

Environmental and Other Litigation Matters

The Company and its subsidiaries 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. The Company's subsidiaries expect to incur substantial costs for ongoing compliance with such laws and regulations. The Company's subsidiaries 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. The Company accrues 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. The Company's subsidiaries have agreements with former owners of certain of their operating locations under which the former owners retained, assumed and/or agreed to indemnify such subsidiaries against certain environmental and other liabilities. The most significant of these agreements was entered into at Koppers Inc.'s formation on December 29, 1988 (the "Acquisition"). Under the related asset purchase agreement between Koppers Inc. and Beazer East, subject to certain limitations, Beazer East retained the responsibility for and agreed to indemnify Koppers Inc. against certain liabilities, damages, losses and costs, including, with certain limited exceptions, liabilities under and costs to comply with environmental laws to the extent attributable to acts or omissions occurring prior to the Acquisition and liabilities related to products sold by Beazer East prior to the Acquisition (the "Indemnity"). Beazer Limited, the parent company of Beazer East, unconditionally guaranteed Beazer East's performance of the Indemnity pursuant to a guarantee (the "Guarantee").

The Indemnity provides different mechanisms, subject to certain limitations, by which Beazer East is obligated to indemnify Koppers Inc. with regard to certain environmental, product and other liabilities and imposes certain conditions on Koppers Inc. before receiving such indemnification, including, in some cases, certain limitations regarding the time period as to which claims for indemnification can be brought. In July 2004, Koppers Inc. and Beazer East agreed to amend the environmental indemnification provisions of the December 29, 1988 asset purchase agreement to extend the indemnification period for pre-closing environmental liabilities through July 2019. As consideration for the amendment, Koppers Inc. paid Beazer East a total of \$7.0 million and agreed to share toxic tort litigation defense costs arising from any sites acquired from Beazer East. The July 2004 amendment did not change the provisions of the Indemnity with respect to indemnification for non-environmental claims, such as product liability claims, which claims may continue to be asserted after July 2019.

Qualified expenditures under the Indemnity are not subject to a monetary limit. Qualified expenditures under the Indemnity include (i) environmental cleanup liabilities required by third parties, such as investigation, remediation and closure costs,

relating to pre-December 29, 1988 (“Pre-Closing”) acts or omissions of Beazer East or its predecessors; (ii) environmental claims by third parties for personal injuries, property damages and natural resources damages relating to Pre-Closing acts or omissions of Beazer East or its predecessors; (iii) punitive damages for the acts or omissions of Beazer East and its predecessors without regard to the date of the alleged conduct and (iv) product liability claims for products sold by Beazer East or its predecessors without regard to the date of the alleged conduct. If the third party claims described in sections (i) and (ii) above are not made by July 2019, Beazer East will not be required to pay the costs arising from such claims under the Indemnity. However, with respect to any such claims which are made by July 2019, Beazer East will continue to be responsible for such claims under the Indemnity beyond July 2019. The Indemnity provides for the resolution of issues between Koppers Inc. and Beazer East by an arbitrator on an expedited basis upon the request of either party. The arbitrator could be asked, among other things, to make a determination regarding the allocation of environmental responsibilities between Koppers Inc. and Beazer East. Arbitration decisions under the Indemnity are final and binding on the parties.

Contamination has been identified at most manufacturing and other sites of the Company’s 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 the Company against the liabilities referred to above, including Beazer East, have performed their obligations in all material respects. The Company believes that, for the last three years ended December 31, 2016, amounts paid by Beazer East as a result of its environmental remediation obligations under the Indemnity have averaged, in total, approximately \$10 million per year. Periodically, issues have arisen between Koppers Inc. and Beazer East and/or other indemnitors that have been resolved without arbitration. Koppers Inc. and Beazer East engage in discussions from time to time that involve, among other things, the allocation of environmental costs related to certain operating and closed facilities.

If for any reason (including disputed coverage or financial incapability) one or more of such parties fail to perform their obligations and the Company or its subsidiaries are held liable for or otherwise required to pay all or part of such liabilities without reimbursement, the imposition of such liabilities on the Company or its subsidiaries could have a material adverse effect on its business, financial condition, cash flows and results of operations. Furthermore, the Company could be required to record a contingent liability on its balance sheet with respect to such matters, which could result in a negative impact to the Company’s 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 Environmental Protection Agency (“EPA”) information request and has executed a PRP agreement which outlines the process to develop an allocation of past and future costs among more than 80 parties to the site. Koppers Inc. believes it is a *de minimus* contributor at the site. Additionally, a separate natural resources damages assessment (“NRDA”) is being conducted by a local trustee group. The NRDA is intended to identify further information necessary to estimate liabilities for settlements of national resource damages (“NRD”) claims. Koppers Inc. may also incur liabilities under the NRD process and has entered into a separate process to develop an allocation of NRDA costs. In January 2017, Koppers Inc. was served in an additional NRD action by a separate party and the Company is currently evaluating this new lawsuit.

The EPA issued its Record of Decision (“ROD”) in January 2017 for the Portland Harbor CERCLA site. The selected remedy includes a combination of sediment removal, capping, enhanced and monitored natural recovery and riverbank improvements. The ROD does not determine who is responsible for remediation costs. The net present value and undiscounted costs of the selected remedy as estimated in the ROD are approximately \$1.1 billion and \$1.7 billion, respectively. Responsibility for implementing and funding that work will be decided in the separate allocation process.

In September 2009, Koppers Inc. received a general notice letter notifying it that it may be a PRP at the Newark Bay CERCLA site. In January 2010, Koppers Inc. submitted a response to the general notice letter asserting that Koppers Inc. is a *de minimis* party at this site.

The Company has accrued the estimated costs of participating in the PRP group at the Portland Harbor and Newark Bay CERCLA sites and estimated *de minimis* settlement amounts at the sites totaling \$2.0 million at December 31, 2016. 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 the Company's business, financial condition, cash flows and results of operations.

In connection with Koppers Inc.'s acquisition of certain entities from Osmose, there are two plant sites in the United States where the Company has recorded an environmental remediation liability for soil and groundwater contamination which occurred prior to the acquisition. As of December 31, 2016, the Company's estimated environmental remediation liability for these acquired sites totals \$4.9 million.

Foreign Environmental Matters. In connection with Koppers Inc.'s acquisition of certain entities from Osmose, there are three plant sites located in the United Kingdom and Australia where the Company has recorded an environmental remediation liability for soil and groundwater contamination which occurred prior to the acquisition. As of December 31, 2016, the Company's estimated environmental remediation liability for these acquired sites totals \$3.5 million. Osmose Holdings, Inc. has provided an indemnity of up to \$5.0 million for certain environmental response costs incurred prior to August 15, 2017 (the "Osmose Indemnity"). In June 2016, the Company recorded an increase in the receivable under the Osmose Indemnity of \$2.9 million related to expected indemnity recoveries associated with the acquired United Kingdom sites. As of December 31, 2016, the receivable with respect to the Osmose Indemnity totaled \$1.9 million.

In December 2011, the Company ceased manufacturing operations at its Continental Carbon facility located in Kurnell, Australia. The Company has accrued its expected cost of site remediation resulting from the closure of \$1.5 million as of December 31, 2016.

Environmental Reserves Rollforward. The following table reflects changes in the accrued liability for environmental matters, of which \$5.2 million and \$7.0 million are classified as current liabilities at December 31, 2016 and 2015, respectively:

	December 31,	
	2016	2015
<i>(Dollars in millions)</i>		
Balance at beginning of year	\$19.8	\$ 7.8
Expense	1.5	1.2
Reversal of reserves	(1.0)	(0.5)
Cash expenditures	(6.3)	(1.4)
Acquisition of Osmose Entities	0.0	13.7
Divestitures	(0.3)	0.0
Currency translation	(0.8)	(1.0)
Balance at end of period	\$12.9	\$19.8

21. Selected Quarterly Financial Data (Unaudited)

The following is a summary of the quarterly results of operations for the years ended December 31, 2016 and 2015:

	Year Ended December 31, 2016				
	1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter	Fiscal Year
<i>(Dollars in millions, except per share amounts)</i>					
Statement of operations data:					
Net sales	\$346.8	\$385.1	\$371.1	\$313.2	\$ 1,416.2
Operating profit	7.8	32.0	27.7	18.9	86.4
Income (loss) from continuing operations	(2.4)	11.3	12.0	6.2	27.1
Net income (loss)	(1.8)	11.3	11.9	6.3	27.7
Net income (loss) attributable to Koppers	(1.3)	12.1	12.1	6.4	29.3
Common stock data:					
Earnings (loss) per common share attributable to Koppers common shareholders: ^(b)					
Basic –					
Continuing operations	\$ (0.09)	\$ 0.58	\$ 0.59	\$ 0.31	\$ 1.39
Discontinued operations	0.03	0.00	0.00	0.00	0.03
Earnings (loss) per basic common share	\$ (0.06)	\$ 0.58	\$ 0.59	\$ 0.31	\$ 1.42
Diluted –					
Continuing operations	\$ (0.09)	\$ 0.57	\$ 0.58	\$ 0.30	\$ 1.36
Discontinued operations	0.03	0.00	0.00	0.00	0.03
Earnings (loss) per diluted common share	\$ (0.06)	\$ 0.57	\$ 0.58	\$ 0.30	\$ 1.39
Price range of common stock:					
High	\$23.43	\$31.35	\$33.71	\$42.70	\$ 42.70
Low	13.58	21.38	28.54	31.28	13.58

	Year Ended December 31, 2015				
	1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter	Fiscal Year
<i>(Dollars in millions, except per share amounts)</i>					
Statement of operations data:					
Net sales	\$397.8	\$431.6	\$433.8	\$363.7	\$1,626.90
Operating (loss) profit ^(a)	8.0	26.0	27.0	(90.6)	(29.6)
(Loss) income from continuing operations	(4.2)	7.9	9.2	(88.8)	(75.9)
Net (loss) income	(4.2)	7.9	9.1	(88.8)	(76.0)
Net (loss) income attributable to Koppers	(3.4)	9.0	10.1	(87.7)	(72.0)
Common stock data:					
(Loss) earnings per common share attributable to Koppers common shareholders: ^(b)					
Basic –					
Continuing operations	\$ (0.16)	\$ 0.44	\$ 0.49	\$ (4.27)	\$ (3.50)
Discontinued operations	0.00	0.00	(0.01)	0.00	(0.01)
(Loss) earnings per basic common share	\$ (0.16)	\$ 0.44	\$ 0.48	\$ (4.27)	\$ (3.51)
Diluted –					
Continuing operations	\$ (0.16)	\$ 0.44	\$ 0.49	\$ (4.27)	\$ (3.50)
Discontinued operations	0.00	0.00	(0.01)	0.00	(0.01)
(Loss) earnings per diluted common share	\$ (0.16)	\$ 0.44	\$ 0.48	\$ (4.27)	\$ (3.51)
Price range of common stock:					
High	\$26.44	\$27.40	\$24.86	\$23.63	\$ 27.40
Low	15.78	19.26	17.88	17.34	15.78

(a) In the fourth quarter of 2015, the Company recorded asset impairment, asset retirement and severance charges totaling \$35.1 million primarily related to the decision to discontinue coal tar distillation activities at CMC plants located in the United Kingdom and the United States. In the fourth quarter of 2015, the Company also recorded goodwill impairment charges of \$67.2 million related to our CMC business.

(b) The cumulative sum of quarterly basic and diluted net income per share amounts may not equal total basic and diluted net income per share amounts for the year due to differences in weighted average and equivalent shares outstanding for each of the periods presented.

22. Subsidiary Guarantor Information for Koppers Inc. 2025 Notes and Shelf Registration

2025 Notes

On January 25, 2017, Koppers Inc. issued \$500.0 million principal value of Senior Notes due 2025 (the "2025 Notes"). Koppers Holdings and each of Koppers Inc.'s 100 percent-owned material domestic subsidiaries other than Koppers Assurance, Inc. fully and unconditionally guarantee the payment of principal and interest on the 2025 Notes. The domestic guarantor subsidiaries include Koppers World-Wide Ventures Corporation, Koppers Delaware, Inc., Koppers Concrete Products, Inc., Concrete Partners, Inc., Koppers Performance Chemicals Inc., Koppers Railroad Structures Inc., Koppers NZ, LLC, Koppers-Nevada Limited Liability Company, Wood Protection LP, Wood Protection Management LLC and Koppers Asia LLC. Non-guarantor subsidiaries are owned directly or indirectly by Koppers Inc. or are owned directly or indirectly by Koppers World-Wide Ventures Corporation.

The guarantee of a guarantor subsidiary will be automatically and unconditionally released and discharged in the event of:

- any sale of the capital stock or substantially all of the assets of the guarantor subsidiary;
- the designation of the guarantor subsidiary as an unrestricted subsidiary in accordance with the indenture governing the 2025 Notes; and
- the legal defeasance, covenant defeasance or satisfaction and discharge of the indenture governing the 2025 Notes.

Shelf Registration

Under a registration statement on Form S-3, Koppers Holdings may sell a combination of securities, including common stock, debt securities, preferred stock, depository shares, warrants, purchase contracts and units, from time to time in one or more offerings. In addition, Koppers Inc. may sell debt securities from time to time under the registration statement. Debt securities may be fully and unconditionally guaranteed, on a joint and several basis, by Koppers Holdings, Koppers Inc. and/or each of Koppers Inc.'s 100 percent-owned material domestic subsidiaries other than Koppers Assurance, Inc. The domestic guarantor subsidiaries are the same as those which guarantee the 2025 Notes. Non-guarantor subsidiaries are owned directly or indirectly by Koppers Inc. or are owned directly or indirectly by Koppers World-Wide Ventures Corporation. The guarantor subsidiaries that issue guarantees, if any, will be determined when a debt offering actually occurs under the registration statement and accordingly, the condensed consolidating financial information for subsidiary guarantors will be revised to identify the subsidiaries that actually provided guarantees. These guarantees will be governed pursuant to a supplement indenture which the trustee and the issuing company would enter into concurrent with the debt offering.

Reliance of Koppers Holdings on Earnings of Koppers Inc. and its Subsidiaries

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. As with the Prior Senior Secured Credit Facilities, the New Senior Secured Credit Facility prohibits Koppers Inc. from making dividend payments to Koppers Holdings unless (1) such dividend payments are permitted by the indenture governing Koppers Inc.'s 2025 Notes, (2) no event of default or potential default has occurred or is continuing under the credit agreement, and (3) we are in pro forma compliance with our fixed charge coverage ratio covenant after giving effect to such dividend. The indenture governing the 2025 Notes restrict Koppers Inc.'s ability to finance our payment of dividends if (1) a default has occurred or would result from such financing, (2) Koppers Inc., or a restricted subsidiary of Koppers Inc. which is not a guarantor under the applicable indenture is not able to incur additional indebtedness (as defined in the applicable indenture), and (3) the sum of all restricted payments (as defined in the applicable indenture) have exceeded the permitted amount (which we refer to as the "basket") at such point in time.

The Koppers Inc. New Senior Secured Credit Facility agreement provides for a revolving credit facility of up to \$400.0 million at variable rates. Borrowings under the revolving credit facility are secured by a first priority lien on substantially all of the assets of Koppers Inc. and its material domestic subsidiaries. The revolving credit facility agreement contains certain covenants for Koppers Inc. and its restricted subsidiaries that limit capital expenditures, additional indebtedness, liens, dividends, investments or acquisitions. In addition, such covenants give rise to events of default upon the failure by Koppers Inc. and its restricted subsidiaries to meet certain financial ratios.

As of December 31, 2016, Koppers Inc.'s assets exceeded its liabilities by \$29.8 million. There are no net assets unavailable for distribution to Koppers Holdings Inc. by Koppers Inc. as of December 31, 2016. Cash dividends paid to Koppers Holdings Inc. by its subsidiaries totaled \$1.2 million, \$6.5 million and \$23.6 million for the years ended December 31, 2016, 2015 and 2014, respectively.

Condensed Consolidating Statement of Comprehensive Income (Loss) For the Year Ended December 31, 2016

	Parent	Koppers Inc.	Domestic Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Consolidating Adjustments	Consolidated
<i>(Dollars in millions)</i>						
Net sales	\$ 0.0	\$660.7	\$350.6	\$504.7	\$ (99.8)	\$1,416.2
Cost of sales including depreciation and amortization	0.0	637.4	252.3	412.4	(101.2)	1,200.9
Gain on sale of business	0.0	0.0	0.0	(2.1)	0.0	(2.1)
Selling, general and administrative	1.9	47.7	38.2	43.2	0.0	131.0
Operating (loss) profit	(1.9)	(24.4)	60.1	51.2	1.4	86.4
Other income (loss)	0.0	0.3	4.1	0.3	(1.8)	2.9
Equity income of subsidiaries	30.6	79.1	35.9	0.0	(145.6)	0.0
Interest (income) expense	0.0	47.6	0.0	5.0	(1.8)	50.8
Income taxes	(0.6)	(23.2)	22.2	13.0	0.0	11.4
Income from continuing operations	29.3	30.6	77.9	33.5	(144.2)	27.1
Discontinued operations	0.0	0.0	0.0	0.6	0.0	0.6
Noncontrolling interests	0.0	0.0	0.0	(1.6)	0.0	(1.6)
Net income attributable to Koppers	\$29.3	\$ 30.6	\$ 77.9	\$ 35.7	\$(144.2)	\$ 29.3
Comprehensive income (loss) attributable to Koppers	\$40.5	\$ 41.3	\$ 85.0	\$ 29.6	\$(155.9)	\$ 40.5

Condensed Consolidating Statement of Comprehensive (Loss) Income For the Year Ended December 31, 2015

	Parent	Koppers Inc.	Domestic Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Consolidating Adjustments	Consolidated
<i>(Dollars in millions)</i>						
Net sales	\$ 0.0	\$791.1	\$335.6	\$600.9	\$(100.7)	\$1,626.9
Cost of sales including depreciation and amortization	0.0	771.7	233.2	562.4	(99.4)	1,467.9
Gain on sale of business	0.0	(3.2)	0.0	0.0	0.0	(3.2)
Goodwill impairment	0.0	43.1	24.1	0.0	0.0	67.2
Selling, general and administrative	1.9	41.3	37.8	43.6	0.0	124.6
Operating (loss) profit	(1.9)	(61.8)	40.5	(5.1)	(1.3)	(29.6)
Other income (loss)	0.0	0.5	4.1	(2.4)	(2.0)	0.2
Equity income of subsidiaries	(70.8)	0.9	(27.9)	0.0	97.8	0.0
Interest expense	0.0	45.8	0.0	6.9	(2.0)	50.7
Income taxes	(0.7)	(35.4)	15.8	16.4	(0.3)	(4.2)
(Loss) income from continuing operations	(72.0)	(70.8)	0.9	(30.8)	96.8	(75.9)
Discontinued operations	0.0	0.0	0.0	(0.1)	0.0	(0.1)
Noncontrolling interests	0.0	0.0	0.0	(4.0)	0.0	(4.0)
Net income attributable to Koppers	\$(72.0)	\$ (70.8)	\$ 0.9	\$ (26.9)	\$ 96.8	\$ (72.0)
Comprehensive income (loss) attributable to Koppers	\$(91.5)	\$ (90.3)	\$ (18.1)	\$ (41.8)	\$ 150.2	\$ (91.5)

Condensed Consolidating Statement of Comprehensive (Loss) Income For the Year Ended December 31, 2014

	Parent	Koppers Inc.	Domestic Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Consolidating Adjustments	Consolidated
<i>(Dollars in millions)</i>						
Net sales	\$ 0.0	\$795.9	\$143.0	\$683.5	\$ (67.4)	\$1,555.0
Cost of sales including depreciation and amortization	0.0	724.5	108.8	639.0	(66.7)	1,405.6
Selling, general and administrative	2.2	59.2	17.4	37.4	0.0	116.2
Operating (loss) profit	(2.2)	12.2	16.8	7.1	(0.7)	33.2
Other income (loss)	0.0	0.2	4.7	(0.6)	(4.3)	0.0
Equity income of subsidiaries	(31.0)	(15.9)	(6.4)	0.0	53.3	0.0
Interest expense	0.0	36.5	0.0	6.9	(4.3)	39.1
Income taxes	(0.8)	(9.0)	30.5	13.4	0.0	34.1
Income from continuing operations	(32.4)	(31.0)	(15.4)	(13.8)	52.6	(40.0)
Discontinued operations	0.0	0.0	(0.6)	1.2	0.0	0.6
Noncontrolling interests	0.0	0.0	0.0	(7.0)	0.0	(7.0)
Net income attributable to Koppers	\$(32.4)	\$(31.0)	\$(16.0)	\$(5.6)	\$ 52.6	\$(32.4)
Comprehensive income (loss) attributable to Koppers	\$(82.5)	\$(81.1)	\$(54.4)	\$(35.1)	\$170.6	\$(82.5)

Condensed Consolidating Balance Sheet December 31, 2016

	Parent	Koppers Inc.	Domestic Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Consolidating Adjustments	Consolidated
<i>(Dollars in millions)</i>						
ASSETS						
Cash and cash equivalents	\$ 0.0	\$ 0.0	\$ 0.0	\$ 20.8	\$ 0.0	\$ 20.8
Receivables, net	0.0	50.8	25.4	64.4	0.0	140.6
Affiliated receivables	0.7	34.8	32.2	15.4	(83.1)	0.0
Inventories, net	0.0	106.6	23.9	99.0	(0.8)	228.7
Other current assets	0.0	5.1	13.4	29.2	0.3	48.0
Total current assets	0.7	197.3	94.9	228.8	(83.6)	438.1
Equity investments	29.9	697.4	195.4	0.0	(922.7)	0.0
Property, plant and equipment, net	0.0	126.7	39.6	114.5	0.0	280.8
Goodwill	0.0	0.8	153.1	32.5	0.0	186.4
Intangible assets, net	0.0	7.9	107.1	26.9	0.0	141.9
Deferred tax assets	0.0	29.7	(8.4)	5.8	0.0	27.1
Affiliated loan receivables	0.0	36.9	205.3	21.9	(264.1)	0.0
Other assets	0.0	5.5	6.1	1.6	0.0	13.2
Total assets	\$30.6	\$1,102.2	\$793.1	\$432.0	\$(1,270.4)	\$1,087.5
LIABILITIES AND EQUITY						
Accounts payable	\$ 0.2	\$ 69.6	\$ 38.9	\$ 35.5	\$ 0.0	\$ 144.2
Affiliated payables	0.0	46.0	20.7	24.5	(91.2)	0.0
Accrued liabilities	0.0	49.5	18.9	37.9	0.0	106.3
Current maturities of long-term debt	0.0	30.2	0.0	12.4	0.0	42.6
Total current liabilities	0.2	195.3	78.5	110.3	(91.2)	293.1
Long-term debt	0.0	592.0	0.0	27.8	0.0	619.8
Affiliated debt	0.0	209.9	23.5	30.7	(264.1)	0.0
Other long-term liabilities	0.0	75.0	11.6	53.4	0.0	140.0
Total liabilities	0.2	1,072.2	113.6	222.2	(355.3)	1,052.9
Koppers shareholders' equity	30.4	30.0	679.5	205.6	(915.1)	30.4
Noncontrolling interests	0.0	0.0	0.0	4.2	0.0	4.2
Total liabilities and equity	\$30.6	\$1,102.2	\$793.1	\$432.0	\$(1,270.4)	\$1,087.5

Condensed Consolidating Balance Sheet December 31, 2015

	Parent	Koppers Inc.	Domestic Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Consolidating Adjustments	Consolidated
<i>(Dollars in millions)</i>						
ASSETS						
Cash and cash equivalents	\$ 0.0	\$ 0.1	\$ 0.7	\$ 21.0	\$ 0.0	\$ 21.8
Receivables, net	0.0	60.4	23.7	75.5	0.0	159.6
Affiliated receivables	0.0	14.3	15.2	4.4	(33.9)	0.0
Inventories, net	0.0	111.9	24.9	91.8	(2.2)	226.4
Deferred tax assets	0.0	0.0	0.0	0.0	0.0	0.0
Other current assets	0.0	3.7	1.9	30.9	0.0	36.5
Total current assets	0.0	190.4	66.4	223.6	(36.1)	444.3
Equity investments	(19.0)	703.2	165.7	0.0	(849.9)	0.0
Property, plant and equipment, net	0.0	117.5	41.2	119.1	0.0	277.8
Goodwill	0.0	0.8	153.1	32.7	0.0	186.6
Intangible assets, net	0.0	8.7	117.6	29.8	0.0	156.1
Deferred tax assets	0.0	29.8	0.8	5.7	0.3	36.6
Affiliated loan receivables	0.7	29.6	222.6	31.7	(284.6)	0.0
Other assets	(0.2)	4.5	4.9	2.3	0.0	11.5
Total assets	\$(18.5)	\$1,084.5	\$772.3	\$444.9	\$(1,170.3)	\$1,112.9
LIABILITIES AND EQUITY						
Accounts payable	\$ 0.0	\$ 73.8	\$ 18.9	\$ 48.1	\$ 0.0	\$ 140.8
Affiliated payables	0.0	16.6	10.9	15.3	(42.8)	0.0
Accrued liabilities	0.0	35.6	23.4	40.8	0.0	99.8
Current maturities of long-term debt	0.0	30.2	0.0	9.7	0.0	39.9
Total current liabilities	0.0	156.2	53.2	113.9	(42.8)	280.5
Long-term debt	0.0	647.5	0.0	34.9	0.0	682.4
Affiliated debt	0.0	217.5	29.5	36.9	(283.9)	0.0
Other long-term liabilities	0.0	81.6	13.2	67.6	0.0	162.4
Total liabilities	0.0	1,102.8	95.9	253.3	(326.7)	1,125.3
Koppers shareholders' equity	(18.5)	(18.3)	676.4	185.5	(843.6)	(18.5)
Noncontrolling interests	0.0	0.0	0.0	6.1	0.0	6.1
Total liabilities and equity	\$(18.5)	\$1,084.5	\$772.3	\$444.9	\$(1,170.3)	\$1,112.9

Condensed Consolidating Statement of Cash Flows For the Year Ended December 31, 2016

	Parent	Koppers Inc.	Domestic Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Consolidating Adjustments	Consolidated
<i>(Dollars in millions)</i>						
Cash provided by (used in) operating activities	\$(0.1)	\$106.6	\$ 77.0	\$29.1	\$(93.1)	\$119.5
Cash provided by (used in) investing activities:						
Capital expenditures and acquisitions	0.0	(30.1)	(7.1)	(12.7)	0.0	(49.9)
Repayments (loans to) from affiliates	0.0	(6.9)	16.9	9.8	(19.8)	0.0
Net cash proceeds (payments) from divestitures and asset sales	0.0	00.0	0.9	(4.7)	00.0	(3.8)
Net cash (used in) provided by investing activities	0.0	(37.0)	10.7	(7.6)	(19.8)	(53.7)
Cash provided by (used in) financing activities:						
(Repayments) borrowings of long-term debt	0.0	(59.9)	0.1	(1.6)	0.0	(61.4)
Borrowings (repayments) of affiliated debt	0.0	(7.2)	(6.5)	(6.1)	19.8	00.0
Deferred financing costs	0.0	(1.4)	0.0	0.0	0.0	(1.4)
Dividends paid	(0.0)	(1.2)	(82.0)	(9.9)	93.1	(0.0)
Stock repurchased	0.1	0.0	0.0	0.0	0.0	0.1
Net cash used in financing activities	0.1	(69.7)	(88.4)	(17.6)	112.9	(62.7)
Effect of exchange rates on cash	0.0	0.0	0.0	(4.1)	0.0	(4.1)
Net increase (decrease) in cash and cash equivalents	0.0	(0.1)	(0.7)	(0.2)	0.0	(1.0)
Cash and cash equivalents at beginning of year	0.0	0.1	0.7	21.0	0.0	21.8
Cash and cash equivalents at end of period	\$ 0.0	\$ 0.0	\$ 0.0	\$20.8	\$ 0.0	\$ 20.8

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Condensed Consolidating Statement of Cash Flows For the Year Ended December 31, 2015

	Parent	Koppers Inc.	Domestic Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Consolidating Adjustments	Consolidated
<i>(Dollars in millions)</i>						
Cash provided by (used in) operating activities	\$ 5.4	\$ 63.0	\$ 55.9	\$60.3	\$(56.9)	\$127.7
Cash provided by (used in) investing activities:						
Capital expenditures and acquisitions	0.0	(41.2)	(5.3)	(9.5)	0.0	(56.0)
(Loans to) repayments from affiliates	0.0	6.3	(5.1)	9.2	(10.4)	0.0
Net cash proceeds from divestitures and asset sales	0.0	12.3	2.1	0.5	0.0	14.9
Net cash (used in) provided by investing activities	0.0	(22.6)	(8.3)	0.2	(10.4)	(41.1)
Cash provided by (used in) financing activities:						
Borrowings (repayments) of long-term debt	0.0	(104.2)	0.1	(9.3)	0.0	(113.4)
Borrowings (repayments) of affiliated debt	0.0	71.0	(6.4)	(75.0)	10.4	0.0
Deferred financing costs	0.0	(1.0)	0.0	0.0	0.0	(1.0)
Dividends paid	(5.1)	(6.2)	(40.8)	(13.5)	56.9	(8.7)
Stock (repurchased) issued	(0.3)	0.0	0.0	0.0	0.0	(0.3)
Net cash (used in) provided by financing activities	(5.4)	(40.4)	(47.1)	(97.8)	67.3	(123.4)
Effect of exchange rates on cash	0.0	0.1	(0.7)	8.1	0.0	7.5
Net (decrease) increase in cash and cash equivalents	0.0	0.1	(0.2)	(29.2)	0.0	(29.3)
Cash and cash equivalents at beginning of year	0.0	0.0	0.9	50.2	0.0	51.1
Cash and cash equivalents at end of period	\$ 0.0	\$ 0.1	\$ 0.7	\$21.0	\$ 0.0	\$ 21.8

Condensed Consolidating Statement of Cash Flows For the Year Ended December 31, 2014

	Parent	Koppers Inc.	Domestic Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Consolidating Adjustments	Consolidated
<i>(Dollars in millions)</i>						
Cash provided by (used in) operating activities	\$ 21.8	\$ 23.8	\$ 33.8	\$ 10.4	\$(54.3)	\$35.5
Cash provided by (used in) investing activities:						
Capital expenditures and acquisitions	0.0	(518.5)	(16.7)	(59.9)	14.8	(580.3)
(Loans to) repayments from affiliates	0.0	(32.2)	(38.9)	0.0	71.1	0.0
Net cash proceeds (payments) from divestitures and asset sales	0.0	0.1	0.1	0.1	0.0	0.3
Net cash used in investing activities	0.0	(550.6)	(55.5)	(59.8)	85.9	(580.0)
Cash provided by (used in) financing activities:						
Repayments of long-term debt	0.0	497.0	0.0	50.5	0.0	547.5
Borrowings of affiliated long- term debt	0.0	35.8	27.6	7.7	(71.1)	0.0
Deferred financing costs	0.0	(11.1)	0.0	0.0	0.0	(11.1)
Other financing receipts	0.0	0.0	0.0	1.4	0.0	1.4
Dividends paid	(20.5)	(23.6)	(6.1)	(24.5)	54.3	(20.4)
Stock issued and repurchased	(1.3)	0.0	0.0	14.8	(14.8)	(1.3)
Net cash provided by (used in) financing activities	(21.8)	498.1	21.5	49.9	(31.6)	516.1
Effect of exchange rates on cash	0.0	(1.2)	1.0	(2.5)	0.0	(2.7)
Net increase in cash and cash equivalents	0.0	(29.9)	0.8	(2.0)	0.0	(31.1)
Cash and cash equivalents at beginning of year	0.0	29.9	0.1	52.2	0.0	82.2
Cash and cash equivalents at end of period	\$ 0.0	\$ 0.0	\$ 0.9	\$50.2	\$ 0.0	\$51.1

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

(a) Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our chief executive officer and chief financial officer, 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, our 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.

(b) Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during our most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

See Management Report on page 46 for management's annual report on internal control over financial reporting. See Report of Independent Registered Public Accounting Firm on page 48 for KPMG LLP's attestation report on internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by Item 401 of Regulation S-K with respect to directors is contained in our definitive Proxy Statement for our 2017 Annual Meeting of Shareholders (the "Proxy Statement") which we will file with the Securities and Exchange Commission, pursuant to Regulation 14A, not later than 120 days after the end of the Company's fiscal year under the caption "Proxy Item 1 – Proposal for Election of Directors", and is incorporated herein by reference.

The information required by this item concerning our executive officers is incorporated by reference herein from Part I of this report under "Executive Officers of the Company".

The information required by Item 405 of Regulation S-K is included in the Proxy Statement under the caption "General Matters – Section 16(a) Beneficial Ownership Reporting Compliance" and is incorporated herein by reference.

The information required by Item 407(d)(4) and Item 407(d)(5) of Regulation S-K is included in the Proxy Statement under the caption "Board Meetings and Committees" and is incorporated herein by reference.

The audit committee and our board have approved and adopted a Code of Business Conduct and Ethics for all directors, officers and employees and a Code of Ethics Applicable to Senior Officers, copies of which are available on our website at www.koppers.com and upon written request by our shareholders at no cost. Requests should be sent to Koppers Holdings Inc., Attention: Corporate Secretary's Office, 436 Seventh Avenue, Suite 1550, Pittsburgh, Pennsylvania 15219. We will describe the date and nature of any amendment to our Code of Business Conduct and Ethics or Code of Ethics Applicable to Senior Officers or any waiver (implicit or explicit) from a provision of our Code of Business Conduct and Ethics or Code of Ethics Applicable to Senior Officers within four business days following the date of the amendment or waiver on our Internet website at www.koppers.com. We do not intend to incorporate the contents of our website into this report.

ITEM 11. EXECUTIVE COMPENSATION

The information required by Item 11 is contained in the Proxy Statement under the captions "Executive Compensation" and "Committee Reports to Shareholders – Management Development and Compensation Committee Report" and is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by Item 12 is contained in the Proxy Statement under the captions "Common Stock Ownership" and "Equity Compensation Plans" and is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by Item 13 is contained in the Proxy Statement under the captions "Transactions with Related Persons" and "Corporate Governance Matters – Director Independence" and is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by Item 14 is contained in the Proxy Statement under the caption "Auditors" and is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) 1. Financial Statements

Financial statements filed as part of this report are included in “Item 8 – Financial Statements and Supplementary Data” as listed on the index on page 45.

(a) 2. Financial Statement Schedules

“Schedule II – Valuation and Qualifying Accounts and Reserves is included on page 102. All other schedules are omitted because they are not applicable or the required information is contained in the applicable financial statements or notes thereto.

(a) 3. Exhibits

ITEM 16. FORM 10-K SUMMARY

None.

EXHIBIT INDEX

<i>Exhibit No.</i>	<i>Exhibit</i>
1.1	Purchase Agreement, dated as of January 19, 2017, among Koppers Inc., Koppers Holdings Inc., the other guarantors party thereto, and Wells Fargo Securities, LLC, as representative of the initial purchasers named therein (incorporated by reference to exhibit 1.1 to the Company's Current Report on Form 8-K filed on January 20, 2017) (Commission File No. 001-32737).
2.1	Joint Venture Contract for the establishment of Koppers (Jiangsu) Carbon Chemical Company Limited between Koppers International B.V. and Yizhou Group Company Limited dated September 10, 2012 (incorporated by reference to exhibit 2.1 to the Company's Quarterly Report on Form 10-Q filed on November 9, 2012) (Commission File No. 001-32737).
2.2	Asset Purchase Agreement by and between Tolko Industries Ltd., Koppers Ashcroft Inc. and Koppers Inc., dated as of January 7, 2014 (incorporated by reference to exhibit 2.2 to the Company's Annual Report on Form 10-K for the year ended December 31, 2013 filed on March 3, 2014) (Commission File No. 001-32737).
2.3	Stock Purchase Agreement by and among Osmose Holdings, Inc., Osmose, Inc., Osmose Railroad Services, Inc., and Koppers Inc., dated as of April 13, 2014 (incorporated by reference to exhibit 2.3 to the Company's Quarterly Report on Form 10-Q filed on August 7, 2014) (Commission File No. 001-32737).
2.4	Amendment No. 1 to Stock Purchase Agreement, dated as of August 15, 2014, by and among Koppers Inc., Osmose Holdings, Inc., Osmose, Inc. and Osmose Railroad Services, Inc. (incorporated by reference to exhibit 2.4 to the Company's Quarterly Report on Form 10-Q filed on November 10, 2014) (Commission File No. 001-32737).
3.1	Amended and Restated Articles of Incorporation of the Company, as amended on May 7, 2015 (incorporated by reference to exhibit 3.1 to the Company's Quarterly Report on Form 10-Q filed on August 6, 2015) (Commission File No. 001-32737).
3.2	Amended and Restated Bylaws of the Company, as amended on August 6, 2014 (incorporated by reference to exhibit 3.2 to the Company's Quarterly Report on Form 10-Q filed on August 7, 2014) (Commission File No. 001-32737).
4.1	Indenture, by and among Koppers Inc., Koppers Holdings Inc., the Subsidiary Guarantors party thereto and Wells Fargo Bank, National Association, dated as of December 1, 2009 (incorporated by reference to exhibit 4.1 of the Company's Annual Report on Form 10-K for the year ended December 31, 2009 filed on February 19, 2010) (Commission File No. 001-32737).
4.3	Exchange and Registration Rights Agreement by and among Koppers Inc., Koppers Holdings and the other guarantors party hereto, Goldman, Sachs & Co., Banc of America Securities LLC, RBS Securities Inc. and UBS Securities LLC, dated December 1, 2009 (incorporated by reference to exhibit 4.3 of the Company's Annual Report on Form 10-K for the year ended December 31, 2009 filed on February 19, 2010) (Commission File No. 001-32737).
4.4	Supplemental Indenture, dated as of February 24, 2010, to the Indenture dated as of December 1, 2009 among Koppers Ventures LLC, Koppers Inc., Koppers Holdings Inc., as Guarantor, each of the subsidiary guarantors party thereto and Wells Fargo Bank, National Association (incorporated by reference to exhibit 10.96 to the Company's Quarterly Report on Form 10-Q filed on November 10, 2014) (Commission File No. 001-32737).
4.5	Second Supplemental Indenture, dated as of August 15, 2014, to the Indenture dated as of December 1, 2009 among Koppers Inc., Koppers Holdings Inc., as Guarantor, each of the subsidiary guarantors party thereto and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to exhibit 10.97 to the Company's Quarterly Report on Form 10-Q filed on November 10, 2014) (Commission File No. 001-32737).
4.6	Third Supplemental Indenture, dated as of January 19, 2017, among Koppers Inc., Koppers Holdings Inc., the subsidiary guarantors party thereto, and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to exhibit 4.1 to the Company's Current Report on Form 8-K filed on January 20, 2017) (Commission File No. 001-32737).

- 4.7 Indenture, dated as of January 25, 2017, among Koppers Inc., Koppers Holdings Inc., the other guarantors named therein and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to exhibit 4.1 to the Company's Current Report on Form 8-K filed on January 25, 2017) (Commission File No. 001-32737).
- 10.1 Asset Purchase Agreement by and between Koppers Inc. and Koppers Company, Inc., dated as of December 28, 1988 (incorporated by reference to respective exhibits to the Koppers Inc. Prospectus filed on February 7, 1994).
- 10.2 Asset Purchase Agreement Guarantee provided by Beazer PLC, dated as of December 28, 1988 (incorporated by reference to respective exhibits to the Koppers Inc. Prospectus filed on February 7, 1994).
- 10.9* Employment agreement with Steven R. Lacy dated April 5, 2002 (incorporated by reference to Exhibit 10.35 of the Koppers Inc. Form 10-K for the year ended December 31, 2002 filed on March 5, 2003) (Commission File No. 001-12716).
- 10.13* Koppers Industries, Inc. Non-contributory Long Term Disability Plan for Salaried Employees (incorporated by reference to respective exhibits to the Koppers Inc. Prospectus filed on February 7, 1994 pursuant to Rule 424(b) of the Securities Act of 1933, as amended, in connection with the offering of the 8 1/2% Senior Notes due 2004).
- 10.15* Koppers Industries, Inc. Survivor Benefit Plan (incorporated by reference to respective exhibits to the Koppers Inc. Prospectus filed on February 7, 1994 pursuant to Rule 424(b) of the Securities Act of 1933, as amended, in connection with the offering of the 8 1/2 % Senior Notes due 2004).
- 10.32 Amendment and Restatement to Article VII of the Asset Purchase Agreement by and between Koppers Inc. and Beazer East, Inc., dated July 15, 2004 (incorporated by reference to exhibit 10.33 to the Koppers Inc. Quarterly Report on Form 10-Q filed on August 6, 2004) (Commission File No. 001-12716).
- 10.34 Agreement and Plan of Merger dated as of November 18, 2004, by and among Koppers Inc., Merger Sub for KI Inc. and Koppers Holdings Inc. (f/k/a KI Holdings Inc.) (incorporated by reference to exhibit 10.34 to the Company's Registration Statement on Form S-4 filed on February 14, 2005) (Registration No. 333-122810).
- 10.37* Koppers Holdings Inc. 2005 Long Term Incentive Plan, as Amended and Restated effective March 24, 2016 (incorporated by reference to Appendix A to the Company's Definitive Proxy Statement for its 2016 Annual Meeting of Shareholders filed on April 5, 2016) (Commission File No. 001-32737).
- 10.42 Asset Purchase Agreement dated April 28, 2006 between Reilly Industries, Inc. and Koppers Inc. (incorporated by reference to exhibit 99.1 to the Company's Current Report on Form 8-K filed on April 28, 2006) (Commission File No. 001-32737).
- 10.48* Koppers Holdings Inc. Benefit Restoration Plan (incorporated by reference to exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed on August 9, 2007) (Commission File No. 001-32737).
- 10.49 Purchase Agreement dated as of August 3, 2008 by and among Koppers Inc., Carbon Investments, Inc., and ArcelorMittal S.A. (incorporated by reference to exhibit 10.49 to the Company's Quarterly Report on Form 10-Q filed on November 6, 2008) (Commission File No. 001-32737).
- 10.51* Koppers Inc. Supplemental Executive Retirement Plan I (incorporated by reference to exhibit 10.51 to the Company's Annual Report on Form 10-K for the year ended December 31, 2008 filed on February 20, 2009) (Commission File No. 001-32737).
- 10.52* Koppers Inc. Supplemental Executive Retirement Plan II, as amended and restated (incorporated by reference to exhibit 10.93 to the Company's Quarterly Report on Form 10-Q filed on August 7, 2014) (Commission File No. 001-32737).
- 10.53* Amendment to Employment Agreement with Steven R. Lacy effective as of January 1, 2009 (incorporated by reference to exhibit 10.53 to the Company's Annual Report on Form 10-K for the year ended December 31, 2008 filed on February 20, 2009) (Commission File No. 001-32737).
- 10.55* Amendment to Koppers Holdings Inc. Benefit Restoration Plan effective as of January 1, 2009 (incorporated by reference to exhibit 10.55 to the Company's Annual Report on Form 10-K for the year ended December 31, 2008 filed on February 20, 2009) (Commission File No. 001-32737).

Exhibit No.	Exhibit
10.62*	Restricted Stock Unit Issuance Agreement – Time Vesting (incorporated by reference to exhibit 10.62 to the Company’s Annual Report on Form 10-K for the year ended December 31, 2012 filed on February 25, 2013) (Commission File No. 001-32737).
10.63*	Restricted Stock Unit Issuance Agreement – Performance Vesting (incorporated by reference to exhibit 10.63 to the Company’s Annual Report on Form 10-K for the year ended December 31, 2012 filed on February 25, 2013) (Commission File No. 001-32737).
10.64*	Notice of Grant of Stock Option (incorporated by reference to exhibit 10.64 to the Company’s Annual Report on Form 10-K for the year ended December 31, 2012 filed on February 25, 2013) (Commission File No. 001-32737).
10.66*	Form of Koppers Holdings Inc. Restricted Stock Unit Issuance Agreement Non-Employee Director –Time Vesting (incorporated by reference to exhibit 10.66 to the Company’s Quarterly Report on Form 10-Q filed on May 5, 2011) (Commission File No. 001-32737).
10.68*	Summary of Terms and Conditions of Employment between Mark R. McCormack and Koppers (incorporated by reference to exhibit 10.68 to the Company’s Quarterly Report on Form 10-Q filed on May 5, 2011) (Commission File No. 001-32737).
10.73*	Amendment No. 2 to Employment Agreement with Steven R. Lacy effective December 19, 2012 (incorporated by reference to exhibit 10.73 to the Company’s Annual Report on Form 10-K for the year ended December 31, 2012 filed on February 25, 2013) (Commission File No. 001-32737).
10.76*	2013 Restricted Stock Unit Issuance Agreement – Time Vesting for Walter W. Turner (incorporated by reference to exhibit 10.76 to the Company’s Annual Report on Form 10-K for the year ended December 31, 2012 filed on February 25, 2013) (Commission File No. 001-32737).
10.77*	2013 Restricted Stock Unit Issuance Agreement – Performance Vesting for Walter W. Turner (incorporated by reference to exhibit 10.77 to the Company’s Annual Report on Form 10-K for the year ended December 31, 2012 filed on February 25, 2013) (Commission File No. 001-32737).
10.78*	2013 Notice of Grant of Stock Option for Walter W. Turner (incorporated by reference to exhibit 10.78 to the Company’s Annual Report on Form 10-K for the year ended December 31, 2012 filed on February 25, 2013) (Commission File No. 001-32737).
10.80*	Form of Amended and Restated Change in Control Agreement entered into as of May 6, 2013 between the Company and the named Executive (incorporated by reference to exhibit 10.80 to the Company’s Quarterly Report on Form 10-Q filed on August 8, 2013) (Commission File No. 001-32737).
10.81*	Amendment No. 3 to Employment Agreement with Steven R. Lacy effective August 7, 2013 (incorporated by reference to exhibit 10.81 to the Company’s Quarterly Report on Form 10-Q filed on November 7, 2013) (Commission File No. 001-32737).
10.84*	2014 Restricted Stock Unit Issuance Agreement – Time Vesting (incorporated by reference to exhibit 10.84 to the Company’s Annual Report on Form 10-K for the year ended December 31, 2013 filed on March 3, 2014) (Commission File No. 001-32737).
10.85*	2014 Restricted Stock Unit Issuance Agreement – Time Vesting for Walter W. Turner (incorporated by reference to exhibit 10.85 to the Company’s Annual Report on Form 10-K for the year ended December 31, 2013 filed on March 3, 2014) (Commission File No. 001-32737).
10.92*	Key Employee Non-Competition Agreement, dated November 8, 2006, between Osmose Holdings, Inc. and Paul Goydan (incorporated by reference to exhibit 10.98 to the Company’s Quarterly Report on Form 10-Q filed on November 10, 2014) (Commission File No. 001-32737).
10.93*	Amendment No. 1 to Key Employee Non-Competition Agreement, dated April 2, 2012, between Osmose Holdings, Inc. and Paul Goydan (incorporated by reference to exhibit 10.99 to the Company’s Quarterly Report on Form 10-Q filed on November 10, 2014) (Commission File No. 001-32737).
10.94*	Employment Letter Agreement, dated March 14, 2012, between Osmose, Inc. and Paul Goydan (incorporated by reference to exhibit 10.100 to the Company’s Quarterly Report on Form 10-Q filed on November 10, 2014) (Commission File No. 001-32737).

- 10.95* Amendment to Employment Letter Agreement, dated June 25, 2014, by and among Osmose, Inc. and Paul Goydan (incorporated by reference to exhibit 10.101 to the Company's Quarterly Report on Form 10-Q filed on November 10, 2014) (Commission File No. 001-32737).
- 10.96 First Amendment to Credit Agreement and Consent and Waiver, dated as of December 17, 2014 by and among Koppers Inc., the Guarantors party thereto, the Lenders party thereto and PNC Bank, National Association, as Administrative Agent (incorporated by reference to exhibit 10.96 to the Company's Annual Report on Form 10-K for the year ended December 31, 2014 filed on March 2, 2015) (Commission File No. 001-32737).
- 10.97* Koppers Annual Incentive Plan, as amended February 17, 2016.
- 10.98* Restricted Stock Unit Issuance Agreement – Time Vesting (incorporated by reference to exhibit 10.98 to the Company's Annual Report on Form 10-K for the year ended December 31, 2014 filed on March 2, 2015) (Commission File No. 001-32737).
- 10.99* Restricted Stock Unit Issuance Agreement – Performance Vesting (incorporated by reference to exhibit 10.99 to the Company's Annual Report on Form 10-K for the year ended December 31, 2014 filed on March 2, 2015) (Commission File No. 001-32737).
- 10.100* Notice of Grant of Stock Option (incorporated by reference to exhibit 10.100 to the Company's Annual Report on Form 10-K for the year ended December 31, 2014 filed on March 2, 2015) (Commission File No. 001-32737).
- 10.101* Executive Income Summary for Paul Goydan (incorporated by reference to exhibit 10.101 to the Company's Annual Report on Form 10-K for the year ended December 31, 2014 filed on March 2, 2015) (Commission File No. 001-32737).
- 10.102* 2015 Restricted Stock Unit Issuance Agreement – Time Vesting for Walter W. Turner (incorporated by reference to exhibit 10.102 to the Company's Annual Report on Form 10-K for the year ended December 31, 2014 filed on March 2, 2015) (Commission File No. 001-32737).
- 10.105* Restricted Stock Unit Issuance Agreement – Time Vesting for Stephen C. Reeder (incorporated by reference to exhibit 10.105 to the Company's Annual Report on Form 10-K for the year ended December 31, 2015 filed on February 29, 2016) (Commission File No. 001-32737).
- 10.106* Restricted Stock Unit Issuance Agreement – Performance Vesting for Stephen C. Reeder (incorporated by reference to exhibit 10.106 to the Company's Annual Report on Form 10-K for the year ended December 31, 2015 filed on February 29, 2016) (Commission File No. 001-32737).
- 10.107* 2016 Restricted Stock Unit Issuance Agreement – Performance Vesting (incorporated by reference to exhibit 10.107 to the Company's Quarterly Report on Form 10-Q filed on May 6, 2016) (Commission File No. 001-32737).
- 10.109 Credit Agreement, dated as of February 17, 2017, by and among Koppers Inc., as Borrower, the Guarantors party thereto, the Lenders party thereto, PNC Bank, National Association, as Administrative Agent, and the other agents party thereto (incorporated by reference to exhibit 10.1 to the Company's Current Report on Form 8-K filed on February 22, 2017) (Commission File No. 001-32737).
- 12.1*** Computation of ratio of earnings to fixed charges.
- 21*** List of subsidiaries of the Company.
- 23.1*** Consent of Independent Registered Public Accounting Firm.
- 23.2*** Consent of Independent Registered Public Accounting Firm.
- 24*** Powers of Attorney.
- 31.1*** Certification of Chief Executive Officer pursuant to Rule 13a-14(a).
- 31.2*** Certification of Chief Financial Officer pursuant to Rule 13a-14(a).

<i>Exhibit No.</i>	<i>Exhibit</i>
32.1***	Certification of Chief Executive Officer and Chief Financial Officer pursuant to Section 1350.
101.INS***	XBRL Instance Document
101.SCH***	XBRL Taxonomy Extension Schema Document
101.CAL***	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF***	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB***	XBRL Taxonomy Extension Label Linkbase Document
101.PRE***	XBRL Taxonomy Extension Presentation Linkbase Document

* *Management Contract or Compensatory Plan.*

*** *Filed herewith.*

KOPPERS HOLDINGS INC.

SCHEDULE II – VALUATION AND QUALIFYING ACCOUNTS

For the years ended December 31, 2016, 2015 and 2014

	<i>Balance at Beginning of Year</i>	<i>Business Acquisition</i>	<i>Increase (Decrease) to Expense</i>	<i>Net (Write- Offs) Recoveries</i>	<i>Currency Translation</i>	<i>Balance at End of Year</i>
<i>(Dollars in millions)</i>						
2016						
Allowance for doubtful accounts	\$ 6.5	\$0.0	\$ 0.7	\$(3.4)	\$ 0.0	\$ 3.8
Inventory obsolescence reserves	\$ 2.3	\$0.0	\$(0.4)	\$ 0.0	\$ 0.0	\$ 1.9
Deferred tax valuation allowance	\$41.9	\$0.0	\$ 0.9	\$(1.5)	\$(1.1)	\$40.2
2015						
Allowance for doubtful accounts	\$ 5.6	\$0.0	\$ 1.3	\$ 0.0	\$(0.4)	\$ 6.5
Inventory obsolescence reserves	\$ 3.4	\$0.0	\$(1.0)	\$ 0.0	\$(0.1)	\$ 2.3
Deferred tax valuation allowance	\$32.4	\$0.0	\$10.1	\$ 0.0	\$(0.6)	\$41.9
2014						
Allowance for doubtful accounts	\$ 3.6	\$2.6	\$(0.2)	\$ 0.0	\$(0.4)	\$ 5.6
Inventory obsolescence reserves	\$ 1.7	\$0.8	\$ 1.0	\$ 0.0	\$(0.1)	\$ 3.4
Deferred tax valuation allowance	\$19.7	\$1.5	\$11.4	\$ 0.0	\$(0.2)	\$32.4

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, Koppers Holdings Inc. has duly caused this annual report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized.

KOPPERS HOLDINGS INC.

BY: /s/ MICHAEL J. ZUGAY

Michael J. Zugay
Chief Financial Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this annual report on Form 10-K has been signed below by the following persons on behalf of the Registrant and in the capacities and on the date indicated.

<i>Signature</i>	<i>Capacity</i>	<i>Date</i>
<u>/s/ LEROY M. BALL, JR.</u> Leroy M. Ball, Jr.	Director, President and Chief Executive Officer	February 24, 2017
<u>/s/ MICHAEL J. ZUGAY</u> Michael J. Zugay	Chief Financial Officer (Principal Financial and Principal Accounting Officer)	February 24, 2017
David M. Hillenbrand	Director and Non-Executive Chairman of the Board	By <u>/s/ LEROY M. BALL, JR.</u> Leroy M. Ball, Jr. <i>Attorney-in-Fact</i> February 24, 2017
Cynthia A. Baldwin	Director	
X. Sharon Feng	Director	
Albert J. Neupaver	Director	
Louis L. Testoni	Director	
Stephen R. Tritch	Director	
Walter W. Turner	Director	
T. Michael Young	Director	

CERTIFICATIONS

I, Leroy M. Ball, Jr. certify that:

1. I have reviewed this annual report on Form 10-K 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-15(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 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: February 24, 2017

/s/ LEROY M. BALL, JR.

Leroy M. Ball, Jr.

President and Chief Executive Officer

Exhibit 31.2

CERTIFICATIONS

I, Michael J. Zugay, certify that:

1. I have reviewed this annual report on Form 10-K 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-15(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 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: February 24, 2017

/s/ MICHAEL J. ZUGAY
Michael J. Zugay
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 Annual Report of Koppers Holdings Inc. (the "Company") on Form 10-K for the year ended December 31, 2016, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned hereby certifies in his capacity as an officer of Koppers Holdings Inc., 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.

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

/s/ LEROY M. BALL, JR.
Leroy M. Ball, Jr.
President and Chief Executive Officer
February 24, 2017

/s/ MICHAEL J. ZUGAY
Michael J. Zugay
Chief Financial Officer
February 24, 2017

Board of Directors

David M. Hillenbrand

Non-Executive Chairman of the Board
Retired President and Chief Executive Officer
Carnegie Museums of Pittsburgh

Cynthia A. Baldwin

Former Vice President and General Counsel
of The Pennsylvania State University

Leroy M. Ball

President and Chief Executive Officer
Koppers Holdings Inc. and Koppers Inc.

Sharon Feng

Executive Director and Senior Associate Dean
for Budget and Strategy
Institute for Molecular Engineering
University of Chicago

Albert J. Neupaver

Executive Chairman
Westinghouse Air Brake Technologies Corporation

Louis L. Testoni

Former Lake Erie Managing Partner
PricewaterhouseCoopers LLP

Stephen R. Tritch

Retired Chairman
Westinghouse Electric Company

T. Michael Young

Managing Partner
The CapStreet Group LLC

Senior Management

Leroy M. Ball

President and Chief Executive Officer
Koppers Holdings Inc. and Koppers Inc.

Joseph P. Dowd

Global Vice President, Safety, Health,
Environmental and Process Excellence
Koppers Inc.

Daniel R. Groves

Vice President, Human Resources
Koppers Inc.

Leslie S. Hyde

Vice President, Risk Management and Deputy
General Counsel
Koppers Inc.

Steven R. Lacy

Senior Vice President, Administration,
General Counsel and Secretary
Koppers Holdings Inc. and Koppers Inc.

Thomas D. Loadman

Senior Vice President,
Railroad Products and Services
Koppers Inc.

Mark R. McCormack

Vice President, Australasian Operations
Koppers Inc.

Christian A. Nielsen

Vice President, North American and European
Carbon Materials and Chemicals
Koppers Inc.

Stephen C. Reeder

Senior Vice President,
Performance Chemicals
Koppers Inc.

James A. Sullivan

Senior Vice President,
Global Carbon Materials and Chemicals
Koppers Inc.

Louann Tronsberg-Deihle

Treasurer
Koppers Holdings Inc. and Koppers Inc.

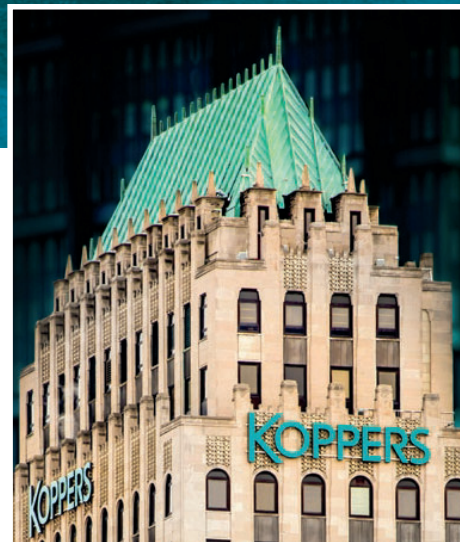
J. Robin Zhu

Vice President, China Operations
Koppers Inc.

Michael J. Zugay

Chief Financial Officer
Koppers Holdings Inc. and Koppers Inc.

KOPPERS World Headquarters
Pittsburgh, Pennsylvania, USA



Shareholder Information

Transfer Agent, Registrar of Stock and Dividend Disbursing Agent

Computershare
P.O. Box 30170
College Station, TX 77842-3170

Overnight correspondence should be sent to:
Computershare
211 Quality Circle, Suite 210
College Station, TX 77845

Koppers-dedicated phone: 866 293 5637
TDD for hearing impaired: 800 231 5469
Foreign holders: 201 680 6578
TDD for foreign holders: 201 680 6610

As a convenience to our shareholders who hold their shares with our transfer agent, individuals can access their account information and view 1099-DIVS by logging on at www.computershare.com/investor.

Stock Exchange Listing

Koppers common stock is listed on the New York Stock Exchange (symbol: KOP).

Investor Relations and Media Information

Securities analysts and shareholders seeking financial or general information should contact Ms. Quynh McGuire, Director, Investor Relations and Corporate Communications, at 412 227 2049.

For a free copy of the Koppers Annual Report on Form 10-K as filed with the Securities and Exchange Commission, please send a written request by mail to Ms. McGuire at 436 Seventh Avenue, Pittsburgh, Pennsylvania 15219-1800.

For news media inquiries, please contact Ms. Jessica Franklin, Corporate Communications Manager, at 412 227 2025.

Company News

Visit www.koppers.com for Securities and Exchange Commission (SEC) filings, annual reports, quarterly earnings reports, and other company news.

Annual Meeting of Shareholders

Thursday, May 4, 2017
Duquesne Club
325 Sixth Avenue
Pittsburgh, PA 15222
10:00 a.m. Eastern Time

World Headquarters

Koppers Holdings Inc.

436 Seventh Avenue
Pittsburgh, Pennsylvania
15219-1800
USA
Telephone: 412 227 2001

Forward-Looking Statements:

Certain statements in this report are "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 resulting 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. For further discussion of forward-looking statements, including some of the specific factors that may cause such a difference, see the forward-looking statements and risk factors disclosure included in our 2016 Annual Report on Form 10-K. Koppers disclaims any intention or obligation to update or revise any forward-looking statements.



Responsible Care®

Koppers is a member of the
American Chemistry Council.

 Printed on recycled paper.



Koppers is an integrated global provider of treated wood products, wood treatment chemicals and carbon compounds for the railroad, specialty chemical, utility, residential lumber, agriculture, aluminum, steel, rubber, and construction industries. Headquartered in Pittsburgh, Pennsylvania, we serve our customers through a comprehensive global manufacturing and distribution network, with facilities located in North America, South America, Australasia, China and Europe.

www.koppers.com

