OLIN CORP
Form 10-K
March 01, 2016

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
Form 10-K
(Mark One)

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

For the fiscal year ended December 31, 2015

OR

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

For the transition period from to

Commission file number 1-1070
OLIN CORPORATION
(Exact name of registrant as specified in its charter)

Virginia	13-1872319
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
190 Carondelet Plaza, Suite 1530, Clayton, MO	63105
(Address of principal executive offices)	(Zip code)

Registrant's telephone number, including area code: (314) 480-1400
Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, par value $1 per share	New York Stock Exchange

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 x No ¨
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes ¨ No x
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 x 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 x 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. x
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 definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act. Large Accelerated Filer x 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 x

As of June 30, 2015, the aggregate market value of registrant’s common stock, par value $1 per share, held by non-affiliates of registrant was approximately $2,060,950,212 based on the closing sale price as reported on the New York Stock Exchange.

As of January 29, 2016, 165,113,906 shares of the registrant’s common stock were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the following document are incorporated by reference in this Form 10-K as indicated herein:

Document	Part of 10-K into which incorporated
Proxy Statement relating to Olin’s Annual Meeting of Shareholders to be held in 2016	Part III

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PART I

Item 1. BUSINESS

GENERAL

Olin Corporation (Olin) is a Virginia corporation, incorporated in 1892, having its principal executive offices in Clayton, MO. On October 5, 2015 (the Closing Date), we acquired from The Dow Chemical Company (TDCC) its U.S. Chlor Alkali and Vinyl, Global Chlorinated Organics and Global Epoxy businesses (collectively, the Acquired Business) using a Reverse Morris Trust Structure (collectively, the Acquisition). The Acquired Business's operating results are included in the accompanying financial statements since the Closing Date of the Acquisition. For segment reporting purposes, the Acquired Business's Global Epoxy operating results comprise the newly created Epoxy segment and U.S. Chlor Alkali and Vinyl and Global Chlorinated Organics (Acquired Chlor Alkali Business) operating results combined with our former Chlor Alkali Products and Chemical Distribution segments to comprise the newly created Chlor Alkali Products and Vinyls segment.

We are a manufacturer concentrated in three business segments: Chlor Alkali Products and Vinyls, Epoxy and Winchester. The Chlor Alkali Products and Vinyls segment manufactures and sells chlorine and caustic soda, ethylene dichloride and vinyl chloride monomer, methyl chloride, methylene chloride, chloroform, carbon tetrachloride, perchloroethylene, trichloroethylene and vinylidene chloride, hydrochloric acid, hydrogen, bleach products and potassium hydroxide, which represent 54% of fourth quarter 2015 sales. The Epoxy segment produces and sells a full range of epoxy materials, including allyl chloride, epichlorohydrin, liquid epoxy resins and downstream products such as converted epoxy resins and additives, which represent 34% of fourth quarter 2015 sales. The Winchester segment produces and sells sporting ammunition, reloading components, small caliber military ammunition and components, and industrial cartridges, which represent 12% of fourth quarter 2015 sales. See our discussion of our segment disclosures contained in Item 7—"Management's Discussion and Analysis of Financial Condition and Results of Operations."

GOVERNANCE

We maintain an Internet website at www.olin.com. Our reports on Form 10-K, Form 10-Q and Form 8-K, as well as amendments to those reports, are available free of charge on our website, as soon as reasonably practicable after we file the reports with the Securities and Exchange Commission (SEC). Additionally, a copy of our SEC filings can be accessed from the SEC at their Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549 or by calling that office of the SEC at 1-800-SEC-0330. Also, a copy of our electronically filed materials can be obtained at www.sec.gov. Our Principles of Corporate Governance, Committee Charters and Code of Conduct are available on our website at www.olin.com in the Governance Section under Governance Documents and Committees.

In May 2015, our Chief Executive Officer executed the annual Section 303A.12(a) CEO Certification required by the New York Stock Exchange (NYSE), certifying that he was not aware of any violation of the NYSE's corporate governance listing standards by us. Additionally, our Chief Executive Officer and Chief Financial Officer executed the required Sarbanes-Oxley Act of 2002 (SOX) Sections 302 and 906 certifications relating to this Annual Report on Form 10-K, which are filed with the SEC as exhibits to this Annual Report on Form 10-K.

PRODUCTS, SERVICES AND STRATEGIES

Chlor Alkali Products and Vinyls

Products and Services

We have been involved in the chlor alkali industry for more than 120 years and are a major participant in the global chlor alkali industry. Chlorine, caustic soda and hydrogen are co-produced commercially by the electrolysis of salt. These co-produced products are produced simultaneously, and in a fixed ratio of 1.0 ton of chlorine to 1.1 tons of caustic soda and 0.03 tons of hydrogen. The industry refers to this as an Electrochemical Unit or ECU. With the addition of the Acquired Business to Olin, we now have the largest global chlor alkali capacity, according to data from IHS, Inc. (IHS), with a demonstrated capacity of 6.2 million ECUs for 2015. IHS is a global information consulting company established in 1959 that provides information to a variety of industries.

Chlorine is used as a raw material in the production of thousands of products, including vinyls, urethanes, epoxy, water treatment chemicals and a variety of other organic and inorganic chemicals. A significant portion of chlorine production is consumed in the manufacture of ethylene dichloride (EDC) and vinyl chloride monomer (VCM), both of which Chlor Alkali Products and Vinyls produces. A large portion of our EDC production is utilized in the production of VCM, but we are also one of the largest global participants in merchant EDC sales. EDC and VCM are precursors for polyvinyl chloride, or PVC. PVC is a plastic used in applications such as vinyl siding, pipe, pipe fittings and automotive parts.

We also manufacture and sell other chlor alkali-related products, which we refer to as co-products. The production of chlorinated organics, epoxy products, hydrochloric acid, sodium hypochlorite (bleach), and potassium hyrdroxide also consume chlorine as a raw material creating downstream applications for the upgrading of chlorine and the enablement of caustic soda production. As industry leaders in chlorinated organics and epoxy, the addition of the Acquired Business creates integrated outlets for our captive chlorine. With the addition of the Acquired Business, we have increased the diversification of our high value outlets for chlorine from three to nineteen.

Our Chlor Alkali Products and Vinyls segment is also one of the largest global marketers of caustic soda, including caustic soda produced by TDCC in Brazil. The off-take arrangement with TDCC in Brazil entitles the Chlor Alkali Products and Vinyls segment the right to market and sell the caustic soda produced at TDCC's Aratu, Brazil site throughout Latin America. The diversity of caustic sourcing allows us to cost effectively supply customers worldwide. Caustic soda has a wide variety of end-use applications, the largest of which include water treatment, alumina, pulp and paper, urethanes, detergents and soaps and a variety of other organic and inorganic chemicals.

Our Chlor Alkali Products and Vinyls segment also includes the acquired chlorinated organics business which is the largest global producer of chlorinated organic products that include chloromethanes (methyl chloride, methylene chloride, chloroform and carbon tetrachloride) and chloroethenes (perchloroethylene, trichloroethylene, and vinylidene chloride). Chlorinated organics participates in both the solvent segment, as well as the intermediate segment of the global chlorocarbon industry with a focus on sustainable applications and in applications where we can benefit from our cost advantages. Intermediate products are used as feedstocks in the production of fluoropolymers, fluorocarbon refrigerants and blowing agents, silicones, cellulosics and agricultural chemicals. Solvent products are sold into end uses such as surface preparation, dry cleaning, pharmaceuticals and regeneration of refining catalysts. This business's unique technology allows us to utilize both hydrochloric acid and chlorinated hydrocarbon byproducts (RCl), produced by our other production processes, as raw materials in an integrated system. These manufacturing facilities also consume chlorine, which generates caustic soda production and sales.

The Chlor Alkali Products and Vinyls segment's products are delivered by marine vessel, deep-water and coastal barge, railcar and truck. Our chemical distribution infrastructure provides us with geographically advantaged storage capacity and provides us with a private fleet of trucks, tankers and trailers that expands our geographic coverage. At our largest integrated product sites, our deep-water access enables us to reach global markets.

Our Chlor Alkali Products and Vinyls segment maintains strong relationships with TDCC as both a customer and supplier. These relationships are maintained through long-term cost based contracts that provide us with a reliable supply of key raw materials and predictable and consistent demand for our end use products. Key products sold to TDCC include chlorine, cell effluent, global chlorinated organics and VCM and key raw materials received from TDCC include ethylene. Ethylene is supplied for the vinyl business under a long-term supply arrangement with TDCC whereby we receive ethylene at integrated producer economics.

Electricity, salt and ethylene are the major purchased raw materials for our Chlor Alkali Products and Vinyls segment. Electricity is the single largest raw material component in the production of chlor alkali vinyl products. Approximately 85% of our electricity is generated from natural gas or hydroelectric sources. Approximately 80% of our salt requirements are met by internal supply. The high volume nature of this industry places an emphasis on cost management and we believe that our scale, integration and raw material positions make us one of the low cost producers in the industry.

The following table lists products and services of our Chlor Alkali Products and Vinyls segment, with principal products on the basis of annual sales highlighted in bold face.

Products & Services	Major End Uses	Plants & Facilities	Major Raw Materials & Components for Products/Services
Chlorine/caustic soda	Pulp & paper processing, chemical manufacturing, water purification, manufacture of vinyl chloride, bleach, swimming pool chemicals and urethane chemicals	Becancour, Canada Charleston, TN Freeport, TX Henderson, NV McIntosh, AL Niagara Falls, NY Plaquemine, LA St. Gabriel, LA	salt, electricity
Ethylene dichloride/vinyl chloride monomer	Precursor to polyvinyl chloride used in vinyl siding, plumbing and automotive parts	Freeport, TX Plaquemine, LA	chlorine, ethylene
Chlorinated organics intermediates	Used as feedstocks in the production of fluoropolymers, fluorocarbon refrigerants and blowing agents, silicones, cellulosics and agricultural chemicals	Freeport, TX Plaquemine, LA Stade, Germany	chlorine, ethylene dichloride, hydrochloric acid, methanol, RCls
Chlorinated organics solvents	Surface preparation, dry cleaning, pharmaceuticals and regeneration of refining catalysts	Freeport, TX Plaquemine, LA Stade, Germany	chlorine, ethylene dichloride, hydrochloric acid, RCls
Sodium hypochlorite (bleach)	Household cleaners, laundry bleaching, swimming pool sanitizers, semiconductors, water treatment, textiles, pulp & paper and food processing	Augusta, GA Becancour, Canada Charleston, TN Henderson, NV* Lemont, IL McIntosh, AL* Niagara Falls, NY* Santa Fe Springs, CA Tracy, CA	caustic soda, chlorine
Hydrochloric acid	Steel, oil & gas, plastics, organic chemical synthesis, water & wastewater treatment, brine treatment, artificial sweeteners, pharmaceuticals, food processing and ore & mineral processing	Becancour, Canada Charleston, TN Henderson, NV McIntosh, AL Niagara Falls, NY	chlorine, hydrogen
		Charleston, TN	

Potassium hydroxide	Fertilizer manufacturing, soaps, detergents & cleaners, battery manufacturing, food processing chemicals and deicers		electricity, potassium chloride
Hydrogen	Fuel source, hydrogen peroxide and hydrochloric acid	Becancour, Canada Charleston, TN Freeport, TX Henderson, NV McIntosh, AL Niagara Falls, NY Plaquemine, LA St. Gabriel, LA	electricity, salt

* Includes low salt, high strength bleach manufacturing.

Strategies

Strengthen Our Role as Preferred Supplier in North America. Take maximum advantage of our world-scale integrated facilities on the Gulf Coast, our geographically-advantaged plants across North America and our extensive distribution network to provide a reliable and preferred supply position to our North American customers.

Capitalize on Our Low Cost Position. Our advantaged cost position is derived from shale gas, scale, integration, and deep-water ports. We expect to maximize our low cost position to export caustic soda, chlorinated organics and EDC to customers worldwide.

Optimize the Breadth of Products and Pursue Incremental Expansion Opportunities. Fully utilize the portfolio of co-products and integrated derivatives to continually upgrade chlorine and caustic soda to the highest value applications and provide expansion opportunities.

Epoxy

Products and Services

With the addition of the Acquired Business, we acquired TDCC's Global Epoxy business. The Epoxy business was one of the first major manufacturers of epoxy products, and has continued to build on a half a century of history through product innovation and technical excellence. According to data from IHS, the Epoxy segment is one of the largest fully integrated global producers of epoxy resins, curing agents and intermediates. The Epoxy segment has a favorable manufacturing cost position which is driven by a combination of scale and integration into low cost feedstocks (including chlorine, caustic soda, allylics and aromatics). The Epoxy segment produces and sells a full range of epoxy materials, including upstream products such as allyl chloride (Allyl) and epichlorohydrin (EPI), midstream products such as liquid epoxy resins (LER), and downstream products such as converted epoxy resins (CER) and additives.

The Epoxy segment serves a diverse array of applications, including wind energy, electrical laminates, marine coatings, consumer goods and composites, as well as numerous applications in civil engineering and protective coating. The Epoxy segment has important relationships with established customers, some of which span decades. Geographically, the Epoxy segment's primary markets are North America and Western Europe. The segment's product is delivered primarily by marine vessel, deep-water and coastal barge, railcar and truck.

Allyl has use, not only as a feedstock in the production of EPI, but also as a chemical intermediate in multiple industries and applications, including water purification chemicals. EPI is primarily produced as a feedstock for use in the business's epoxy resins, and also sold to epoxy producers globally who produce their own resins for end use segments such as coatings and adhesives. LER is manufactured in liquid form and cures with the addition of a hardener into a thermoset solid material offering a distinct combination of strength, adhesion and chemical resistance that is well-suited to coatings and composites applications. While LER is sold externally, a large share of LER production is further converted into CER where value-added modifications produce higher margin customer-specific resins.

Our Epoxy segment maintains strong relationships with TDCC as both a customer and supplier. These relationships are maintained through long-term cost based contracts that provide us with a reliable supply of key raw materials. Key products sold to TDCC include aromatics and key raw materials received from TDCC include propylene and benzene.

The Epoxy segment's production economics benefit from its integration into chlor alkali and aromatics which are key inputs in epoxy production. This fully integrated structure provides both access to low cost materials and significant operational flexibility. The Epoxy segment operates an integrated aromatics production chain producing cumene, phenol, acetone and bisphenol (BisA) for internal consumption and sale. The Epoxy segment's consumption of chlorine allows the Chlor Alkali Products and Vinyls segment to generate caustic soda production and sales. Chlorine used in our Epoxy segment is transferred at cost from the Chlor Alkali Products and Vinyls segment.

The following table lists products and services of our Epoxy segment, with principal products on the basis of annual sales highlighted in bold face.

Products & Services	Major End Uses	Plants & Facilities	Major Raw Materials & Components for Products/Services
Allylics (allyl chloride & epichlorohydrin)	Manufacturers of polymers, resins and other plastic materials, water purification, and pesticides	Freeport, TX Stade, Germany	chlor alkali, propylene
Liquid epoxy resin	Adhesives, paint and coatings, composites and flooring	Freeport, TX Guaruja, Brazil Stade, Germany	acetone, benzene, bisphenol, chlor alkali, cumene, phenol
Converted epoxy resins	Electrical laminates, paint and coatings, wind blades, electronics and construction	Baltringen, Germany Freeport, TX Guaruja, Brazil Gumi, South Korea Pisticci, Italy Rheinmunster, Germany Roberta, GA Stade, Germany Zhangjigang, China	acetone, benzene, bisphenol, chlor alkali, cumene, phenol

Strategies

Optimize Existing Cost Position. The Epoxy segment continues to drive productivity cost improvements through the entire supply chain, enhancing reliability and delivering yield improvements. With its advantaged cost position, the business will continue its focus to sell products through improved margin discipline and optimization of our integrated aromatics capabilities.

Continued Focus on Product Innovation. With a long history of leading technology and quality, the Epoxy segment is a leading global innovator. Innovation capture in resins and systems improvements, combined with process, geographic and asset mix, provide the road map to improving the profitability of the Epoxy portfolio.

Take Maximum Advantage of Our Geographical Presence. Operating nine strategically-located sites on four continents with reliable production and delivery of product enables the business to increase market share in strategic international markets and expand into attractive new emerging markets.

Winchester

Products and Services

In 2016, Winchester is celebrating its 150th year of operation and its 86th year as part of Olin. Winchester is a premier developer and manufacturer of small caliber ammunition for sale to domestic and international retailers (commercial customers), law enforcement agencies and domestic and international militaries. We believe we are a leading U.S. producer of ammunition for recreational shooters, hunters, law enforcement agencies and the U.S. Armed Forces.

In February 2016, Winchester was awarded a five-year contract for .38 caliber, .45 caliber and 9mm ammunition to be used by the U.S. Army. The contract has the potential to generate approximately $75 million of sales over the five-year contract.

In January 2016, Winchester was awarded a five-year contract for 5.56mm, 7.62mm and .50 caliber ammunition to be used by the U.S. Army. The contract has the potential to generate approximately $300 million of sales over the five-year contract.

In March 2015, Winchester was awarded a five-year contract for 5.56mm frangible ammunition to be used for training by the U.S. Navy and U.S. Marine Corp. The contract has the potential to generate approximately $45 million of sales over the five-year contract.

In September 2014, Winchester was awarded a five-year contract to produce training ammunition for the U.S. Department of Homeland Security. The contract has the potential to generate $50 million of sales over the five-year contract.

In 2015, Winchester was recognized with the Strategic Partnership award by Cabela’s Incorporated (Cabela’s), one of the country’s largest retailers of hunting, fishing and outdoor gear. The Strategic Partnership award is given to partners who demonstrate superior performance metrics and overall contribution to the company. In April 2014, Winchester was recognized with the exclusive Overall Vendor of the Year award by Cabela’s. The Overall Vendor of the Year is Cabela’s highest merchandising vendor award across all categories and departments. Winchester was chosen from more than 3,500 merchandise suppliers for superior performance, partnership and overall contribution to the retailer.

In October 2014 and 2013, Winchester was recognized by the National Association of Sporting Goods Wholesalers (NASGW) with the group’s Excellence in Ammunition Manufacturing award. The NASGW presents the award to manufacturers who best demonstrate outstanding value and service to NASGW distributor members.

Our legendary Winchester® product line includes all major gauges and calibers of shotgun shells, rimfire and centerfire ammunition for pistols and rifles, reloading components and industrial cartridges. We believe we are the leading U.S. supplier of small caliber commercial ammunition.

Winchester has strong relationships throughout the sales and distribution chain and strong ties to traditional dealers and distributors. Winchester has also built its business with key high-volume mass merchants and specialty sporting goods retailers. Winchester has consistently developed industry-leading ammunition, which is recognized in the industry for manufacturing excellence, design innovation and consumer value. Winchester’s new ammunition products continue to receive awards from major industry publications, with recent awards including: Predator Xtreme magazine’s “2015 Readers’ Choice Gold” award; American Rifleman magazine’s Golden Bullseye Award as “Ammunition Product of the Year” in 2015 and 2014; Field & Stream magazine’s “Best of the Best” award in 2014 and 2013; Petersen's Hunting magazine’s 2014 “Editor’s Choice” award; Guns & Ammo magazine’s “2014 Ammunition of the Year” award; and Shooting Illustrated magazine’s “Ammunition Product of the Year” in 2014.

Winchester purchases raw materials such as copper-based strip and ammunition cartridge case cups and lead from vendors based on a conversion charge or premium. These conversion charges or premiums are in addition to the market prices for metal as posted on exchanges such as the Commodity Exchange, or COMEX, and London Metals Exchange, or LME. Winchester's other main raw material is propellant, which is purchased predominantly from one of the U.S.'s largest propellant suppliers.

The following table lists products and services of our Winchester segment, with principal products on the basis of annual sales highlighted in bold face.

Products & Services	Major End Uses	Plants & Facilities	Major Raw Materials & Components for Products/Services
Winchester® sporting ammunition (shotshells, small caliber centerfire & rimfire ammunition)	Hunters & recreational shooters, law enforcement agencies	East Alton, IL Geelong, Australia Oxford, MS	brass, lead, steel, plastic, propellant, explosives
Small caliber military ammunition	Infantry and mounted weapons	East Alton, IL Oxford, MS	brass, lead, propellant, explosives
Industrial products (8 gauge loads & powder-actuated tool loads)	Maintenance applications in power & concrete industries, powder-actuated tools in construction industry	East Alton, IL Geelong, Australia Oxford, MS	brass, lead, plastic, propellant, explosives

On November 3, 2010, we announced that we had made the decision to relocate the Winchester centerfire pistol and rifle ammunition manufacturing operations from East Alton, IL to Oxford, MS. In October 2011, we opened the new centerfire pistol and rifle production facility in Oxford, MS and, during 2013, we completed the relocation of the centerfire pistol manufacturing equipment. During 2014, the centerfire rifle manufacturing equipment was in the process of being relocated, and by December 1, 2014, all commercial centerfire rifle ammunition was manufactured in Oxford, MS. During 2015, all of Winchester's commercial centerfire pistol and rifle ammunition were manufactured in Oxford, MS. The annual savings from the Oxford relocation project reached $35 million in 2015. During the first half of 2016, the final rifle ammunition production equipment relocation will be completed, and it is expected that the annual cost savings for the project could reach $40 million. Once completed, Winchester expects to have the most modern centerfire ammunition production facility in North America.

Strategies

Maximize Existing Strengths. Winchester plans to seek new opportunities to fully utilize the legendary Winchester brand name and will continue to offer a full line of ammunition products to the markets we serve, with specific focus on investments that make Winchester ammunition the retail brand of choice.

Focus on Product Line Growth. With a long record of pioneering new product offerings, Winchester has built a strong reputation as an industry innovator. This includes the introduction of reduced-lead and non-lead products, which are growing in popularity for use in indoor shooting ranges and for outdoor hunting.

Cost Reduction Strategy. Winchester plans to continue to focus on strategies that will lower our costs, including the ongoing relocation of our centerfire pistol and rifle ammunition manufacturing operations from East Alton, IL to Oxford, MS.

INTERNATIONAL OPERATIONS

With the addition of the Acquired Business our international presence increased, including the geographic regions of Europe, Asia Pacific and Latin America. Approximately 39% of Olin's fourth quarter sales, including 23% of our Chlor Alkali Products and Vinyls fourth quarter segment sales, 75% of our Epoxy fourth quarter segment sales and

10% of our Winchester fourth quarter segment sales, were generated outside of the U.S. See the Note "Segment Information" of the notes to consolidated financial statements contained in Item 8, for geographic segment data. We are incorporating our segment information from that Note into this section of our Form 10-K.

CUSTOMERS AND DISTRIBUTION

During 2015, no single customer accounted for more than 8% of sales. Sales to all U.S. Government agencies and sales under U.S. Government contracting activities in total accounted for approximately 3% of sales in 2015. Products we sell to industrial or commercial users or distributors for use in the production of other products constitute a major part of our total sales. We sell some of our products, such as epoxy resins, caustic soda and sporting ammunition, to a large number of users or distributors, while we sell others, such as chlorine and chlorinated organics in substantial quantities to a relatively small number of industrial users. With the addition of the Acquired Business, we entered into or have significant relationships with a few customers including TDCC, who was our largest customer by revenue in 2015. We expect this relationships to continue to be significant to Olin in the future and to represent more than 10% of our annual sales in the future. We discuss the customers for each of our three business segments in more detail above under “Products and Services.”

We market most of our products and services primarily through our sales force and sell directly to various industrial customers, mass merchants, retailers, wholesalers, other distributors and the U.S. Government and its prime contractors.

Because we engage in some government contracting activities and make sales to the U.S. Government, we are subject to extensive and complex U.S. Government procurement laws and regulations. These laws and regulations provide for ongoing government audits and reviews of contract procurement, performance and administration. Failure to comply, even inadvertently, with these laws and regulations and with laws governing the export of munitions and other controlled products and commodities could subject us or one or more of our businesses to civil and criminal penalties, and under certain circumstances, suspension and debarment from future government contracts and the exporting of products for a specified period of time.

BACKLOG

The total amount of contracted backlog was approximately $312.5 million and $289.0 million as of January 31, 2016 and 2015, respectively. The backlog orders are in our Winchester business. Beginning in November 2012, consumer purchases of ammunition surged significantly above historical demand levels. The surge in demand was across all of Winchester’s commercial product offerings. Beginning in the third quarter of 2014, Winchester began to experience a decline in commercial demand from the 2013 level. However, for 2015 and the second half of 2014 commercial demand remained stronger than 2011 levels. The increase above historical levels of commercial demand can be illustrated by the increase in Winchester’s commercial backlog, which was $230.5 million and $192.4 million at January 31, 2016 and 2015, respectively, compared to $29.4 million at December 31, 2011 and $37.6 million at January 31, 2012. The orders included in the commercial backlog may be canceled by the customer. Backlog is comprised of all open customer orders not yet shipped. Approximately 88% of contracted backlog as of January 31, 2016 is expected to be filled during 2016.

COMPETITION

We are in active competition with businesses producing or distributing the same or similar products, as well as, in some instances, with businesses producing or distributing different products designed for the same uses.

Chlor alkali manufacturers in North America, with approximately 18 million tons of chlorine and 19 million tons of caustic soda capacity, account for approximately 18% of worldwide chlor alkali production capacity. With the addition of the Acquired Business, according to IHS, we now have the largest chlor alkali capacity in North America and globally. While the technologies to manufacture and transport chlorine and caustic soda are widely available, the production facilities require large capital investments, and are subject to significant regulatory and permitting requirements. Approximately 75% of the total North American chlor alkali capacity is located in the U.S. Gulf Coast region. There is a worldwide market for caustic soda, which attracts imports and allows exports depending on market conditions. Other large chlor alkali producers in North America include The Occidental Petroleum Corporation (Oxy) and Axiall Corporation (Axiall).

We are also a leading integrated global producer of chlorinated organic products with a strong cost position due to our scale and access to chlor alkali feedstocks. This industry includes large diversified producers such as Oxy, Axiall and Solvay S.A., as well as multiple producers located in China.

We are a fully integrated major epoxy producer in the world, with access to key low cost feedstocks and cost a advantaged infrastructure. The markets in which our Epoxy segment operates are highly competitive and are dependent on significant capital investment, the development of proprietary technology and maintenance of product research and development. Among our competitors are Huntsman Corporation and Hexion, Inc.

We are among the largest manufacturers in the U.S. of commercial small caliber ammunition based on independent market research sponsored by the National Shooting Sports Foundation (NSSF). Formed in 1961, NSSF has a membership of more than 8,000 manufacturers, distributors, firearms retailers, shooting ranges, sportsman's organizations and publishers. According to NSSF, our Winchester business, Vista Outdoor Inc. (Vista), and Remington Outdoor Company, Inc. (Remington) are the three largest commercial ammunition manufacturers in the U.S. The ammunition industry is highly competitive with us, Vista, Remington, numerous smaller domestic manufacturers and foreign producers competing for sales to the commercial ammunition customers. Many factors influence our ability to compete successfully, including price, delivery, service, performance, product innovation and product recognition and quality, depending on the product involved.

EMPLOYEES

As of December 31, 2015, we had approximately 6,200 employees, with 5,200 working in the U.S. and 1,000 working in foreign countries. Various labor unions represent a majority of our hourly-paid employees for collective bargaining purposes.

The following labor contract is scheduled to expire in 2016:

Location	Number of Employees	Expiration Date
East Alton (Winchester)	676	December 2016

While we believe our relations with our employees and their various representatives are generally satisfactory, we cannot assure that we can conclude this labor contract or any other labor agreements without work stoppages and cannot assure that any work stoppages will not have a material adverse effect on our business, financial condition or results of operations.

RESEARCH ACTIVITIES; PATENTS

Our research activities are conducted on a product-group basis at a number of facilities. Company-sponsored research expenditures were $4.9 million in 2015, $4.1 million in 2014 and $2.5 million in 2013.

We own or license a number of patents, patent applications and trade secrets covering our products and processes. We believe that, in the aggregate, the rights under our patents and licenses are important to our operations, but we do not consider any individual patent or license or group of patents and licenses related to a specific process or product to be of material importance to our total business.

SEASONALITY

Our sales are affected by the cyclicality of the economy and the seasonality of several industries we serve, including building and construction, coatings, infrastructure, electronics, automotive, bleach, refrigerants and ammunition. The seasonality of the ammunition business is typically driven by the fall hunting season. The chlor alkali industry is cyclical, both as a result of changes in demand for each of the co-produced products and as a result of the large increments in which new capacity is added and removed. Because chlorine and caustic soda are produced in a fixed ratio, the supply of one product can be constrained both by the physical capacity of the production facilities and/or by the ability to sell the co-produced product. Prices for both products respond rapidly to changes in supply and demand. The cyclicality of the chlor alkali industry has further impacts on downstream products. In general, our chlor alkali businesses experience their highest level of activity during the spring and summer months, particularly when construction, refrigerants, coatings and infrastructure activity is higher. With the addition of the Acquired Business, we have significantly increased the diversification of our chlorine outlets allowing us to better manage the cyclical nature of the industry.

RAW MATERIALS AND ENERGY

Basic raw materials are processed through an integrated manufacturing process to produce a number of products that are sold at various points throughout the process. We purchase a portion of our raw material requirements and also utilize internal resources, co-products and finished goods as raw materials for downstream products. We believe we have reliable sources of supply for our raw materials under normal market conditions. However, we cannot predict the likelihood or impact of any future raw material shortages.

The principal basic raw materials for our production of Chlor Alkali Products and Vinyls' products are electricity, salt, ethylene, potassium chloride, methanol and hydrogen. A portion of our purchases of our raw materials, including ethylene, are made under long-term supply agreements, while approximately 80% of the salt used in our Chlor Alkali Products and Vinyls segment is produced from internal resources.

The Epoxy segment's principal raw materials are chlorine, benzene, propylene and aromatics which consist of cumene, phenol, acetone and BisA. A portion of our purchases of our raw materials, including benzene, propylene and a portion of our aromatics requirements, are made under long-term supply agreements, while a portion of our aromatics requirements are produced from our integrated production chain. Chlorine is predominately sourced from our Chlor Alkali Products and Vinyls segment.

Lead, brass and propellant are the principal raw materials used in the Winchester business. We typically purchase our ammunition cartridge case cups and copper-based strip, and propellants pursuant to multi-year contracts.

Electricity is the predominant energy source for our manufacturing facilities. Approximately 85% of our electricity is generated from natural gas or hydroelectric sources. In conjunction with the Acquisition, we entered into long-term power supply contracts with TDCC in addition to acquiring power assets which allow for cost differentiation at specific U.S. manufacturing sites.

We provide additional information with respect to specific raw materials in the tables set forth under "Products and Services."

ENVIRONMENTAL AND TOXIC SUBSTANCES CONTROLS

As is common in our industry, we are subject to environmental laws and regulations related to the use, storage, handling, generation, transportation, emission, discharge, disposal and remediation of, and exposure to, hazardous and non-hazardous substances and wastes in all of the countries in which we do business.

The establishment and implementation of national, state or provincial and local standards to regulate air, water and land quality affect substantially all of our manufacturing locations around the world. Laws providing for regulation of the manufacture, transportation, use and disposal of hazardous and toxic substances, and remediation of contaminated sites have imposed additional regulatory requirements on industry, particularly the chemicals industry. In addition, implementation of environmental laws has required and will continue to require new capital expenditures and will increase operating costs.

We employ waste minimization and pollution prevention programs at our manufacturing sites and we are a party to various governmental and private environmental actions associated with former waste disposal sites and past manufacturing facilities. Charges to income for investigatory and remedial efforts were material to operating results in the past three years and may be material to operating results in future years.

In connection with the Acquisition, TDCC retained liabilities relating to releases of hazardous materials and violations of environmental law to the extent arising prior to the Closing Date.

See our discussion of our environmental matters contained in Item 3—"Legal Proceedings" below, the Note "Environmental" of the notes to consolidated financial statements contained in Item 8 and Item 7—"Management's Discussion and Analysis of Financial Condition and Results of Operations."

Item 1A. RISK FACTORS

In addition to the other information in this Form 10-K, the following factors should be considered in evaluating Olin and our business. All of our forward-looking statements should be considered in light of these factors. Additional risks and uncertainties that we are unaware of or that we currently deem immaterial also may become important factors that affect us.

Sensitivity to Global Economic Conditions and Cyclicality—Our operating results could be negatively affected during economic downturns.

The business of most of our customers, particularly our vinyl, urethanes and pulp and paper customers are, to varying degrees, cyclical and have historically experienced periodic downturns. These economic and industry downturns have been characterized by diminished product demand, excess manufacturing capacity and, in some cases, lower average selling prices. Therefore, any significant downturn in our customers' businesses or in global economic conditions could result in a reduction in demand for our products and could adversely affect our results of operations or financial condition.

Although we historically have not sold a large percentage of our products directly to customers abroad, a large part of our financial performance is dependent upon a healthy economy beyond North America because our customers sell their products abroad. Additionally, the percentage of our sales to customers abroad is expected to increase significantly since the

Acquired Business derives a larger portion of its sales from customers outside the U.S. As a result, our business is and will continue to be affected by general economic conditions and other factors in Europe, Asia Pacific, particularly China and Japan, and Latin America, including fluctuations in interest rates, customer demand, labor and energy costs, currency changes and other factors beyond our control. The demand for our customers' products, and therefore, our products, is directly affected by such fluctuations. In addition, our customers could decide to move some or all of their production to lower cost, offshore locations, and this could reduce demand in North America for our products. We cannot assure you that events having an adverse effect on the industries in which we operate will not occur or continue, such as a downturn in the European, Asia Pacific, particularly China and Japan, Latin American, or world economies, increases in interest rates or unfavorable currency fluctuations. Economic conditions in other regions of the world, predominantly Asia and Europe, can increase the amount of caustic soda produced and available for export to North America. The increased caustic soda supply can put downward pressure on our caustic soda prices, negatively impacting our profitability.

Cyclical Pricing Pressure—Our profitability could be reduced by declines in average selling prices of our products, particularly declines in ECU netbacks for chlorine and caustic soda.

Our historical operating results reflect the cyclical and sometimes volatile nature of the chemical and ammunition industries. We experience cycles of fluctuating supply and demand in each of our business segments, particularly in our Chlor Alkali Products and Vinyls segment, which result in changes in selling prices. Periods of high demand, tight supply and increasing operating margins tend to result in increases in capacity and production until supply exceeds demand, generally followed by periods of oversupply and declining prices. Another factor influencing demand and pricing for chlorine and caustic soda is the price of natural gas. Higher natural gas prices increase our customers' and competitors' manufacturing costs, and depending on the ratio of crude oil to natural gas prices, could make them less competitive in world markets. Continued expansion offshore, particularly in Asia, will continue to have an impact on the ECU values as imported caustic soda replaces some capacity in North America.

In the chlor alkali industry, price is the major supplier selection criterion. We have little or no ability to influence prices in these large commodity markets. Decreases in the average selling prices of our products could have a material adverse effect on our profitability. While we strive to maintain or increase our profitability by reducing costs through improving production efficiency, emphasizing higher margin products and by controlling transportation, selling and administration expense, we cannot assure you that these efforts will be sufficient to offset fully the effect of possible decreases in pricing on operating results.

Because of the cyclical nature of our businesses, we cannot assure you that pricing or profitability in the future will be comparable to any particular historical period, including the most recent period shown in our operating results. We cannot assure you that the chlor alkali industry will not experience adverse trends in the future, or that our business, financial condition and results of operations will not be adversely affected by them.

Our Winchester and Epoxy segments are also subject to changes in operating results as a result of cyclical pricing pressures, but to a lesser extent than our Chlor Alkali Products and Vinyls segment. Selling prices of ammunition and epoxy materials are affected by changes in raw material costs and availability and customer demand, and declines in average selling prices of products of our Winchester and Epoxy segments could adversely affect our profitability.

Indebtedness—Our indebtedness could adversely affect our financial condition.

As of December 31, 2015, we had $3,881.7 million of indebtedness outstanding. Outstanding indebtedness does not include amounts that could be borrowed under our $500.0 million senior revolving credit facility, under which $489.6 million was available for borrowing as of December 31, 2015 because we had issued $10.4 million of letters of credit. As of December 31, 2015, our indebtedness represented 61.6% of our total capitalization. At December 31, 2015, $206.5 million of our indebtedness was due within one year. Despite our level of indebtedness, we expect to continue to have the ability to borrow additional debt.

Our indebtedness could have important consequences, including but not limited to:

- limiting our ability to fund working capital, capital expenditures, and other general corporate purposes;

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limiting our ability to accommodate growth by reducing funds otherwise available for other corporate purposes and to compete, which in turn could prevent us from fulfilling our obligations under our indebtedness;

- limiting our operational flexibility due to the covenants contained in our debt agreements;

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- to the extent that our debt is subject to floating interest rates, increasing our vulnerability to fluctuations in market interest rates;
- limiting our ability to pay cash dividends;
- limiting our flexibility for, or reacting to, changes in our business or industry or economic conditions, thereby limiting our ability to compete with companies that are not as highly leveraged; and
- increasing our vulnerability to economic downturns.

Our ability to generate sufficient cash flow from operations to make scheduled payments on our debt will depend on a range of economic, competitive and business factors, many of which are outside our control. There can be no assurance that our business will generate sufficient cash flow from operations to make these payments. If we are unable to meet our expenses and debt obligations, we may need to refinance all or a portion of our indebtedness before maturity, sell assets or issue additional equity. We may not be able to refinance any of our indebtedness, sell assets or issue additional equity on commercially reasonable terms or at all, which could cause us to default on our obligations and impair our liquidity. Our inability to generate sufficient cash flow to satisfy our debt obligations, or to refinance our debt obligations on commercially reasonable terms, would have a material adverse effect on our business, financial condition and results of operations, as well as on our ability to satisfy our debt obligations.

Credit Facilities—Weak industry conditions could affect our ability to comply with the financial maintenance covenants in our senior credit facilities.

Our senior credit facilities include certain financial maintenance covenants requiring us to not exceed a maximum leverage ratio and to maintain a minimum coverage ratio.

Depending on the magnitude and duration of chlor alkali cyclical downturns, including deterioration in prices and volumes, there can be no assurance that we will continue to be in compliance with these ratios. If we failed to comply with either of these covenants in a future period and were not able to obtain waivers from the lenders, we would need to refinance our current senior credit facilities. However, there can be no assurance that such refinancing would be available to us on terms that would be acceptable to us or at all.

Integration—Our integration of the Acquired Business may not be successful or the anticipated benefits from the Acquisition may not be realized.

As a result of the addition of the Acquired Business, we have significantly more sales, assets and employees than we did prior to the Closing Date. The integration process will require us to expend capital and significantly expand the scope of our operations and financial systems. Our management will be required to devote a significant amount of time and attention to the process of integrating the operations of our business and the Acquired Business. There is a significant degree of difficulty and management involvement inherent in that process. These difficulties include, but are not limited to:

- integrating the operations of the Acquired Business while carrying on the ongoing operations of our existing business;
- managing a significantly larger company than before the Closing Date;
- the possibility of faulty assumptions underlying our expectations regarding the integration process;
- coordinating a greater number of diverse businesses located in a greater number of geographic locations, including in global regions and countries in which we have not previously had operations;
- operating in geographic markets or industry sectors in which we may have little or no experience;

- complying with laws of new jurisdictions in which we have not previously operated;
- integrating business systems and models;
- attracting and retaining the necessary personnel associated with the Acquired Business following the Closing Date;

- creating and implementing uniform standards, controls, procedures, policies and information systems and controlling the costs associated with such matters; and
- integrating information technology, purchasing, accounting, finance, sales, billing, payroll and regulatory compliance systems, and meeting external reporting requirements following the Closing Date.

All of the risks associated with the integration process could be exacerbated by the fact that we may not have a sufficient number of employees with the requisite expertise to integrate the businesses or to operate our business after the Closing Date. If we do not hire or retain employees with the requisite skills and knowledge to run our business, it may have a material adverse effect on our business, financial condition and results of operations.

Even if we are able to combine the two business operations successfully, it may not be possible to realize the benefits of the increased sales volume and other benefits, including the expected synergies that are expected to result from the addition of the Acquired Business, or realize these benefits within the time frame that is expected. The costs to realize the anticipated synergies, including integration fees and capital spending, may be greater than anticipated. For example, the elimination of duplicative costs may not be possible or may take longer than anticipated, or the benefits from the Acquisition may be offset by costs incurred or delays in integrating the companies. In addition, the quantification of synergies expected to result from the Acquisition is based on significant estimates and assumptions that are subjective in nature and inherently uncertain. The amount of synergies actually realized, if any, and the time periods in which any such synergies are realized, could differ materially from the expected synergies discussed in this document, regardless of whether we are able to combine the two business operations successfully.

If we are unable to successfully integrate the Acquired Business or if we are unable to realize the anticipated synergies and other benefits of the Acquisition, there could be a material adverse effect on our business, financial condition and results of operations.

Raw Materials—Availability of purchased feedstocks and energy, and the volatility of these costs, impact our operating costs and add variability to earnings.

Purchased feedstock and energy costs account for a substantial portion of our total production costs and operating expenses. We purchase certain raw materials as feedstocks.

Feedstock and energy costs generally follow price trends in crude oil and natural gas, which are sometimes volatile. Ultimately, the ability to pass on underlying cost increases is dependent on market conditions. Conversely, when feedstock and energy costs decline, selling prices generally decline as well. As a result, volatility in these costs could impact our business, financial condition and results of operations.

If the availability of any of our principal feedstocks is limited or we are unable to obtain natural gas or energy from any of our energy sources, we may be unable to produce some of our products in the quantities demanded by our customers, which could have a material adverse effect on plant utilization and our sales of products requiring such raw materials. In connection with the Acquisition, we entered into long-term supply agreements with TDCC for certain raw materials, including ethylene, propylene and benzene. The initial term of the majority of these supply agreements is either five or ten years (a small number of agreements have shorter or longer initial terms) beginning on the Closing Date. As these contracts with TDCC and other third-party contracts expire, we may be unable to renew these contracts or obtain new long-term supply agreements on terms comparable or as favorable to us, depending on market conditions, which may have a material adverse effect on our business, financial condition and results of operations. In addition, many of our long-term contracts contain provisions that allow their suppliers to limit the amount of raw materials shipped to us below the contracted amount in force majeure circumstances. If we are required to obtain alternate sources for raw materials because TDCC or any other supplier is unwilling or unable to perform under raw material supply agreements or if a supplier terminates its agreements with us, we may not be able to obtain these raw materials from alternative suppliers or obtain new long-term supply agreements on terms comparable or favorable to us.

Suppliers—We rely on a limited number of outside suppliers for specified feedstocks and services.

We obtain, a significant portion of our raw materials from a few key suppliers. If any of these suppliers are unable to meet their obligations under present or any future supply agreements, we may be forced to pay higher prices to obtain the necessary raw materials. Any interruption of supply or any price increase of raw materials could have a material adverse effect on our business, financial condition and results of operations. In connection with the Acquisition, we entered into agreements with TDCC to provide specified feedstocks and services for the facilities operated by the Acquired Business. T hese facilities will be dependent upon TDCC's infrastructure for services such as wastewater and ground water treatment. Any failure of

TDCC to perform its obligations under those agreements could adversely affect the operation of the affected facilities and our business, financial condition and results of operations. Many of the agreements relating to these feedstocks and services have initial terms ranging from several years to 20 years. Most of these agreements are automatically renewable, but may be terminated by us or TDCC after specified notice periods. If we are required to obtain an alternate source for these feedstocks or services, we may not be able to obtain pricing on as favorable terms. A dditionally, we may be forced to pay additional transportation costs or to invest in capital projects for pipelines or alternate facilities to accommodate railcar or other delivery methods or to replace other services.

A vendor may choose, subject to existing contracts, to modify its relationship due to general economic concerns or concerns relating to the vendor or us, at any time. Any significant change in the terms that we have with our key suppliers could materially adversely affect our business, financial condition and results of operation, as could significant additional requirements from its suppliers that we provide them additional security in the form of prepayments or posting letters of credit.

Imbalance in Demand for Our Chlor Alkali Products—A loss of a substantial customer for our chlorine or caustic soda could cause an imbalance in customer demand for these products, which could have an adverse effect on our results of operations.

Chlorine and caustic soda are produced simultaneously and in a fixed ratio of 1.0 ton of chlorine to 1.1 tons of caustic soda. The loss of a substantial chlorine or caustic soda customer could cause an imbalance in customer demand for our chlorine and caustic soda products. An imbalance in customer demand may require Olin to reduce production of both chlorine and caustic soda or take other steps to correct the imbalance. Since Olin cannot store large quantities of chlorine, we may not be able to respond to an imbalance in customer demand for these products as quickly or efficiently as some of our competitors. If a substantial imbalance occurred, we would need to reduce prices or take other actions that could have a material adverse impact on our business, results of operations and financial condition.

Security and Chemicals Transportation—New regulations on the transportation of hazardous chemicals and/or the security of chemical manufacturing facilities and public policy changes related to transportation safety could result in significantly higher operating costs.

The transportation of our products and feedstocks, including transportation by pipeline, and the security of our chemical manufacturing facilities are subject to extensive regulation. Government authorities at the local, state and federal levels could implement new or stricter regulations that would impact the security of chemical plant locations and the transportation of hazardous chemicals. Our Chlor Alkali Products and Vinyls segment could be adversely impacted by the cost of complying with any new regulations. Our business also could be adversely affected if an incident were to occur at one of our facilities or while transporting product. The extent of the impact would depend on the requirements of future regulations and the nature of an incident, which are unknown at this time.

Effects of Regulation—Changes in legislation or government regulations or policies could have a material adverse effect on our financial position or results of operations.

Legislation that may be passed by Congress or other legislative bodies or new regulations that may be issued by federal and other administrative agencies, including import and export duties and quotas, anti-dumping regulations and related tariffs, could significantly affect the sales, costs and profitability of our business. The chemical and ammunition industries are subject to legislative and regulatory actions, which could have a material adverse effect on our business, financial position or results of operations. Existing and future government regulations and laws may reduce the demand for our products, including certain chlorinated organic products, such as dry cleaning solvents. Any decrease in the demand for chlorinated organic products could result in lower unit sales and lower selling prices for such chlorinated organic products, which would have a material adverse effect on our business, financial condition and results of operations.

Cost Control—Our profitability could be reduced if we experience increasing raw material, utility, transportation or logistics costs, or if we fail to achieve targeted cost reductions.

Our operating results and profitability are dependent upon our continued ability to control, and in some cases reduce, our costs. In addition, our expected benefits from the Acquisition are dependent upon our ability to reduce our costs following the Closing Date. If we are unable to do so, or if costs outside of our control, particularly our costs of raw materials, utilities, transportation and similar costs, increase beyond anticipated levels, our profitability will decline

and we will not realize the level of cost reductions anticipated following the Closing Date.
For example, our chlor alkali product transportation costs, particularly railroad shipment costs, are a significant portion of our cost of goods sold, and have been increasing over the past several years. Part of the anticipated cost reductions from the Acquisition are due to transportation cost efficiencies from the increased number of manufacturing locations and the Acquired

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Business's utilization of diverse modes of delivery for products which we currently deliver by rail. If transportation costs continue to increase, and we are unable to control those costs or pass the increased costs on to customers, our profitability in our Chlor Alkali Products and Vinyls and Epoxy segments would be negatively affected. Similarly, costs of commodity metals and other materials used in our Winchester business, such as copper and lead, can vary. If we experience significant increases in these costs and are unable to raise our prices to offset the higher costs, the profitability in our Winchester business would be negatively affected.

Credit and Capital Market Conditions—Adverse conditions in the credit and capital markets may limit or prevent our ability to borrow or raise capital.

While we believe we have facilities in place that should allow us to borrow funds as needed to meet our ordinary course business activities, adverse conditions in the credit and financial markets could prevent us from obtaining financing, if the need arises. Our ability to invest in our businesses and refinance or repay maturing debt obligations could require access to the credit and capital markets and sufficient bank credit lines to support cash requirements. If we are unable to access the credit and capital markets on commercially reasonable terms, we could experience a material adverse effect on our business, financial position or results of operations.

Environmental Costs—We have ongoing environmental costs, which could have a material adverse effect on our financial position or results of operations.

Our operations and assets are subject to extensive environmental, health and safety regulations, including laws and regulations related to air emissions, water discharges, waste disposal and remediation of contaminated sites. The nature of our operations and products, including the raw materials we handle, exposes us to the risk of liabilities, obligations or claims under these laws and regulations due to the production, storage, use, transportation and sale of materials that can cause contamination or personal injury, including, in the case of chemicals, potential releases into the environment. Environmental laws may have a significant effect on the costs of use, transportation and storage of raw materials and finished products, as well as the costs of the storage and disposal of wastes. In addition, we are party to various governmental and private environmental actions associated with past manufacturing facilities and former waste disposal sites. We have incurred, and expect to incur, significant costs and capital expenditures in complying with environmental laws and regulations.

The ultimate costs and timing of environmental liabilities are difficult to predict. Liabilities under environmental laws relating to contaminated sites can be imposed retroactively and on a joint and several basis. One liable party could be held responsible for all costs at a site, regardless of fault, percentage of contribution to the site or the legality of the original disposal. We could incur significant costs, including clean-up costs, natural resource damages, civil or criminal fines and sanctions and third-party lawsuits claiming, for example, personal injury and/or property damage, as a result of past or future violations of, or liabilities under, environmental or other laws.

In addition, future events, such as changes to or more rigorous enforcement of environmental laws, could require us to make additional expenditures, modify or curtail our operations and/or install pollution control equipment. It is possible that regulatory agencies may enact new or more stringent clean-up standards for chemicals of concern, including chlorinated organic products that we manufacture. This could lead to expenditures for environmental remediation in the future that are additional to existing estimates.

Accordingly, it is possible that some of the matters in which we are involved or may become involved may be resolved unfavorably to us, which could materially adversely affect our business, financial position, cash flows or results of operations. See "Environmental Matters" contained in Item 7—"Management's Discussion and Analysis of Financial Condition and Results of Operations."

Litigation and Claims—We are subject to litigation and other claims, which could cause us to incur significant expenses.

We are a defendant in a number of pending legal proceedings relating to our present and former operations. These include product liability claims relating to ammunition and firearms and proceedings alleging injurious exposure of plaintiffs to various chemicals and other substances (including proceedings based on alleged exposures to asbestos). Frequently, the proceedings alleging injurious exposure involve claims made by numerous plaintiffs against many defendants. Because of the inherent uncertainties of litigation, we are unable to predict the outcome of these proceedings and therefore cannot determine whether the financial impact, if any, will be material to our financial position, cash flows or results of operations.

Integration of Information Technology Systems—Operation on multiple Enterprise Resource Planning ("ERP") information systems, and the conversion from multiple systems to a single system, may negatively impact our operations.
We are highly dependent on our information systems infrastructure in order to process orders, track inventory, ship products in a timely manner, prepare invoices to our customers, maintain regulatory compliance and otherwise carry on our business in the ordinary course. We currently operate on an ERP information system and the Acquired Business operates on a separate ERP system. Since we will be required to process and reconcile our information from multiple systems, the chance of errors has increased, and we may incur significant additional costs related thereto. Inconsistencies in the information from multiple ERP systems could adversely impact our ability to manage our business efficiently and may result in heightened risk to our ability to maintain our books and records and comply with regulatory requirements. We expect that we may transition all or a portion of the operations of the Acquired Business from one ERP system to another. The transition to a different ERP system involves numerous risks, including:

- diversion of management's attention away from normal daily business operations;
- loss of, or delays in accessing, data;
- increased demand on our operations support personnel;
- increased costs;
- initial dependence on unfamiliar systems while training personnel to use new systems; and
- increased operating expenses resulting from training, conversion and transition support activities.

Any of the foregoing could result in a material increase in information technology compliance or other related costs, and could materially and negatively impact our business, results of operations or financial condition.
Information Security—A failure of our information technology systems, or an interruption in their operation, could have a material adverse effect on our business, financial condition or results of operations.
Our operations are dependent on our ability to protect our information systems, computer equipment and information databases from systems failures. We rely on our information technology systems generally to manage the day-to-day operation of our business, operate elements of our manufacturing facilities, manage relationships with our customers, fulfill customer orders and maintain our financial and accounting records. Failure of our information technology systems could be caused by internal or external events, such as incursions by intruders or hackers, computer viruses, cyber-attacks, failures in hardware or software, or power or telecommunication fluctuations or failures. The failure of our information technology systems to perform as anticipated for any reason or any significant breach of security could disrupt our business and result in numerous adverse consequences, including reduced effectiveness and efficiency of operations, increased costs or loss of important information, any of which could have a material adverse effect on our business, financial condition or results of operations. We have technology and information security processes and disaster recovery plans in place to mitigate our risk to these vulnerabilities. However, these measures may not be adequate to ensure that our operations will not be disrupted, should such an event occur.
Production Hazards—Our facilities are subject to operating hazards, which may disrupt our business.
We are dependent upon the continued safe operation of our production facilities. Our production facilities are subject to hazards associated with the manufacture, handling, storage and transportation of chemical materials and products and ammunition, including leaks and ruptures, explosions, fires, inclement weather and natural disasters, unexpected utility disruptions or outages, unscheduled downtime, transportation interruptions, transportation accidents involving our chemical products, chemical spills and other discharges or releases of toxic or hazardous substances or gases and environmental hazards. From time to time in the past, we have had incidents that have temporarily shut down or otherwise disrupted our manufacturing, causing production delays and resulting in liability for workplace injuries and fatalities. Some of our products involve the manufacture and/or handling of a variety of explosive and flammable materials. Use of these products by our customers could also result in liability if an explosion, fire, spill or other accident were to occur. We cannot assure you that we will not experience these types of incidents in the future or that these incidents will not result in production delays or otherwise have a material adverse effect on our business, results

of operations or financial condition. In the past, major hurricanes have caused significant disruption in the Acquired Business's operations on the U.S. Gulf Coast, logistics across the region and the supply of certain raw materials, which had an adverse impact on volume and cost for some of the Acquired Business's products. Due to the substantial presence we have on the U.S. Gulf Coast, similar severe weather conditions or other natural phenomena in the future could negatively affect our results of operations.

Third Party Transportation—We rely heavily on third party transportation, which subjects us to risks and costs that we cannot control, and which risks and costs may have a material adverse effect on our financial position or results of operations.

We rely heavily on railroad, truck, marine vessel, barge and other shipping companies to transport finished products to customers and to transport raw materials to the manufacturing facilities used by each of our businesses. These transport operations are subject to various hazards and risks, including extreme weather conditions, work stoppages and operating hazards, as well as interstate transportation regulations. In addition, the methods of transportation we utilize, including shipping chlorine and other chemicals by railroad and by barge, may be subject to additional, more stringent and more costly regulations in the future. If we are delayed or unable to ship finished products or unable to obtain raw materials as a result of any such new regulations or public policy changes related to transportation safety, or these transportation companies' failure to operate properly, or if there were significant changes in the cost of these services due to new additional regulations, or otherwise, we may not be able to arrange efficient alternatives and timely means to obtain raw materials or ship goods, which could result in a material adverse effect on our business, financial position or results of operations. If any third-party railroad which we utilize to transport chlorine and other chemicals ceases to transport toxic-by-inhalation hazardous ("TIH") materials, or if there are significant changes in the cost of shipping TIH materials by rail or otherwise, we may not be able to arrange efficient alternatives and timely means to deliver our products or at all, which could result in a material adverse effect on our business, financial position or results of operations.

Pension Plans—The impact of declines in global equity and fixed income markets on asset values and any declines in interest rates and/or improvements in mortality assumptions used to value the liabilities in our pension plans may result in higher pension costs and the need to fund the pension plans in future years in material amounts.

Under Accounting Standard Codification (ASC) 715 "Compensation-Retirement Benefits" (ASC 715), we recorded an after-tax charge of $78.8 million ($125.3 million pretax) to shareholders' equity as of December 31, 2015 for our pension and other postretirement plans. This charge reflected unfavorable performance on plan assets during 2015, partially offset by a 50-basis point increase in the domestic pension plans' discount rate. In 2014, we recorded an after-tax charge of $86.6 million ($142.0 million pretax) to shareholders' equity as of December 31, 2014 for our pension and other postretirement plans. This charge reflected a 60-basis point decrease in the plans' discount rate and the negative impact of the newly mandated mortality tables, partially offset by favorable performance on plan assets during 2014. In 2013, we recorded an after-tax charge of $7.7 million ($12.5 million pretax) to shareholders' equity as of December 31, 2013 for our pension and other postretirement plans. This charge reflected unfavorable performance on plan assets during 2013, partially offset by a 60-basis point increase in the plans' discount rate. These non-cash charges to shareholders' equity do not affect our ability to borrow under our senior credit facility.

The determinations of pension expense and pension funding are based on a variety of rules and regulations. Changes in these rules and regulations could impact the calculation of pension plan liabilities and the valuation of pension plan assets. They may also result in higher pension costs, additional financial statement disclosure, and the need to fund the pension plan. Effective as of the Closing Date, we changed the approach used to measure service and interest costs for our defined benefit pension plans and on December 31, 2015 changed this approach for our other postretirement benefits. Prior to the Closing Date, we measured service and interest costs utilizing a single weighted-average discount rate derived from the yield curve used to measure the plan obligations. Subsequent to the Closing Date for our defined benefit pension plans and beginning in 2016 for our other postretirement benefits, we elected to measure service and interest costs by applying the specific spot rates along the yield curve to the plans' estimated cash flows. We believe the new approach provides a more precise measurement of service and interest costs by aligning the timing of the plans' liability cash flows to the corresponding spot rates on the yield curve. This change does not affect the measurement of our plan obligations. We have accounted for this change as a change in accounting estimate and, accordingly, have accounted for it on a prospective basis.

During the fourth quarter of 2014, the Society of Actuaries (SOA) issued the final report of its mortality tables and mortality improvement scales. The updated mortality data reflected increasing life expectancies in the U.S. During the third quarter of 2012, the "Moving Ahead for Progress in the 21st Century Act" (MAP-21) became law. The law changed the mechanism for determining interest rates to be used for calculating minimum defined benefit pension plan funding requirements. Interest rates are determined using an average of rates for a 25-year period, which can have the effect of increasing the annual discount rate, reducing the defined benefit pension plan obligation and potentially reducing or eliminating the minimum annual funding requirement. The law also increased premiums paid to the Pension Benefit Guaranty Corporation (PBGC). During the third quarter of 2014, the "Highway and Transportation Funding Act" (HATFA 2014) became law, which includes an extension of MAP-21's defined benefit plan funding stabilization relief.

Based on our plan assumptions and estimates, we will not be required to make any cash contributions to the domestic qualified defined benefit pension plan at least through 2016.
We have several international qualified defined benefit pension plans to which we made cash contributions of $0.9 million in 2015, $0.8 million in 2014 and $1.0 million in 2013, and we anticipate less than $5 million of cash contributions to international qualified defined benefit pension plans in 2016.
At December 31, 2015, the projected benefit obligation of $2,680.8 million exceeded the market value of assets in our qualified defined benefit pension plans by $644.3 million, as calculated under ASC 715.
In addition, the impact of declines in global equity and fixed income markets on asset values may result in higher pension costs and may increase and accelerate the need to fund the pension plans in future years. For example, holding all other assumptions constant, a 100-basis point decrease or increase in the assumed long-term rate of return on plan assets would have decreased or increased, respectively, the 2015 defined benefit pension plans income by approximately $18.7 million.
Holding all other assumptions constant, a 50-basis point decrease in the discount rate used to calculate pension income for 2015 and the projected benefit obligation as of December 31, 2015 would have decreased pension income by $1.4 million and increased the projected benefit obligation by $146.0 million. A 50-basis point increase in the discount rate used to calculate pension income for 2015 and the projected benefit obligation as of December 31, 2015 would have increased pension income by $1.5 million and decreased the projected benefit obligation by $133.0 million.
We assumed certain material pension benefit obligations associated with the Acquired Business. These liabilities and the related future funding obligations could restrict cash available for our operations, capital expenditures and other requirements, and may materially adversely affect its financial condition and liquidity.
In accordance with TDCC's election, our U.S. tax-qualified defined benefit pension plan assumed certain U.S. tax-qualified defined benefit pension obligations related to active employees and certain terminated, vested retirees of the Acquired Business with a net liability of approximately $286.5 million, which amount remains subject to adjustment. In connection therewith, pension assets will be transferred from TDCC's U.S. tax-qualified defined benefit pension plans to our U.S. tax-qualified defined benefit pension plan. In addition to the standard minimum funding requirements, the Pension Protection Act of 2006 (as amended by the Worker, Retiree and Employer Recovery Act of 2008) (the Pension Act) requires companies with U.S. tax-qualified defined benefit pension plans to make contributions to such plans as frequently as quarterly in order to meet the "funding target" for such plans, as defined in the Pension Act. The failure to meet a minimum required percentage of the funding target in any given year could result in adverse consequences, including the imposition of fines or penalties. Funding obligations with respect to U.S. tax-qualified defined benefit pension plans change due to, among other things, the actual investment return on plan assets and changes in interest rates and/or mortality assumptions. Continued volatility in the capital markets may have a further negative impact on the funded status of U.S. tax-qualified defined benefit pension plans, which may in turn increase attendant funding obligations. Given the amount of pension assets that may be transferred from TDCC's U.S. tax-qualified defined benefit pension plans to our U.S. tax-qualified defined benefit pension plan, and subject to the foregoing and other variables, and the associated uncertainties, it is possible that we could be required to make substantial additional contributions in future years to our tax-qualified defined benefit pension plan attributable to the transferred pension liabilities. These contributions could restrict available cash for our operations, capital expenditures and other requirements, and may materially adversely affect its financial condition and liquidity.
In addition, we assumed certain accrued defined benefit pension liabilities relating to employees of TDCC in Germany, Switzerland and other international locations who transferred as part of the Acquired Business. These liabilities and the related future payment obligations could restrict cash available for our operations, capital expenditures and other requirements, and may materially adversely affect its financial condition and liquidity.
Foreign Exchange Rates—Fluctuations in foreign currency exchange could affect our consolidated financial results.
We earn revenues, pay expenses, own assets and incur liabilities in countries using currencies other than the USD. Because our consolidated financial statements are presented in USD, we must translate revenues and expenses into USD at the average exchange rate during each reporting period, as well as assets and liabilities into USD at exchange rates in effect at the end of each reporting period. Therefore, increases or decreases in the value of the USD against other major currencies will affect our net revenues, operating income and the value of balance sheet items

denominated in foreign currencies. Because of the geographic diversity of our operations, weaknesses in various currencies might occur in one or many of such currencies over time. From time to time, we may use derivative financial instruments to further reduce our net exposure to currency exchange rate fluctuations. However, we cannot assure you that fluctuations in foreign currency exchange rates, particularly the strengthening of the USD against major currencies, would not materially adversely affect our financial results.

Labor Matters—We cannot assure you that we can conclude future labor contracts or any other labor agreements without work stoppages.
Various labor unions represent, a majority of our hourly paid employees for collective bargaining purposes. The following labor contract is scheduled to expire in 2016:

Location	Number of Employees	Expiration Date
East Alton (Winchester)	676	December 2016

While we believe our relations with our employees and their various representatives are generally satisfactory, we cannot assure that we can conclude any labor agreements without work stoppages and cannot assure that any work stoppages will not have a material adverse effect on our business, financial condition or results of operations.

Ability to Attract and Retain Qualified Employees—We must attract, retain and motivate key employees, and the failure to do so may adversely affect our business, financial condition or results of operations.
We feel our success depends on hiring, retaining and motivating key employees, including executive officers. We may have difficulty locating and hiring qualified personnel. In addition, we may have difficulty retaining such personnel once hired, and key people may leave and compete against us. The loss of key personnel or our failure to attract and retain other qualified and experienced personnel could disrupt or materially adversely affect our business, financial condition or results of operations. In addition, our operating results could be adversely affected by increased costs due to increased competition for employees, higher employee turnover, which may result in the loss of significant customer business or increased costs.

We may be unable to provide the same types and level of benefits, services and resources to the Acquired Business that historically have been provided by TDCC, or may be unable to provide them at the same cost.

As part of TDCC, the Acquired Business was historically able to receive benefits and services from TDCC and was able to benefit from TDCC's financial strength and extensive business relationships. The Acquired Business is now owned by Olin and will no longer benefit from TDCC's resources. While we have entered into agreements under which TDCC has agreed to provide certain transition services and site-related services following the Closing Date, we cannot assure that we will be able to adequately replace those resources or replace them at the same cost. If we are not able to replace the resources provided by TDCC or are unable to replace them at the same cost or are delayed in replacing the resources provided by TDCC, our business, financial condition and results of operations may be materially adversely impacted.

The historical financial information of the Acquired Business may not be representative of its results or financial condition if it had been operated independently of TDCC and, as a result, may not be a reliable indicator of its future results.

The financial information of the Acquired Business prior to the Closing Date and included within the unaudited pro forma financial information within this document has been derived from the consolidated financial statements and accounting records of TDCC and reflects all direct costs as well as assumptions and allocations made by TDCC management. The financial position, results of operations and cash flows of the Acquired Business presented may be different from those that would have resulted had the Acquired Business been operated independently of TDCC during the applicable periods or at the applicable dates.

The unaudited pro forma financial information of Olin and the Acquired Business is not intended to reflect what actual results of operations and financial condition would have been had Olin and the Acquired Business been a combined company for the periods presented, and therefore these results may not be indicative of Olin's future operating performance.

The unaudited pro forma financial information presented in this document is for illustrative purposes only and is not intended to, and does not purport to, represent what our actual results or financial condition would have been if the Acquisition had occurred on the relevant date. The unaudited pro forma financial information has been prepared using the acquisition method of accounting. Under the acquisition method of accounting, the purchase price is allocated to the underlying tangible and intangible assets acquired and liabilities assumed based on their respective fair values with any excess purchase price allocated to goodwill. The pro forma purchase price allocation was based on the preliminary fair value of the tangible and intangible assets and liabilities of the Acquired Business. The final purchase price allocation may be different than that reflected in the pro forma purchase price allocation presented herein, and this difference may be material.

The unaudited pro forma financial information does not reflect the costs of any integration activities or transaction-related costs or incremental capital spending that Olin management believes are necessary to realize the anticipated synergies from the Acquisition. Accordingly, the unaudited pro forma financial information included in this document does not reflect what our results of operations or operating condition would have been had Olin and the Acquired Business been a consolidated entity during all periods presented, or what our results of operations and financial condition will be in the future.

Olin's business, financial condition and results of operations may be adversely affected following the Closing Date if we cannot negotiate contract terms that are as favorable as those TDCC had received when we replace certain contracts after the Closing Date.

Prior to the Closing Date, certain functions (such as purchasing, accounts payable processing, accounts receivable management, information systems, logistics and distribution) for the Acquired Business were generally being performed under TDCC's centralized systems and, in some cases, under contracts that are also used for TDCC's other businesses and which were not intended to be assigned in whole or in part to the combined business. In addition, some other contracts to which TDCC is a party on behalf of the Acquired Business will require consents of third parties to assign them to us or our subsidiaries. There can be no assurance that we will be able to negotiate contract terms that are as favorable as those TDCC received when and if we replace these contracts with our own agreements for similar services, including any contracts that may need to be replaced as a result of a failure to obtain required third-party consents. Although we believe that we will be able to enter into new agreements for similar services and that we will be able to obtain all material third-party consents required to assign contracts to us, it is possible that the failure to enter into new agreements for similar services or to obtain required consents to assign contracts could have a material adverse impact on our business, financial condition and results of operations following the Closing Date.

We may be affected by significant restrictions following the Closing Date in order to avoid significant tax-related liabilities.

In connection with the Acquisition, we entered into a Tax Matters Agreement (the Tax Matters Agreement) with TDCC. The Tax Matters Agreement generally prohibits us and our affiliates from taking certain actions that could cause certain related transactions consummated on the Closing Date, to fail to qualify as tax-free transactions. In particular, unless an exception applies, for a two-year period following the Closing Date, we may not:

- enter into any transaction or series of transactions (or any agreement, understanding or arrangement) as a result of which one or more persons would acquire (directly or indirectly) stock comprising 50 percent or more of the vote or value of Blue Cube Spinco Inc. (Spinco) (taking into account the stock of Spinco acquired pursuant to the Agreement and Plan of Merger (Merger Agreement) and Separation Agreement dated March 26, 2015);

- redeem or repurchase any stock or stock rights;

- amend our certificate of incorporation or take any other action affecting the relative voting rights of our capital stock;

- merge or consolidate with any other person (other than pursuant to the Merger Agreement and Separation Agreement dated March 26, 2015);

- take any other action that would, when combined with any other direct or indirect changes in ownership of Spinco capital stock (including pursuant to the Merger Agreement and Separation Agreement dated March 26, 2015), have the effect of causing one or more persons to acquire stock comprising 50 percent or more of the vote or value of Spinco, or would reasonably be expected to adversely affect the tax-free status of the related transactions consummated on the Closing Date;

- discontinue the active conduct of the Acquired Business; or
- sell, transfer or otherwise dispose of assets (including stock of subsidiaries) that constitute more than 35 percent of the consolidated gross assets of Spinco and/or its subsidiaries (subject to exceptions for, among other things, ordinary course dispositions and repayments or prepayments of Spinco debt).

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If we decide to take any such restricted action, we will be required to cooperate with TDCC in obtaining a supplemental Internal Revenue Service (IRS) ruling or an unqualified tax opinion acceptable to TDCC to the effect that such action will not affect the status of certain related transactions consummated on the Closing Date as tax-free transactions. However, if we take any of the above actions and such action results in tax-related losses to TDCC, then we generally will be required to indemnify TDCC for such losses, without regard to whether TDCC has given us prior consent.

Due to these restrictions and indemnification obligations under the Tax Matters Agreement, we may be limited in our ability to pursue strategic transactions, equity or convertible debt financings or other transactions that may otherwise be in our best interests. Also, our potential indemnity obligation to TDCC might discourage, delay or prevent a change of control during this two-year period that our shareholders may consider favorable to our ability to pursue strategic transactions, equity or convertible debt financings, or other transactions that may otherwise be in our best interests.

Item 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

Item 2. PROPERTIES

Information concerning our principal locations at or from which our products and services are manufactured, distributed or marketed are included in the tables set forth under the caption “Products and Services” contained in Item 1—“Business.” Generally, these facilities are well maintained, in good operating condition, and suitable and adequate for their use. Our two largest facilities are co-located with TDCC. The land in which these facilities are located is leased with a 99 year term. Additionally, we lease warehouses, terminals and distribution offices and space for executive and branch sales offices and service departments. We believe our current facilities are adequate to meet the requirements of our present operations.

Item 3. LEGAL PROCEEDINGS

Saltville

We have completed all work in connection with remediation of mercury contamination at the site of our former mercury cell chlor alkali plant in Saltville, VA required to date. In mid-2003, the Trustees for natural resources in the North Fork Holston River, the Main Stem Holston River and associated floodplains, located in Smyth and Washington Counties in Virginia and in Sullivan and Hawkins Counties in Tennessee notified us of, and invited our participation in, an assessment of alleged damages to natural resources resulting from the release of mercury. The Trustees also notified us that they have made a preliminary determination that we are potentially liable for natural resource damages in said rivers and floodplains. We agreed to participate in the assessment. We and the Trustees have entered into discussions concerning a resolution of this matter. In light of the ongoing discussions and inherent uncertainties of the assessment, we cannot at this time determine whether the financial impact, if any, of this matter will be material to our financial position or results of operations. See “Environmental Matters” contained in Item 7—“Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

Other

As part of the continuing environmental investigation by federal, state and local governments of waste disposal sites, we have entered into a number of settlement agreements requiring us to participate in the investigation and cleanup of a number of sites. Under the terms of such settlements and related agreements, we may be required to manage or perform one or more elements of a site cleanup, or to manage the entire remediation activity for a number of parties, and subsequently seek recovery of some or all of such costs from other Potentially Responsible Parties (PRPs). In many cases, we do not know the ultimate costs of our settlement obligations at the time of entering into particular settlement agreements, and our liability accruals for our obligations under those agreements are often subject to significant management judgment on an ongoing basis. Those cost accruals are provided for in accordance with generally accepted accounting principles and our accounting policies set forth in "Environmental Matters" contained in Item 7—"Management's Discussion and Analysis of Financial Condition and Results of Operations."

We, and our subsidiaries, are defendants in various other legal actions (including proceedings based on alleged exposures to asbestos) incidental to our past and current business activities. At December 31, 2015 and 2014, our consolidated balance sheets included liabilities for these legal actions of $21.2 million and $22.1 million, respectively. These liabilities do not include costs associated with legal representation. Based on our analysis, and considering the inherent uncertainties associated with litigation, we do not believe that it is reasonably possible that these legal actions will materially adversely affect our financial position, cash flows or results of operations. In connection with the Acquisition, TDCC retained liabilities relating to the Acquired Business for litigation, releases of hazardous materials and violations of environmental law to the extent arising prior to the Closing Date.

Item 4. MINE SAFETY DISCLOSURES

Not applicable.

Executive Officers of the Registrant as of February 29, 2016

Name and Age	Office	Served as an Olin Officer Since
Joseph D. Rupp (65)	Chairman and Chief Executive Officer	1996
Scott R. Abel (52)	Vice President and Vice President, Chlorine, Co-Products and Distribution	2014
Frank W. Chirumbole (57)	Vice President and President, Chlor Alkali Products	2011
Stephen C. Curley (64)	Vice President and Treasurer	2005
Pat D. Dawson (58)	Executive Vice President and President, Epoxy and International	2015
Dolores J. Ennico (63)	Vice President, Human Resources	2009
John E. Fischer (60)	President and Chief Operating Officer	2004
Clive A. Grannum (50)	Vice President and President, Global Chlorinated Organics	2015
G. Bruce Greer, Jr. (55)	Vice President, Strategic Planning and Information Technology	2005
John L. McIntosh (61)	Executive Vice President and President, Chemicals and Ammunition	1999
Thomas J. O'Keefe (57)	Vice President and President, Winchester	2011
George H. Pain (65)	Senior Vice President, General Counsel and Secretary	2002
John M. Sampson (55)	Vice President and Vice President, Manufacturing and Engineering, Chlor Alkali Vinyls, Epoxy and Global Chlorinated Organics	2015
Todd A. Slater (52)	Vice President and Chief Financial Officer	2005
Randee N. Sumner (41)	Vice President and Controller	2014
James A. Varilek (57)	Executive Vice President and President, Chlor Alkali Vinyls and Services	2015

No family relationship exists between any of the above named executive officers or between any of them and any of our directors. Such officers were elected to serve, subject to the Bylaws, until their respective successors are chosen.

All executive officers, except Messrs. Abel, Chirumbole, Dawson, Grannum, O'Keefe, Sampson and Varilek and Ms. Sumner, have served as executive officers for more than five years.

All executive officers who have been employed by Olin for over five years, except Messrs. Chirumbole, Fischer, McIntosh, O'Keefe and Slater and Ms Sumner, have served in their current position for more than five years.

Scott R. Abel was appointed Vice President, Chlorine, Co-Products and Distribution effective January 29, 2016, adding business responsibility for chlorine and co-products to the duties he assumed in April 2014 of leading the Chemical Distribution business, which commenced on April 24, 2015 when he became Vice President of Olin and President, Chemical Distribution. From 2012 to 2014, he served as Commercial Vice President at KOST USA, Inc. From 2009 to 2012, he served as Business Director – Glycols at Archer Daniels Midland Company. From 2008 to 2009, he served as Global Marketing Director – Acrylic Monomers; and from 1989 through 2007, he served in various sales and commercial management positions including marketing roles in Chlor-Alkali and Global Chlorinated Organics, all at TDCC.

Frank W. Chirumbole assumed his current duties on April 28, 2011 and was appointed Vice President of Olin and President, Chlor Alkali Products effective April 26, 2012. From October 2010 until April 2012, he served as President, Chlor Alkali Products; from 2009 until September 2010, he served as Vice President, General Manager - Bleach; from 2007 to 2009, he served as Vice President, Supply Chain Management; and from 2001 to 2007, he served as Vice President, Manufacturing and Engineering, all at Olin Chlor Alkali Products.

Pat D. Dawson was appointed Executive Vice President of Olin and President, Epoxy and International effective October 5, 2015. From July 2013 through September 2015, he was Senior Vice President, Epoxy and Corporate Project Development; from 2010 to 2013, he served as the President of Dow Asia Pacific; and from 2004 to 2010, he served as Group President for the Polyurethanes Business, all at TDCC. His career began in 1980 at TDCC.

John E. Fischer has served as President and Chief Operating Officer since May 2014 and will become President and Chief Executive Officer effective May 1, 2016. From October 2010 until May 2014, he served as Senior Vice President and Chief Financial Officer; from May 2005 to October 2010, he served as Vice President and Chief Financial Officer; and from June 2004 until May 2005, he served as Vice President, Finance and Controller, all at Olin.

Clive A. Grannum was appointed Vice President of Olin and President, Global Chlorinated Organics effective October 5, 2015. From December 2013 to October 2015, he served as Business President, Global Chlorinated Organics; from 2011 to 2013, he was the business leader for Global Chlorinated Organics and Plastics additives businesses, all at TDCC. He retained the Plastics Additives leadership role after TDCC's acquisition of Rohm and Haas in 2009. From 2008 to 2009, he served as the Vice President of Plastic Additives for Rohm and Haas. Prior to Rohm and Haas, he held multiple roles of increasing responsibilities at The BOC Group and The ICI Group with the last role being Vice President of ICI and Senior Vice President, Uniqema Americas.

John L. McIntosh was appointed Executive Vice President, Chemicals and Ammunition effective October 5, 2015. From May 2014 until October 4, 2015, he served as Senior Vice President, Chemicals; from January 2011 until April 2014, he served as Senior Vice President, Operations; and from October 2010 until December 2010, he served as Senior Vice President, Chemicals, all at Olin.

Thomas J. O'Keefe assumed his current duties on April 28, 2011 and was appointed Vice President of Olin and President, Winchester effective April 26, 2012. From 2010 to 2011, he served as President, Winchester; from 2008 to 2010, he served as Vice President, Operations and Planning; and from 2006 to 2008 he was Vice President, Manufacturing Operations, in each case, at Winchester. From 2001 to 2006, he was Vice President, Manufacturing and Engineering for Olin's former Brass Division.

John M. Sampson was appointed Vice President of Olin and Vice President, Manufacturing and Engineering, Chlor Alkali Vinyls, Epoxy and Global Chlorinated Organics effective October 5, 2015. From February 2014 to October 2015, he served as Vice President, Dow Chlorine Products Operations; from November 2012 to February 2014, he served as Vice President of Environmental, Health, & Safety Operations; from 2011 to 2012, he served as Manufacturing Vice President for Chemicals & Energy; and from 2007 to 2011, he served as Global Business Director for Chlor-Alkali, all at TDCC. His career began at TDCC in 1983.

Todd A. Slater was appointed Vice President and Chief Financial Officer effective May 4, 2014. From October 2010 until May 3, 2014, he served as Vice President, Finance and Controller; and from May 2005 until September 2010, he served as Vice President and Controller, all at Olin.

Randee N. Sumner was appointed Vice President and Controller effective May 4, 2014. From December 2012 until April 2014, she served as Division Financial Officer for Chemical Distribution. From 2010 until December 2012, she served as Assistant Controller; from 2008 to 2010, she served as Director, Corporate Accounting and Financial Reporting; and from 2006 to 2008, she served as Manager, Corporate Accounting and Financial Reporting, all at Olin.

James A. Varilek was appointed Executive Vice President of Olin and President, Chlor Alkali Vinyls and Services effective October 5, 2015. In November 2013, he was named President of the U.S. Chlor Alkali & Vinyl Business and in March 2015, he assumed additional responsibilities as Chief Operating Officer of Dow Chlorine Products; from December 2010 to November 2013, he was Business Vice President for the Dow Services Business, adding Vice President for Procurement in July 2013; from November 2008 to December 2010, he was Vice President for Business Services, Advanced Materials Division; and from February 2006 to November 2008, he was Vice President of Global Supply Chain, all at TDCC. His career began at TDCC in 1982.

PART II

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

As of January 29, 2016, we had 4,445 record holders of our common stock.

Our common stock is traded on the New York Stock Exchange.

The high and low sales prices of our common stock during each quarterly period in 2015 and 2014 are listed below. A dividend of $0.20 per common share was paid during each of the four quarters in 2015 and 2014.

2015	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Market price of common stock per New York Stock Exchange composite transactions				
High	$34.34	$32.56	$27.18	$22.13
Low	22.00	26.77	15.73	16.60
2014				
Market price of common stock per New York Stock Exchange composite transactions				
High	$29.18	$29.28	$28.08	$25.97
Low	24.51	26.42	25.23	20.43

Issuer Purchases of Equity Securities

Period	Total Number of Shares (or Units) Purchased	Average Price Paid per Share (or Unit)	Total Number of Shares (or Units) Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares (or Units) that May Yet Be Purchased Under the Plans or Programs
October 1-31, 2015	—	—	—	
November 1-30, 2015	—	—	—	
December 1-31, 2015	—	—	—	
Total				6,062,657 (1)

(1) On April 24, 2014, we announced a share repurchase program approved by the board of directors for the purchase of up to 8 million shares of common stock that will terminate on April 24, 2017. Through December 31, 2015, 1,937,343 shares had been repurchased, and 6,062,657 shares remained available for purchase under this program. Under the Merger Agreement relating to the Acquisition, we were restricted from repurchasing shares of our common stock prior to the consummation of the merger. For a period of two years subsequent to the Closing Date, we will continue to be subject to certain restrictions on our ability to conduct share repurchases.

Performance Graph

This graph compares the total shareholder return on our common stock with the cumulative total return of the Standard & Poor's 1000 Index (the S&P 1000) and a customized peer group of five companies comprised of: Orbital ATK, Inc., Axiall, TDCC, Oxy, and Westlake Chemical Corporation.

Data is for the five-year period from December 31, 2010 through December 31, 2015. The cumulative return includes reinvestment of dividends. The Peer Group is weighted in accordance with market capitalization (closing stock price multiplied by the number of shares outstanding) as of the beginning of each of the five years covered by the performance graph. We calculated the weighted return for each year by multiplying (a) the percentage that each corporation's market capitalization represented of the total market capitalization for all corporations in the Peer Group for such year by (b) the total shareholder return for that corporation for such year.

Item 6. SELECTED FINANCIAL DATA

FIVE-YEAR SUMMARY

	2015	2014	2013	2012	2011
Operations	($ and shares in millions, except per share data)				
Sales	$2,854	$2,241	$2,515	$2,185	$1,961
Cost of goods sold	2,487	1,853	2,034	1,748	1,574
Selling and administration	187	166	190	169	161
Restructuring charges	3	16	6	9	11
Acquisition-related costs	123	4	—	8	—
Other operating income	46	2	1	8	9
Earnings of non-consolidated affiliates	2	2	3	3	10
Interest expense	97	44	39	26	30
Interest and other income (expense)	2	1	—	(10)	176
Income before taxes from continuing operations	7	163	250	226	380
Income tax provision	8	58	71	76	138
Income (loss) from continuing operations	(1)	105	179	150	242
Discontinued operations, net	—	1	—	—	—
Net (loss) income	$(1)	$106	$179	$150	$242
Financial position					
Cash and cash equivalents, short-term investments and restricted cash	$392	$257	$312	$177	$357
Working capital, excluding cash and cash equivalents and short-term investments	394	182	125	150	76
Property, plant and equipment, net	3,953	931	988	1,034	885
Total assets	9,322	2,698	2,803	2,778	2,450
Capitalization:					
Short-term debt	207	16	13	24	12
Long-term debt	3,675	659	678	690	524
Shareholders' equity	2,419	1,013	1,101	998	986
Total capitalization	$6,301	$1,688	$1,792	$1,712	$1,522
Per share data					
Basic:					
Continuing operations	$(0.01)	$1.33	$2.24	$1.87	$3.02
Discontinued operations, net	—	0.01	—	—	—
Net (loss) income	$(0.01)	$1.34	$2.24	$1.87	$3.02
Diluted:					
Continuing operations	$(0.01)	$1.32	$2.21	$1.85	$2.99
Discontinued operations, net	—	0.01	—	—	—
Net (loss) income	$(0.01)	$1.33	$2.21	$1.85	$2.99
Common Cash Dividends	0.80	0.80	0.80	0.80	0.80
Market price of common stock:					
High	34.34	29.28	29.52	23.48	27.16
Low	15.73	20.43	21.29	18.40	16.11
Year end	17.26	22.77	28.85	21.59	19.65
Other					
Capital expenditures	$131	$72	$91	$256	$201
Depreciation and amortization	229	139	135	111	99
Common dividends paid	80	63	64	64	64

Repurchases of common stock	—	65	36	3	4
Current ratio	1.7	2.2	2.1	1.7	2.0
Total debt to total capitalization	61.6 %	40.0 %	38.6 %	41.7 %	35.2 %
Effective tax rate	120.9 %	35.5 %	28.6 %	33.6 %	36.3 %
Average common shares outstanding - diluted	103.4	79.7	80.9	81.0	80.8
Shareholders	4,500	3,600	3,900	4,100	4,400
Employees	6,200	3,900	4,100	4,100	3,800

Since February 28, 2011, our Selected Financial Data reflects the acquisition of the remaining 50% of the SunBelt Chlor Alkali Partnership, which we refer to as SunBelt. Since August 22, 2012, our Selected Financial Data reflects the acquisition of K.A. Steel Chemicals Inc. (KA Steel). Since October 5, 2015, our Selected Financial Data reflects the operating results of the Acquired Business.

Item 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

BUSINESS BACKGROUND

We are a leading vertically-integrated global manufacturer and distributor of chemical products and a leading U.S. manufacturer of ammunition. Our operations are concentrated in three business segments: Chlor Alkali Products and Vinyls, Epoxy and Winchester. All of our business segments are capital intensive manufacturing businesses. Chlor Alkali Products and Vinyls operating rates are closely tied to the general economy. Each segment has a commodity element to it, and therefore, our ability to influence pricing is quite limited on the portion of the segment’s business that is strictly commodity.

Our Chlor Alkali Products and Vinyls segment is a commodity business where all supplier products are similar and price is the major supplier selection criterion. We have little or no ability to influence prices in the large, global commodity markets. Our Chlor Alkali Products and Vinyls segment produces some of the most widely used chemicals in the world that can be upgraded into a wide variety of downstream chemical products used in many end-markets. Cyclical price swings, driven by changes in supply/demand, can be abrupt and significant and, given capacity in our Chlor Alkali Products and Vinyls segment, can lead to very significant changes in our overall profitability.

The Epoxy segment consumes products manufactured by the Chlor Alkali Products and Vinyls segment. While competitive differentiation exists through downstream customization and product development opportunities, pricing is extremely competitive with a broad range of competitors across the globe.

Winchester also has a commodity element to its business, but a majority of Winchester ammunition is sold as a branded consumer product where there are opportunities to differentiate certain offerings through innovative new product development and enhanced product performance. While competitive pricing versus other branded ammunition products is important, it is not the only factor in product selection.

RECENT DEVELOPMENTS AND HIGHLIGHTS

Acquisition

On the Closing Date, we acquired from TDCC the Acquired Business, whose operating results are included in the accompanying financial statements since the date of the Acquisition. For segment reporting purposes, the Acquired Business’s Global Epoxy operating results comprise the newly created Epoxy segment and the Acquired Chlor Alkali Business operating results combined with our former Chlor Alkali Products and Chemical Distribution segments to comprise the newly created Chlor Alkali Products and Vinyls segment.
Under the Merger Agreement dated March 26, 2015, the aggregate purchase price for the Acquired Business was $5,162.2 million, subject to certain post-closing adjustments. The $5,162.2 million consisted of $2,095.0 million of cash and debt transferred to TDCC and approximately 87.5 million shares of Olin common stock valued at approximately $1,527.4 million, plus the assumption of pension liabilities of approximately $447.1 million and long-term debt of $569.0 million. In connection with the Acquisition, TDCC retained liabilities relating to the Acquired Business for litigation, releases of hazardous materials and violations of environmental law to the extent arising prior to the Closing Date. The value of the common stock was based on the closing stock price on the last trading day prior to the Closing Date of $17.46.
Certain additional agreements have been entered into, including, among others, an Employee Matters Agreement, a Tax Matters Agreement, site, transitional and other service agreements, supply and purchase agreements, real estate agreements, technology licenses and intellectual property agreements. Payments of approximately $90.2 million,

subject to certain post-closing adjustments, will be made related to certain acquisition related liabilities including the estimated working capital adjustment. In addition, Olin and TDCC have agreed in connection with the Acquisition to enter into arrangements for the long-term supply of ethylene by TDCC to Olin, pursuant to which, among other things, Olin made upfront payments of $433.5 million in order to receive ethylene at producer economics and for certain reservation fees for the option to obtain additional future ethylene supply at producer economics.

In connection with the Acquisition, we filed a Certificate of Amendment to our Articles of Incorporation to increase the number of authorized shares of Olin common stock from 120.0 million shares to 240.0 million shares. Olin issued approximately 87.5 million shares of Olin common stock on the Closing Date that represented approximately 53% of the outstanding shares of Olin common stock. Olin's pre-merger shareholders continued to hold the remaining approximately 47% of the outstanding shares of Olin common stock.

We financed the cash and debt portion of the Acquisition with new long-term debt which consisted of $720.0 million aggregate principal amount of 9.75% senior notes due October 15, 2023, $500.0 million aggregate principal amount of 10.00% senior notes due October 15, 2025 and a $1,350.0 million five-year senior term loan facility, a portion of which was used to refinance the remaining $146.3 million outstanding on an existing term loan facility. Also in connection with the Acquisition, we obtained a three-year senior term loan facility in an aggregate principal amount of $800.0 million, which was primarily used to refinance existing indebtedness of the Acquired Business outstanding that was assumed by Olin.

The Acquired Business's results of operations have been included in our consolidated results for the period subsequent to the Closing Date. Our results for the year ended December 31, 2015 include Epoxy sales of $429.6 million and a segment loss of $7.5 million and the Acquired Chlor Alkali Business sales of $373.0 million and segment income of $37.2 million.

During 2015, we incurred costs in connection with the Acquisition, including $76.3 million of advisory, legal, accounting, integration and other professional fees and $30.5 million of financing-related fees. In addition, $47.1 million of costs were incurred as a result of the change in control which created a mandatory acceleration of expenses under deferred compensation plans as a result of the Acquisition.

As a result of the Acquisition, we believe we can generate at least $250 million in annual cost synergies by 2019, or if we are able to increase sales to new third-party customers and access new product markets as a result of the Acquisition, the potential for additional annual synergies of up to $100 million. We expect to incur $100 million to $150 million in transition-related costs during the first three years and $200 million in incremental capital spending during the first three years which we believe are necessary to realize the anticipated synergies.

2015 Overview

In 2015, Chlor Alkali Products and Vinyls generated segment income of $115.5 million for 2015 compared to $130.1 million for 2014. Chlor Alkali Products and Vinyls segment income was lower than the prior year due to decreased chlorine, caustic soda, potassium hydroxide and hydrochloric acid volumes and lower product prices. These decreases were partially offset by the contributions of the Acquired Chlor Alkali Business, lower operating costs, primarily due to lower energy costs, and insurance recoveries. Chlor Alkali Products and Vinyls segment income also included $6.7 million of additional costs of goods sold related to the fair value adjustment related to the preliminary purchase accounting for inventory. The lower product prices were predominantly due to caustic soda, partially offset by higher chlorine prices. The insurance recoveries represent reimbursement of costs incurred and expensed in prior periods, primarily related to the portion of the Becancour, Canada chlor alkali facility that has been shut down since late June 2014. Chlor Alkali Products and Vinyls segment income included depreciation and amortization expense of $186.1 million and $119.4 million for 2015 and 2014, respectively.

Epoxy segment loss for 2015 was $7.5 million, respectively, which represent the segment's operating results from the Closing Date through December 31, 2015. Epoxy segment loss included $17.3 million of additional costs of goods sold related to the fair value adjustment related to the preliminary purchase accounting for inventory. Epoxy segment loss included depreciation and amortization expense of $20.9 million for 2015.

Winchester reported segment income of $115.6 million for 2015 compared to $127.3 million for 2014. The decrease in segment income in 2015 compared to 2014 reflects lower volumes and a less favorable product mix for pistol and shotshell ammunition and lower product pricing. These decreases were partially offset by decreased commodity and other material costs. Winchester's segment income included depreciation and amortization expense of $17.4 million and $16.3 million for 2015 and 2014, respectively.

Other operating income in 2015 included insurance recoveries for property damage and business interruption of $42.3 million related to the portion of the Becancour, Canada chlor alkali facility that has been shut down since late June 2014 and $3.7 million related to the McIntosh, AL chlor alkali facility.

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PENSION AND POSTRETIREMENT BENEFITS

Under ASC 715, we recorded an after-tax charge of $78.8 million ($125.3 million pretax) to shareholders' equity as of December 31, 2015 for our pension and other postretirement plans. This charge reflected unfavorable performance on plan assets during 2015, partially offset by a 50-basis point increase in the domestic pension plans' discount rate. In 2014, we recorded an after-tax charge of $86.6 million ($142.0 million pretax) to shareholders' equity as of December 31, 2014 for our pension and other postretirement plans. This charge reflected a 60-basis point decrease in the plans' discount rate and the negative impact of the newly mandated mortality tables, partially offset by favorable performance on plan assets during 2014. Our benefit obligation as of December 31, 2014 increased approximately $90 million pretax as a result of the newly mandated mortality tables. In 2013, we recorded an after-tax charge of $7.7 million ($12.5 million pretax) to shareholders' equity as of December 31, 2013 for our pension and other postretirement plans. This charge reflected unfavorable performance on plan assets during 2013, partially offset by a 60-basis point increase in the plans' discount rate. The non-cash charges to shareholders' equity do not affect our ability to borrow under our senior credit facility.

Effective as of the Closing Date, we changed the approach used to measure service and interest costs for our defined benefit pension plans and on December 31, 2015 changed this approach for our other postretirement benefits. Prior to the Closing Date, we measured service and interest costs utilizing a single weighted-average discount rate derived from the yield curve used to measure the plan obligations. Subsequent to the Closing Date for our defined benefit pension plans and beginning in 2016 for our other postretirement benefits, we elected to measure service and interest costs by applying the specific spot rates along the yield curve to the plans' estimated cash flows. We believe the new approach provides a more precise measurement of service and interest costs by aligning the timing of the plans' liability cash flows to the corresponding spot rates on the yield curve. This change does not affect the measurement of our plan obligations. We have accounted for this change as a change in accounting estimate and, accordingly, have accounted for it on a prospective basis.

During the fourth quarter of 2014, the SOA issued the final report of its mortality tables and mortality improvement scales. The updated mortality data reflected increasing life expectancies in the U.S. During the third quarter of 2012, the MAP-21 became law. The law changed the mechanism for determining interest rates to be used for calculating minimum defined benefit pension plan funding requirements. Interest rates are determined using an average of rates for a 25-year period, which can have the effect of increasing the annual discount rate, reducing the defined benefit pension plan obligation, and potentially reducing or eliminating the minimum annual funding requirement. The law also increased premiums paid to the PBGC. During the third quarter of 2014, HATFA 2014 became law, which includes an extension of MAP-21's defined benefit plan funding stabilization relief.

As of the Closing Date and as part of the Acquisition, our U.S. qualified defined benefit pension plan assumed certain U.S. qualified defined benefit pension obligations and assets related to active employees and certain terminated, vested retirees of the Acquired Business with an estimated net liability of $286.5 million, subject to certain post-closing adjustments. In connection therewith, pension assets will be transferred from TDCC's U.S. qualified defined benefit pension plans to our U.S. qualified defined benefit pension plan. Immediately prior to the Acquisition, the Acquired Business's participant accounts assumed in the Acquisition were closed to new participants and were no longer accruing additional benefits.

Based on our plan assumptions and estimates, we will not be required to make any cash contributions to the domestic qualified defined benefit pension plan at least through 2016.

As of the Closing Date, we assumed certain accrued defined benefit pension liabilities relating to employees of TDCC in Germany, Switzerland and other international locations who transferred to Olin in connection with the Acquisition. The estimated net liability assumed as of the Closing Date was $160.6 million, subject to post-closing adjustments.

We also have a small Canadian defined benefit pension liability. In connection with international qualified defined benefit pension plans, we made cash contributions of $0.9 million, 0.8 million and $1.0 million in 2015, 2014, and 2013, respectively, and we anticipate less than $5 million of cash contributions to international qualified defined benefit pension plans in 2016.

At December 31, 2015, the projected benefit obligation of $2,680.8 million exceeded the market value of assets in our qualified defined benefit pension plans by $644.3 million, as calculated under ASC 715.

Components of net periodic benefit costs (income) were:

	Years ended December 31,		
	2015	2014	2013
	($ in millions)		
Pension costs (benefits)	$18.7	$(25.0)	$(20.5)
Other postretirement benefits	6.7	6.6	7.5

For the year ended December 31, 2015, pension costs included $47.1 million of costs incurred as a result of the change in control which created a mandatory acceleration of expenses under our domestic non-qualified pension plan as a result of the Acquisition.

For both the years ended December 31, 2015 and 2014, we recorded a curtailment charge of $0.2 million associated with permanently closing a portion of the Becancour, Canada chlor alkali facility that has been shut down since late June 2014. These charges were included in restructuring charges.

The service cost and the amortization of prior service cost components of pension expense related to employees of the operating segments are allocated to the operating segments based on their respective estimated census data.

CONSOLIDATED RESULTS OF OPERATIONS

	Years ended December 31,		
	2015	2014	2013
	($ in millions, except per share data)		
Sales	$2,854.4	$2,241.2	$2,515.0
Cost of goods sold	2,486.8	1,853.2	2,033.7
Gross margin	367.6	388.0	481.3
Selling and administration	186.5	166.2	190.0
Restructuring charges	2.7	15.7	5.5
Acquisition-related costs	123.4	4.2	—
Other operating income	45.7	1.5	0.7
Operating income	100.7	203.4	286.5
Earnings of non-consolidated affiliates	1.7	1.7	2.8
Interest expense	97.0	43.8	38.6
Interest income	1.1	1.3	0.6
Other income (expense)	0.2	0.1	(1.3)
Income from continuing operations before taxes	6.7	162.7	250.0
Income tax provision	8.1	57.7	71.4
Income (loss) from continuing operations	(1.4)	105.0	178.6
Income from discontinued operations, net	—	0.7	—
Net (loss) income	$(1.4)	$105.7	$178.6
Net (loss) income per common share:			
Basic (loss) income per common share:			
Income (loss) from continuing operations	$(0.01)	$1.33	$2.24
Income from discontinued operations, net	—	0.01	—
Net (loss) income	$(0.01)	$1.34	$2.24
Diluted (loss) income per common share:			
Income (loss) from continuing operations	$(0.01)	$1.32	$2.21
Income from discontinued operations, net	—	0.01	—
Net (loss) income	$(0.01)	$1.33	$2.21

2015 Compared to 2014

Sales for 2015 were $2,854.4 million compared to $2,241.2 million last year, an increase of $613.2 million, or 27%. Sales of the Acquired Business were $802.6 million. Chlor Alkali Products and Vinyls sales generated from legacy businesses decreased by $162.4 million primarily due to lower chlorine, caustic soda, potassium hydroxide and hydrochloric acid volumes and lower product prices, predominantly caustic soda partially offset by higher chlorine prices. Winchester sales decreased by $27.0 million primarily due to lower shipments to commercial customers, partially offset by increased shipments to military customers.

Gross margin decreased $20.4 million, or 5%, from 2014. Gross margin of the Acquired Business was $52.8 million, which included additional costs of goods sold of $24.0 million related to the fair value adjustment related to the preliminary purchase accounting for inventory. Chlor Alkali Products and Vinyls gross margin from our legacy business declined $55.4 million, primarily due to decreased chlorine, caustic soda, potassium hydroxide and hydrochloric acid volumes and lower product prices, partially offset by lower operating costs and property damage and business interruption insurance recoveries. The lower product prices were predominantly due to caustic soda and bleach, partially offset by higher chlorine prices. Winchester gross margin was lower by $12.1 million primarily due to lower volumes and a less favorable product mix for pistol and shotshell ammunition, partially offset by decreased commodity and other material costs. Gross margin was also negatively impacted by higher environmental costs of

$7.5 million. Gross margin as a percentage of sales was 13% in 2015 and 17% in 2014.

Selling and administration expenses in 2015 increased $20.3 million, or 12%, from 2014, primarily due to selling and administration costs of the Acquired Business of $25.4 million and an increase in stock-based compensation expense of $3.2 million, which includes mark-to-market adjustments, partially offset by decreased consulting fees of $4.8 million and lower legal and legal-related settlement expenses of $4.3 million. Selling and administration expenses as a percentage of sales were 7% for both 2015 and 2014.

Restructuring charges in 2015 and 2014 of $2.7 million and $15.7 million, respectively, were associated with permanently closing a portion of the Becancour, Canada chlor alkali facility and the ongoing relocation of our Winchester centerfire ammunition manufacturing operations from East Alton, IL to Oxford, MS. Restructuring charges in 2014 were also associated with exiting the use of mercury cell technology in the chlor alkali manufacturing process.

Acquisition-related costs for the years ended December 31, 2015 and 2014 were associated with the Acquisition. For the year ended December 31, 2015 acquisition-related costs included $47.1 million of costs incurred as a result of the change in control which created a mandatory acceleration of expenses under deferred compensation plans. For the years ended December 31, 2015 and 2014 acquisition-related costs also included $76.3 million and $4.2 million, respectively, for advisory, legal, accounting, integration and other professional fees.

Other operating income in 2015 included insurance recoveries for property damage and business interruption of $42.3 million related to the portion of the Becancour, Canada chlor alkali facility that has been shut down since late June 2014 and $3.7 million related to the McIntosh, AL chlor alkali facility. Other operating income in 2014 included a gain of $1.0 million for the resolution of a contract matter.

Interest expense increased by $53.2 million in 2015 due to acquisition financing expenses of $30.5 million primarily for the Bridge Financing associated with the Acquisition, a higher level of debt outstanding due to the financing of the Acquisition and higher interest rates. This increase was partially offset by $9.5 million related to the call premium and the write-off of unamortized deferred debt issuance costs associated with the redemption of our $150.0 million 8.875% senior notes (2019 Notes) that occurred in August 2014.

The effective tax rate from continuing operations for 2015 included $8.9 million of expense associated with certain transaction costs related to the Acquisition that are not deductible for U.S. tax purposes and $8.6 million of expense associated with incremental U.S. tax on foreign earnings. These items were partially offset by $8.7 million of benefit associated with foreign earnings taxed at a lower rate than the U.S. statutory rate and $2.6 million of benefit associated with salt depletion deductions. After giving consideration to these four items of $6.2 million, the effective tax rate from continuing operations for 2015 of 28.4% was lower than the 35% U.S. federal statutory rate, primarily due to favorable permanent tax deduction items, such as the domestic manufacturing deduction and tax deductible dividends paid to the Contributing Employee Ownership Plan (CEOP). The effective tax rate from continuing operations for 2014 included $1.2 million of benefit associated with the return to provision adjustment for the finalization of our 2013 U.S. federal and state income tax returns and $0.7 million of benefit associated with the expiration of the statutes of limitations in federal and state jurisdictions. These items were partially offset by $0.8 million of expense associated with increases in valuation allowances on certain state tax credit balances primarily associated with a change in state tax law and $0.6 million of expense related to the remeasurement of deferred taxes due to an increase in state effective tax rates. After giving consideration to these four items of $0.5 million, the effective tax rate from continuing operations for 2014 of 35.8% was slightly higher than the 35% U.S. federal statutory rate, primarily due to state income taxes net of utilization of certain state tax credits, partially offset by favorable permanent tax deduction items, such as the domestic manufacturing deduction and tax deductible dividends paid to the CEOP.

2014 Compared to 2013

Sales for 2014 were $2,241.2 million compared to $2,515.0 million in 2013, a decrease of $273.8 million, or 11%. Chlor Alkali Products and Vinyls sales decreased by $234.6 million primarily due to lower product prices, predominantly caustic soda, and decreased chlorine and caustic soda volumes, partially offset by increased shipments of hydrochloric acid and potassium hydroxide. Winchester sales decreased by $39.2 million primarily due to decreased shipments of shotshell and rifle ammunition, partially offset by increased shipments of pistol ammunition to domestic commercial customers. The decreased commercial volumes were partially offset by higher selling prices and increased shipments to international and other customers.

Gross margin decreased $93.3 million, or 19%, from 2013. Chlor Alkali Products and Vinyls gross margin decreased by $86.0 million, primarily due to lower product prices, predominantly caustic soda, and decreased chlorine and caustic soda volumes, which were partially offset by decreased operating costs and increased shipments of hydrochloric acid and potassium hydroxide. Winchester gross margin was lower by $14.2 million primarily due to decreased shipments of shotshell and rifle ammunition to domestic commercial customers, which was partially offset by higher selling prices. Gross margin as a percentage of sales was 17% in 2014 and 19% in 2013.

Selling and administration expenses in 2014 decreased $23.8 million, or 13%, from 2013, primarily due to decreased management incentive compensation expense of $18.1 million, which includes mark-to-market adjustments on stock-based compensation, decreased legal and legal-related settlement expenses of $17.1 million and decreased non-income tax expense of $3.7 million. These decreases were partially offset by the recovery of legacy legal costs of $13.9 million during 2013 and increased consulting fees of $1.3 million. Selling and administration expenses as a percentage of sales were 7% in 2014 and 8% in 2013.

Restructuring charges in 2014 included $10.0 million associated with permanently closing a portion of the Becancour, Canada chlor alkali facility. Restructuring charges in 2014 and 2013 also included $5.7 million and $5.5 million, respectively, associated with exiting the use of mercury cell technology in the chlor alkali manufacturing process and the ongoing relocation of our Winchester centerfire ammunition manufacturing operations from East Alton, IL to Oxford, MS.

Acquisition-related costs for the year ended December 31, 2014 were associated with the Acquisition. For the year ended December 31, 2014 acquisition-related costs included advisory, legal, accounting, integration and other professional fees.

Other operating income in 2014 included a gain of $1.0 million for the resolution of a contract matter. Other operating income in 2013 included a gain of $1.5 million on the sale of two former manufacturing sites.

Interest expense increased by $5.2 million in 2014, primarily due to the call premium and the write-off of unamortized deferred debt issuance costs and unamortized discount of $9.5 million associated with the redemption of the 2019 Notes and a decrease in capitalized interest of $0.9 million primarily due to the completion of the low salt, high strength bleach facility and hydrochloric acid expansion project at our Henderson, NV chlor alkali site in the first quarter of 2013. These increases were partially offset by lower interest rates.

Other income (expense) in 2013 included $7.9 million of expense for our earn out liability from the SunBelt acquisition and a gain of $6.5 million on the sale of our equity interest in a bleach joint venture.

The effective tax rate from continuing operations for 2014 included $1.2 million of benefit associated with the return to provision adjustment for the finalization of our 2013 U.S. federal and state income tax returns and $0.7 million of benefit associated with the expiration of the statutes of limitations in federal and state jurisdictions. These items were partially offset by $0.8 million of expense associated with increases in valuation allowances on certain state tax credit balances primarily associated with a change in state tax law and $0.6 million of expense related to the remeasurement of deferred taxes due to an increase in state effective tax rates. After giving consideration to these four items of $0.5 million, the effective tax rate from continuing operations for 2014 of 35.8% was slightly higher than the 35% U.S. federal statutory rate, primarily due to state income taxes net of utilization of certain state tax credits, partially offset by favorable permanent tax deduction items, such as the domestic manufacturing deduction and tax deductible dividends paid to the CEOP. The effective tax rate from continuing operations for 2013 included $11.4 million of benefit associated with the expiration of the statutes of limitations in federal and state jurisdictions, $8.3 million of benefit associated with reductions in valuation allowances on our capital loss carryforwards and $1.9 million of benefit associated with the Research Credit. These items were partially offset by $1.8 million of expense associated with changes in tax contingencies and $1.3 million of expense associated with increases in valuation allowances on certain state tax credit carryforwards. After giving consideration to these five items of $18.5 million, the effective tax rate from continuing operations for 2013 of 36.0% was slightly higher than the 35% U.S. federal statutory rate, primarily due to state income taxes net of utilization of certain state tax credits, partially offset by favorable permanent tax deduction items, such as the domestic manufacturing deduction and tax deductible dividends paid to the CEOP.

Income from discontinued operations, net for the year ended December 31, 2014 included an after tax gain of $0.7 million ($4.6 million pretax) for the favorable resolution of certain indemnity obligations related to our Metals business sold in 2007.

SEGMENT RESULTS

We define segment results as income (loss) from continuing operations before interest expense, interest income, other operating income, other income (expense) and income taxes, and include the results of non-consolidated affiliates. Consistent with the guidance in ASC 280 “Segment Reporting” (ASC 280), we have determined it is appropriate to include the operating results of non-consolidated affiliates in the relevant segment financial results. Beginning in the fourth quarter of 2015, we modified our reportable segments due to changes in our organization resulting from the Acquisition. We have three operating segments: Chlor Alkali Products and Vinyls, Epoxy and Winchester. For segment reporting purposes, the Acquired Business’s Global Epoxy operating results comprise the newly created Epoxy segment and the Acquired Chlor Alkali Business operating results combined with our former Chlor Alkali Products and Chemical Distribution segments comprise the newly created Chlor Alkali Products and Vinyls segment. The new reporting structure has been retrospectively applied to financial results for all periods presented. The three operating segments reflect the organization used by our management for purposes of allocating resources and assessing performance. Chlorine used in our Epoxy segment is transferred at cost from the Chlor Alkali Products and Vinyls segment. Sales and profits are recognized in the Chlor Alkali Products and Vinyls segment for all caustic soda generated and sold by Olin.

	Years ended December 31,		
	2015	2014	2013
Sales:	($ in millions)		
Chlor Alkali Products and Vinyls	$1,713.4	$1,502.8	$1,737.4
Epoxy	429.6	—	—
Winchester	711.4	738.4	777.6
Total sales	$2,854.4	$2,241.2	$2,515.0
Income (loss) from continuing operations before taxes:			
Chlor Alkali Products and Vinyls[(1)]	$115.5	$130.1	$213.5
Epoxy	(7.5)	—	—
Winchester	115.6	127.3	143.2
Corporate/Other:			
Pension income[(2)]	35.2	32.4	26.6
Environmental expense[(3)]	(15.7)	(8.2)	(10.2)
Other corporate and unallocated costs	(60.3)	(58.1)	(79.0)
Restructuring charges[(4)]	(2.7)	(15.7)	(5.5)
Acquisition-related costs[(5)]	(123.4)	(4.2)	—
Other operating income[(6)]	45.7	1.5	0.7
Interest expense[(7)]	(97.0)	(43.8)	(38.6)
Interest income	1.1	1.3	0.6
Other income (expense)[(8)]	0.2	0.1	(1.3)
Income from continuing operations before taxes	$6.7	$162.7	$250.0

(1) Earnings of non-consolidated affiliates are included in the Chlor Alkali Products and Vinyls segment results consistent with management’s monitoring of the operating segment. The earnings from non-consolidated affiliates were $1.7 million, $1.7 million and $2.8 million for the years ended 2015, 2014 and 2013, respectively. During October 2013, we sold our equity interest in a bleach joint venture.

(2) The service cost and the amortization of prior service cost components of pension expense related to the employees of the operating segments are allocated to the operating segments based on their respective estimated census data. All other components of pension costs are included in corporate/other and include items such as the expected

return on plan assets, interest cost and recognized actuarial gains and losses.

(3) Environmental expense for the years ended 2014 and 2013 included \$1.4 million and \$1.3 million, respectively, of recoveries from third parties for costs incurred and expensed in prior periods. Environmental expense is included in cost of goods sold in the consolidated statements of operations.

(4) Restructuring charges for the year ended 2015 were associated with permanently closing a portion of the Becancour, Canada chlor alkali facility and the ongoing relocation of our Winchester centerfire ammunition manufacturing operations from East Alton, IL to Oxford, MS. Restructuring charges for the years ended 2014 and 2013 were associated with exiting the use of mercury cell technology in the chlor alkali manufacturing process and the ongoing relocation of our Winchester centerfire ammunition manufacturing operations from East Alton, IL to Oxford, MS. Restructuring charges in 2014 were also associated with permanently closing a portion of the Becancour, Canada chlor alkali facility.

(5) Acquisition-related costs in 2015 and 2014 were related to the Acquisition. For the years ended December 31, 2015 and 2014 acquisition-related costs included advisory, legal, accounting, integration and other professional fees. For the year ended December 31, 2015 acquisition-related costs also included costs incurred as a result of the change in control which created a mandatory acceleration of expenses under deferred compensation plans.

(6) Other operating income in 2015 included insurance recoveries for property damage and business interruption of $42.3 million related to the portion of the Becancour, Canada chlor alkali facility that has been shut down since late June 2014 and $3.7 million related to the McIntosh, AL chlor alkali facility. Other operating income for the year ended 2014 included a gain of $1.0 million for the resolution of a contract matter. Other operating income for the year ended 2013 included a gain of $1.5 million on the sale of two former manufacturing sites.

(7) Interest expense for the year ended December 31, 2015 included acquisition financing expenses of $30.5 million primarily for the Bridge Financing associated with the Acquisition. Interest expense for the year ended December 31, 2014 included $9.5 million for the call premium and the write-off of unamortized deferred debt issuance costs and unamortized discount associated with the redemption of our 2019 Notes, which would have matured on August 15, 2019. Interest expense was reduced by capitalized interest of $1.1 million, $0.2 million and $1.1 million for the years ended 2015, 2014 and 2013, respectively.

(8) Other income (expense) for the year ended 2013 included $7.9 million of expense for our earn out liability from the SunBelt acquisition and a gain of $6.5 million on the sale of our equity interest in a bleach joint venture.

Chlor Alkali Products and Vinyls

2015 Compared to 2014

Chlor Alkali Products and Vinyls sales for 2015 were $1,713.4 million compared to $1,502.8 million for 2014, an increase of $210.6 million, or 14%. The sales increase was primarily due to the inclusion of the Acquired Chlor Alkali Business ($373.0 million), partially offset by lower product prices ($39.3 million) and lower volumes of chlorine and caustic soda ($96.9 million), potassium hydroxide ($17.3 million) and hydrochloric acid ($9.4 million). The lower product prices were predominantly due to caustic soda and bleach prices, partially offset by increased chlorine prices.

Chlor Alkali Products and Vinyls generated segment income of $115.5 million for 2015 compared to $130.1 million for 2014, a decrease of $14.6 million, or 11%. Chlor Alkali Products and Vinyls segment income was lower primarily due to decreased volumes ($56.9 million) and lower product prices ($39.3 million). These decreases were partially offset by the contributions of the Acquired Chlor Alkali Business ($37.2 million), lower operating costs ($22.1 million), primarily due to lower energy costs, insurance recoveries ($11.4 million) and reduced costs associated with material purchased from other parties ($10.9 million). Segment income also included $6.7 million of additional costs of goods sold related to the fair value adjustment related to the preliminary purchase accounting for inventory. The decreased volumes were primarily due to chlorine and caustic soda, potassium hydroxide and hydrochloric acid. The lower product prices were predominantly due to lower caustic soda and bleach prices, partially offset by increased chlorine prices. The insurance recoveries represent reimbursement of costs incurred and expensed in prior periods primarily related to the portion of the Becancour, Canada chlor alkali facility that has been shut down since late June 2014. Chlor Alkali Products and Vinyls segment income included depreciation and amortization expense of $186.1 million and $119.4 million for 2015 and 2014, respectively.

2014 Compared to 2013

Chlor Alkali Products and Vinyls sales for 2014 were $1,502.8 million compared to $1,737.4 million for 2013, a decrease of $234.6 million, or 14%. The sales decrease was primarily due to lower shipments of chlorine and caustic soda ($157.1 million) and lower product prices ($112.3 million), predominantly caustic soda. These decreases were partially offset by increased shipments of hydrochloric acid ($23.2 million) and potassium hydroxide ($15.5 million). Our operating rates were 80% in 2014 and 84% in 2013. The lower operating rate in 2014 was affected by planned and unplanned customer outages in the second half of 2014.

Chlor Alkali Products and Vinyls generated segment income of $130.1 million for 2014 compared to $213.5 million for 2013, a decrease of $83.4 million. Chlor Alkali Products and Vinyls segment income was lower primarily due to lower product prices ($112.3 million), predominantly caustic soda, decreased volumes ($19.4 million), primarily chlorine and caustic soda, which were partially offset by increased shipments of hydrochloric acid and potassium hydroxide, and the recognition of a favorable contract settlement during 2013 ($11.0 million). These decreases were partially offset by reduced costs associated with material purchased from other parties ($38.7 million) and lower operating costs ($20.6 million), primarily related to cost reduction efforts that were implemented during 2014.

Epoxy

Epoxy sales and segment loss for 2015 were $429.6 million and $7.5 million, respectively, which represent the segment's operating results from the Closing Date through December 31, 2015. Epoxy segment income included $17.3 million of additional costs of goods sold related to the fair value adjustment related to the preliminary purchase accounting for inventory. Epoxy segment income included depreciation and amortization expense of $20.9 million for 2015.

Winchester

2015 Compared to 2014

Winchester sales were $711.4 million for 2015 compared to $738.4 million for 2014, a decrease of $27.0 million, or 4%. The sales decrease was primarily due to lower shipments of ammunition to domestic and international commercial customers ($26.2 million), law enforcement agencies ($12.7 million) and industrial customers ($1.2 million). These decreases were partially offset by increased shipments to military customers ($13.1 million).

Winchester reported segment income of $115.6 million for 2015 compared to $127.3 million for 2014, a decrease of $11.7 million, or 9%. The decrease in segment income in 2015 compared to 2014 reflected the impact of decreased volumes and a less favorable product mix for pistol and shotshell ammunition ($16.3 million), lower selling prices ($7.7 million) and higher operating costs ($1.0 million), which include the impact of decreased costs associated with our new centerfire operation in Oxford, MS ($10.9 million). These decreases were partially offset by lower commodity and other material costs ($13.3 million). Winchester segment income included depreciation and amortization expense of $17.4 million and $16.3 million for 2015 and 2014, respectively.

2014 Compared to 2013

Winchester sales were $738.4 million for 2014 compared to $777.6 million for 2013, a decrease of $39.2 million, or 5%. Sales of ammunition to domestic commercial customers were lower ($61.8 million), primarily due to a lower level of demand for shotshell and rifle ammunition, partially offset by higher pistol ammunition. Beginning with the third quarter of 2014, Winchester began to experience a decline in commercial demand from the 2013 levels. This decrease was partially offset by increased shipments to international customers ($11.8 million), law enforcement agencies ($7.7 million), industrial customers ($2.4 million), who primarily supply the construction sector, and military customers ($0.7 million).

Winchester reported segment income of $127.3 million for 2014 compared to $143.2 million for 2013, a decrease of $15.9 million, or 11%. The decrease in segment income in 2014 compared to 2013 reflected the impact of decreased volumes ($29.6 million), primarily due to a lower level of demand for shotshell and rifle ammunition, and higher commodity and other material costs ($4.9 million). These decreases were partially offset by higher selling prices ($17.0 million) and lower operating costs ($1.6 million), which include the impact of decreased costs associated with the ongoing relocation of our centerfire ammunition manufacturing operations to Oxford, MS ($7.4 million).

Corporate/Other

2015 Compared to 2014

For 2015, pension income included in corporate/other, excluding the impact of the change in control which created a mandatory acceleration of expenses under deferred compensation plans associated with the Acquisition, was $35.2 million compared to $32.4 million for 2014. On a total company basis, defined benefit pension expense was $18.7 million which includes the impact of the change in control which created a mandatory acceleration of expenses under deferred compensation plans of $47.1 million associated with the Acquisition, and was included in acquisition-related costs. On a total company basis, defined benefit pension income without this charge, was $28.4 million for 2015 compared to $25.0 million for 2014. For the years ended December 31, 2015 and 2014, pension income included a curtailment charge of $0.1 million and $0.2 million, respectively, associated with permanently closing a portion of the Becancour, Canada chlor alkali facility that has been shut down since late June 2014. These charges were included in restructuring charges.

Charges to income for environmental investigatory and remedial activities were $15.7 million for 2015 compared to $8.2 million for 2014 which included $1.4 million of recoveries from third parties for costs incurred and expensed in prior periods. Without these recoveries, charges to income for environmental investigatory and remedial activities would have been $9.6 million for 2014. These charges related primarily to expected future investigatory and remedial activities associated with past manufacturing operations and former waste disposal sites.

For 2015, other corporate and unallocated costs were $60.3 million compared to $58.1 million for 2014, an increase of $2.2 million, or 4%. The increase was primarily due to increased stock-based compensation expense of $3.2 million, which includes mark-to-market adjustments, higher non-income tax expense of $2.2 million and increased audit fees of $2.2 million. These increases were partially offset by decreased legal and legal-related settlement expenses of $5.8 million.

2014 Compared to 2013

For 2014, pension income included in corporate/other was $32.4 million compared to $26.6 million for 2013. On a total company basis, defined benefit pension income for 2014 was $25.0 million compared to $20.5 million for 2013. Pension income for 2014 included a curtailment charge of $0.2 million associated with permanently closing a portion of the Becancour, Canada chlor alkali facility that has been shut down since late June 2014. This charge was included in restructuring charges for 2014.

Charges to income for environmental investigatory and remedial activities were $8.2 million for 2014 compared to $10.2 million for 2013, which included $1.4 million and $1.3 million, respectively, of recoveries from third parties for costs incurred and expensed in prior periods. Without these recoveries, charges to income for environmental investigatory and remedial activities would have been $9.6 million for 2014 compared to $11.5 million for 2013. These charges related primarily to expected future investigatory and remedial activities associated with past manufacturing operations and former waste disposal sites.

For 2014, other corporate and unallocated costs were $58.1 million compared to $79.0 million for 2013, a decrease of $20.9 million, or 26%. The decrease was primarily due to lower stock-based compensation expense of $13.9 million, which includes mark-to-market adjustments, decreased legal and legal-related settlement expenses of $12.8 million, decreased non-income tax expense of $3.7 million and lower insurance costs of $2.1 million. These decreases were partially offset by the recovery of legacy legal costs of $13.9 million during 2013.

Restructurings

On December 12, 2014, we announced that we had made the decision to permanently close the portion of the Becancour, Canada chlor alkali facility that has been shut down since late June 2014. This action reduced the facility's chlor alkali capacity by 185,000 tons. Subsequent to the shut down, the plant predominantly focuses on bleach and hydrochloric acid, which are value-added products, as well as caustic soda. In the fourth quarter of 2014, we recorded pretax restructuring charges of $10.0 million for the write-off of equipment and facility costs, employee severance and related benefit costs, and lease and other contract termination costs related to these actions. For the year ended December 31, 2015, we recorded pretax restructuring charges of $2.0 million for the write-off of equipment and facility costs, lease and other contract termination costs and facility exit costs. We expect to incur additional restructuring charges through 2016 of approximately $4 million related to the shut down of this portion of the facility.

On December 9, 2010, our board of directors approved a plan to eliminate our use of mercury in the manufacture of chlor alkali products. Under the plan, the 260,000 tons of mercury cell capacity at our Charleston, TN facility was converted to 200,000 tons of membrane capacity capable of producing both potassium hydroxide and caustic soda. The board of directors also approved plans to reconfigure our Augusta, GA facility to manufacture bleach and distribute caustic soda, while discontinuing chlor alkali manufacturing at this site. The completion of these projects eliminated our chlor alkali production using mercury cell technology. For the years ended December 31, 2014 and 2013, we recorded pretax restructuring charges of $3.8 million and $3.7 million, respectively, for employee severance and related benefit costs, employee relocation costs, facility exit costs, write-off of equipment and facility costs and lease and other contract termination costs related to these actions.

On November 3, 2010, we announced that we had made the decision to relocate the Winchester centerfire pistol and rifle ammunition manufacturing operations from East Alton, IL to Oxford, MS. This relocation, when completed, is forecast to reduce Winchester’s annual operating costs by approximately $35 million to $40 million. Consistent with this relocation decision in 2010, we initiated an estimated $110 million five-year project, which includes approximately $80 million of capital spending. The capital spending was partially financed by $31 million of grants provided by the State of Mississippi and local governments. We currently expect to complete this relocation in the first half of 2016. For the years ended December 31, 2015, 2014 and 2013, we recorded pretax restructuring charges of $0.7 million, $1.9 million and $1.8 million, respectively, for employee severance and related benefit costs, employee relocation costs and facility exit costs related to these actions. We expect to incur additional restructuring charges through 2016 of approximately $1 million related to the transfer of these operations.

2016 OUTLOOK

Net income in the first quarter of 2016 is projected to be in the $0.05 to $0.15 per diluted share range, which includes pretax acquisition-related costs of approximately $10 million and estimated step-up acquisition depreciation and amortization expense of approximately $35 million. Net income in the first quarter of 2015 was $0.17 per diluted share, which included acquisition-related costs of $10.4 million.

Chlor Alkali Products and Vinyls first quarter 2016 segment income is expected to improve compared with the fourth quarter of 2015 segment income of $46.6 million. The expected increase in segment income anticipates higher caustic soda prices and improved volumes across the chlorine envelope, which will be partially offset by increased maintenance turnaround expenses of approximately $10 million. The fourth quarter of 2015 segment income included $6.7 million of additional costs of goods sold related to the fair value adjustment related to the preliminary purchase accounting for inventory.

Epoxy first quarter 2016 segment income is expected to improve compared to the fourth quarter of 2015 segment loss of $7.5 million. The expected increase in segment income is due to improved volumes across all product lines, which will be partially offset by increased maintenance turnaround expenses of approximately $10 million. The fourth quarter of 2015 segment loss included $17.3 million of additional costs of goods sold related to the fair value adjustment related to the preliminary purchase accounting for inventory.

Winchester first quarter 2016 segment income is expected to be higher than the $29.8 million of segment income achieved during the first quarter of 2015 primarily due to improved sales volumes. Winchester full year 2016 segment income is expected to be higher than the full year 2015 segment income of $115.6 million, primarily due to lower operating costs, incremental savings from the Oxford relocation and higher volumes, partially offset by lower pricing. The Oxford, MS relocation project is expected to be completed during the first half of 2016. During 2015, all commercial centerfire pistol and rifle ammunition was produced in Oxford. The relocation is forecast to reduce Winchester's annual operating costs by approximately $40 million compared to $35.0 million realized in 2015.

We anticipate that full year 2016 Other Corporate Costs, including pension income and environmental costs, to be in the $65 million to $85 million range compared to full year 2015 Other Corporate Costs of $40.8 million. The increased corporate infrastructure costs are necessary to support the newly acquired TDCC businesses. Fourth quarter

of 2015 Other Corporate Costs, including pension income and environmental costs, were $5.0 million.
We anticipate first quarter 2016 to include approximately $10 million of acquisition-related integration costs. We anticipate full year 2016 to include approximately $40 million of acquisition-related integration costs associated with outside consulting and professional fees and non-recurring personnel related-costs.

We anticipate that full year 2016 charges for environmental investigatory and remedial activities will be in the $15 million to $20 million range. We do not believe that there will be recoveries of environmental costs incurred and expensed in prior periods in 2016. In connection with the Acquisition, TDCC has retained liabilities relating to litigation, releases of hazardous materials and violations of environmental law to the extent arising prior to the Closing Date.
We expect qualified defined benefit pension plan income in 2016 to be higher than the 2015 level by approximately $10 million due to the impact of an actuarial change in the calculation of the plan discount rates, partially offset by the costs associated with the acquired plans. Based on our plan assumptions and estimates, we will not be required to make any cash contributions to our domestic qualified defined benefit pension plan in 2016. We do have several international qualified defined benefit pension plans to which we anticipate cash contributions of less than $5 million in 2016.
We have approximately 60% variable rate debt in our new debt profile. As a result, we are estimating our first quarter 2016 interest rate will be in the 4.5% range. During 2016, a total of $205 million of debt will mature that is expected to be repaid using available cash.
In 2016, we expect our capital spending to be in the $300 million to $340 million range, which includes approximately $60 million of synergy-related capital, which we believe is necessary to realize the anticipated synergies. Based on the preliminary valuation of the newly acquired fixed assets and intangible assets, we estimate our depreciation and amortization expense in 2016 to be in the $490 million to $500 million range, including approximately $145 million of acquisition step-up depreciation and amortization expense.

We currently believe the 2016 effective tax rate will be in the 35% to 38% range.

ENVIRONMENTAL MATTERS

	Years ended December 31,		
	2015	2014	2013
Cash outlays (receipts):	($ in millions)		
Remedial and investigatory spending (charged to reserve)	$14.1	$14.9	$12.4
Recoveries from third parties	—	(1.4)	(1.3)
Capital spending	2.0	2.7	0.9
Plant operations (charged to cost of goods sold)	71.9	24.2	25.4
Total cash outlays	$88.0	$40.4	$37.4

Cash outlays for remedial and investigatory activities associated with former waste sites and past operations were not charged to income but instead were charged to reserves established for such costs identified and expensed to income in prior years. Cash outlays for normal plant operations for the disposal of waste and the operation and maintenance of pollution control equipment and facilities to ensure compliance with mandated and voluntarily imposed environmental quality standards were charged to income.

Total environmental-related cash outlays in 2015 were higher than 2014 primarily due to environmental spending for plant operations related to the Acquired Business. In connection with the Acquisition, TDCC retained liabilities relating to releases of hazardous materials and violations of environmental law to the extent arising prior to the Closing Date. Total environmental-related cash outlays for 2016 are estimated to be approximately $240 million, of which approximately $20 million is expected to be spent on investigatory and remedial efforts, approximately $10 million on capital projects and approximately $210 million on normal plant operations. Remedial and investigatory spending is anticipated to be higher in 2016 than 2015 due to the timing of continuing remedial action plans and investigations. Historically, we have funded our environmental capital expenditures through cash flow from operations and expect to do so in the future.

Annual environmental-related cash outlays for site investigation and remediation, capital projects and normal plant operations are expected to range between $230 million to $250 million over the next several years, $15 million to $25 million of which is for investigatory and remedial efforts, which are expected to be charged against reserves recorded on our consolidated balance sheet. While we do not anticipate a material increase in the projected annual level of our environmental-related cash outlays for site investigation and remediation, there is always the possibility that such an increase may occur in the future in view of the uncertainties associated with environmental exposures.

Our liabilities for future environmental expenditures were as follows:

	December 31,		
	2015	2014	2013
	($ in millions)		
Beginning balance	$138.3	$144.6	$146.5
Charges to income	15.7	9.6	11.5
Remedial and investigatory spending	(14.1)	(14.9)	(12.4)
Currency translation adjustments	(1.8)	(1.0)	(1.0)
Ending balance	$138.1	$138.3	$144.6

As is common in our industry, we are subject to environmental laws and regulations related to the use, storage, handling, generation, transportation, emission, discharge, disposal and remediation of, and exposure to, hazardous and non-hazardous substances and wastes in all of the countries in which we do business.

The establishment and implementation of national, state or provincial and local standards to regulate air, water and land quality affect substantially all of our manufacturing locations around the world. Laws providing for regulation of the manufacture, transportation, use and disposal of hazardous and toxic substances, and remediation of contaminated sites, have imposed additional regulatory requirements on industry, particularly the chemicals industry. In addition, implementation of environmental laws has required and will continue to require new capital expenditures and will increase plant operating costs. We employ waste minimization and pollution prevention programs at our manufacturing sites.

We are party to various governmental and private environmental actions associated with past manufacturing facilities and former waste disposal sites. Associated costs of investigatory and remedial activities are provided for in accordance with generally accepted accounting principles governing probability and the ability to reasonably estimate future costs. Our ability to estimate future costs depends on whether our investigatory and remedial activities are in preliminary or advanced stages. With respect to unasserted claims, we accrue liabilities for costs that, in our experience, we may incur to protect our interests against those unasserted claims. Our accrued liabilities for unasserted claims amounted to $1.8 million at December 31, 2015. With respect to asserted claims, we accrue liabilities based on remedial investigation, feasibility study, remedial action and operation, maintenance and monitoring (OM&M) expenses that, in our experience, we may incur in connection with the asserted claims. Required site OM&M expenses are estimated and accrued in their entirety for required periods not exceeding 30 years, which reasonably approximates the typical duration of long-term site OM&M. Charges to income for investigatory and remedial efforts were material to operating results in 2015, 2014 and 2013 and may be material to operating results in future years.

Environmental provisions charged (credited) to income, which are included in cost of goods sold, were as follows:

	Years ended December 31,		
	2015	2014	2013
	($ in millions)		
Charges to income	$15.7	$9.6	$11.5
Recoveries from third parties of costs incurred and expensed in prior periods	—	(1.4)	(1.3)
Total environmental expense	$15.7	$8.2	$10.2

These charges relate primarily to remedial and investigatory activities associated with past manufacturing operations and former waste disposal sites.

Our total estimated environmental liability at the end of 2015 was attributable to 69 sites, 14 of which were USEPA National Priority List (NPL) sites. Nine sites accounted for 79% of our environmental liability and, of the remaining 60 sites, no one site accounted for more than 3% of our environmental liability. At four of the nine sites, part of the site is subject to a remedial investigation and another part is in the long-term OM&M stage. At one of the nine sites, a remedial design is being developed. At one of the nine sites, part of the site is subject to a remedial investigation and another part a remedial design is being developed. At one of these nine sites, a remedial investigation is being performed. The two remaining sites are in long-term OM&M. All nine sites are either associated with past manufacturing operations or former waste disposal sites. None of the nine largest sites represents more than 23% of the liabilities reserved on our consolidated balance sheet at December 31, 2015 for future environmental expenditures.

Our consolidated balance sheets included liabilities for future environmental expenditures to investigate and remediate known sites amounting to $138.1 million at December 31, 2015, and $138.3 million at December 31, 2014, of which $119.1 million and $119.3 million, respectively, were classified as other noncurrent liabilities. Our environmental liability amounts do not take into account any discounting of future expenditures or any consideration of insurance recoveries or advances in technology. These liabilities are reassessed periodically to determine if environmental circumstances have changed and/or remediation efforts and our estimate of related costs have changed. As a result of these reassessments, future charges to income may be made for additional liabilities. Of the $138.1 million included on our consolidated balance sheet at December 31, 2015 for future environmental expenditures, we currently expect to utilize $81.1 million of the reserve for future environmental expenditures over the next 5 years, $16.7 million for expenditures 6 to 10 years in the future, and $40.3 million for expenditures beyond 10 years in the future. These estimates are subject to a number of risks and uncertainties, as described in "Environmental Costs" contained in Item 1A—"Risk Factors."

Environmental exposures are difficult to assess for numerous reasons, including the identification of new sites, developments at sites resulting from investigatory studies, advances in technology, changes in environmental laws and regulations and their application, changes in regulatory authorities, the scarcity of reliable data pertaining to identified sites, the difficulty in assessing the involvement and financial capability of other PRPs, our ability to obtain contributions from other parties and the lengthy time periods over which site remediation occurs. It is possible that some of these matters (the outcomes of which are subject to various uncertainties) may be resolved unfavorably to us, which could materially adversely affect our financial position or results of operations. At December 31, 2015, we estimate it is reasonably possible that we may have additional contingent environmental liabilities of $60 million in addition to the amounts for which we have already recorded as a reserve.

LEGAL MATTERS AND CONTINGENCIES

We, and our subsidiaries, are defendants in various legal actions (including proceedings based on alleged exposures to asbestos) incidental to our past and current business activities. We describe some of these matters in Item 3—"Legal Proceedings." At December 31, 2015 and 2014, our consolidated balance sheets incl **265**

Other (represents 9 business sectors)

2,391 0 0 **2,391**

Total Equity Securities

33,839 34,369 0 **68,208**

Fixed-Income Securities:

Commingled funds

0 14,697 0 **14,697**

Preferred (represents 5 business sectors)

6,689 0 0 **6,689**

Other (represents 4 business sectors)	0	1,280	0	**1,280**
Total Fixed-Income Securities	6,689	15,977	0	**22,666**
Alternative Investments:				
Managed funds[(a)]	0	0	32,210	**32,210**
Hedge and absolute return funds	0	0	4,967	**4,967**
Total Alternative Investments	0	0	37,177	**37,177**
Other (primarily cash and cash equivalents):				
Mutual funds	1,836	0	0	**1,836**
Commingled funds	0	1,005	0	**1,005**
Other[(b)]	8,484	0	0	**8,484**
Total Other	10,320	1,005	0	**11,325**
	$ 50,848	**$ 51,351**	**$ 37,177**	**$ 139,376**

(a) Includes approximately 38% in equity and equity-like asset securities, 43% in alternative investments (real assets, commodities and resources, absolute return funds) and 19% in fixed income securities and cash and cash equivalents.

(b) Includes accrued receivables and pending broker settlements.

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Asset categories based on the nature and risks of the U.S. Pension Benefit Plan s assets as of December 31, 2014 are summarized below.

	Quoted Prices in Active Markets for Identical Inputs (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Equity Securities:				
U.S.				
Capital goods	$ 1,684	$ 0	$ 0	$ 1,684
Chemicals	2,424	0	0	2,424
Commercial property	1,012	0	0	1,012
Commercial services	1,210	0	0	1,210
Common collective trust funds	0	34,871	0	34,871
Electronics	1,050	0	0	1,050
Engineering & construction	778	0	0	778
Food processing	3,423	0	0	3,423
Health care	1,345	0	0	1,345
Limited partnerships public equity	6,482	0	0	6,482
Manufacturing	2,224	0	0	2,224
Oil & gas	2,503	0	0	2,503
Retail	935	0	0	935
Technology	2,022	0	0	2,022
Transportation	926	0	0	926
Wholesale distribution	927	0	0	927
Other (represents 10 business sectors)	5,681	0	0	5,681
International				
Bank & financial services	1,790	0	0	1,790
Common collective trust funds	0	6,364	0	6,364
Engineering & construction	600	0	0	600
Oil & gas	1,422	0	0	1,422
Real estate	1,321	0	0	1,321
Technology	965	0	0	965
Other (represents 9 business sectors)	3,106	0	0	3,106
Total Equity Securities	43,830	41,235	0	85,065
Fixed-Income Securities:				
Commingled funds	0	16,533	0	16,533
Preferred (represents 5 business sectors)	7,242	0	0	7,242
Other (represents 6 business sectors)	0	2,035	0	2,035
Total Fixed-Income Securities	7,242	18,568	0	25,810
Alternative Investments:				
Managed funds[(a)]	0	0	33,602	33,602
Hedge and absolute return funds	0	0	8,592	8,592
Total Alternative Investments	0	0	42,194	42,194
Other (primarily cash and cash equivalents):				
Mutual funds	237	0	0	237
Commingled funds	0	1,081	0	1,081
Other[(b)]	2,661	0	0	2,661
Total Other	2,898	1,081	0	3,979
	$ 53,970	$ 60,884	$ 42,194	$ 157,048

(a) Includes approximately 43% in equity and equity-like asset securities, 50% in alternative investments (real assets, commodities and resources, absolute return funds) and 7% in fixed income securities and cash and cash equivalents.

(b) Includes accrued receivables and pending broker settlements.

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Asset categories based on the nature and risks of the Foreign Pension Benefit Plan s assets as of December 31, 2015 are summarized below.

	Quoted Prices in Active Markets for Identical Inputs (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Equity Securities:				
Commingled Funds (U.K.)	$ 0	$ 3,697	$ 0	**$ 3,697**
Commingled Funds (International)	0	18,930	0	**18,930**
Total Equity Securities	0	22,627	0	**22,627**
Fixed-Income Securities:				
Commingled Funds (U.K.)	0	16,298	0	**16,298**
Alternative Investments:				
Hedge and Absolute Return Funds	0	0	10,571	**10,571**
Cash and cash equivalents	132	0	0	**132**
	$ 132	$ 38,925	$ 10,571	**$ 49,628**

Asset categories based on the nature and risks of the Foreign Pension Benefit Plan s assets as of December 31, 2014 are summarized below.

	Quoted Prices in Active Markets for Identical Inputs (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Equity Securities:				
Commingled Funds (U.K.)	$ 0	$ 3,848	$ 0	$ 3,848
Commingled Funds (International)	0	18,449	0	18,449
Total Equity Securities	0	22,297	0	22,297
Fixed-Income Securities:				
Commingled Funds (U.K.)	0	17,366	0	17,366
Alternative Investments:				
Hedge and Absolute Return Funds	0	0	10,799	10,799
Cash and cash equivalents	71	0	0	71
	$ 71	$ 39,663	$ 10,799	$ 50,533

The table below sets forth a summary of changes in the fair value of the Level 3 plan assets for U.S. and foreign pension plans for the year ended December 31, 2015.

	Alternative Investments		
	U.S. Pension Benefits		Foreign Pension Benefits
Fair value as of January 1, 2015	$ 8,592	$ 33,602	$ 10,799
Contributions	5,900	0	0
Withdrawals	(9,843)	(2,424)	0
Realized gains (losses)	2,334	(19)	0
Change in net unrealized (losses) gains	(2,016)	1,051	320
Other, primarily impact from changes in foreign currency exchange rates	0	0	(548)
Fair value as of December 31, 2015	**$ 4,967**	**$ 32,210**	**$ 10,571**

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The table below sets forth a summary of changes in the fair value of the Level 3 plan assets for U.S. and foreign pension plans for the year ended December 31, 2014.

	Alternative Investments		
	U.S. Pension Benefits		Foreign Pension Benefits
Fair value as of January 1, 2014	$ 8,389	$ 32,433	$ 11,041
Withdrawals	(200)	(2,550)	(181)
Realized gains	66	821	0
Change in net unrealized gains	337	2,898	615
Other, primarily impact from changes in foreign currency exchange rates	0	0	(676)
Fair value as of December 31, 2014	$ 8,592	$ 33,602	$ 10,799

Net Periodic Pension and Other Postretirement Benefit Costs

The actual return on the fair value of plan assets is included in determining the funded status of the plans. In determining net periodic pension costs, the expected long-term rate of return on the market-related value of plan assets is used. Differences between the actual return on plan assets and the expected long-term rate of return on plan assets are classified as part of unrecognized actuarial gains or losses and are recorded as a component of accumulated other comprehensive loss on the consolidated balance sheet. When these gains or losses exceed 10% of the greater of the projected benefit obligation or the market-related value of plan assets, they are amortized to net periodic pension and other postretirement costs over the average remaining service period of employees expected to receive benefits under the plans. When the gains or losses are less than 10% of the greater of the projected benefit obligation or the market-related value of plan assets, they are included in net periodic pension and other postretirement costs indirectly as a result of lower/higher interest costs arising from a decrease/increase in the projected benefit obligation.

Net periodic pension and other postretirement benefit costs include the following components for the year ended December 31:

	U.S. Pension Benefits			Foreign Pension Benefits			Other Postretirement Benefits		
	2015	2014	2013	**2015**	2014	2013	**2015**	2014	2013
Service cost	**$ 2,743**	$ 3,683	$ 4,424	**$ 0**	$ 0	$ 0	**$ 384**	$ 505	$ 943
Interest cost	**7,990**	8,762	8,070	**2,394**	2,695	2,551	**474**	688	926
Expected return on plan assets	**(10,996)**	(10,747)	(9,368)	**(2,681)**	(3,157)	(2,485)	**0**	0	0
Amortization of prior service cost (credit)	**371**	854	640	**0**	0	0	**(672)**	(441)	85
Amortization of actuarial loss	**5,440**	4,183	7,146	**845**	599	687	**26**	104	241
Curtailment loss	**1,303**	0	0	**0**	0	0	**0**	0	0
Net cost	**$ 6,851**	$ 6,735	$ 10,912	**$ 558**	$ 137	$ 753	**$ 212**	$ 856	$ 2,195

Assumptions

Assumptions are reviewed on an annual basis. The expected long-term rate of return on plan assets is an estimate of average rates of earnings expected to be earned on funds invested or to be invested to provide for the benefits included in the projected benefit obligation. Since these benefits will be paid over many years, the expected long-term rate of return is reflective of current investment returns and investment returns over a longer period. Consideration is also given to target and actual asset allocations, inflation and real risk-free return. The discount rates used in determining future pension obligations and other postretirement benefits for each of the plans are based on rates of return on high-quality fixed-income investments currently available and expected to be available during the period to maturity of the pension and other postretirement benefits. High-quality fixed-income investments are defined as those investments which have received one of the two highest ratings given by a recognized rating agency with maturities of 10+ years.

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The discount rates and weighted-average wage increases used to determine the benefit obligations as of December 31, 2015 and 2014 are summarized below. The change in discounts rates decreased plan benefit obligations and increased the funded status of the plans by approximately $11,000 as of December 31, 2015 in comparison to December 31, 2014.

	U.S. Pension Benefits		Foreign Pension Benefits		Other Postretirement Benefits	
	2015	2014	**2015**	2014	**2015**	2014
Discount rate	**4.40%**	4.10%	**3.65%**	3.50%	**4.20%**	4.00%
Wage increases	**3.00%**	4.00%	**n/a**	n/a	**n/a**	n/a

In addition, the assumed health care cost trend rate at December 31, 2015 for other postretirement benefits is 6% for 2016 gradually decreasing to 4.75% in 2019. In selecting rates for current and long-term health care assumptions, the Corporation considers known health care cost increases, the design of the benefit programs, the demographics of its active and retiree populations and expectations of inflation rates in the future. A one percentage point increase or decrease in the assumed health care cost trend rate would result in an inconsequential change to the postretirement benefit obligation at December 31, 2015 and the annual benefit expense for 2015.

The following assumptions were used to determine net periodic pension and other postretirement benefit costs for the year ended December 31:

	U.S. Pension Benefits			Foreign Pension Benefits			Other Postretirement Benefits		
	2015	2014	2013	**2015**	2014	2013	**2015**	2014	2013
Discount rate	**4.00/4.10%**	5.00%	4.25%	**3.50%**	4.50%	4.50%	**4.00%**	5.00%	4.25%
Expected long-term rate of return	**8.00%**	8.00%	8.00%	**5.40%**	6.50%	6.09%	**n/a**	n/a	n/a
Wages increases	**4.00%**	4.00%	4.00%	**n/a**	n/a	n/a	**n/a**	n/a	n/a

NOTE 8 COMMITMENTS AND CONTINGENT LIABILITIES:

Outstanding standby and commercial letters of credit as of December 31, 2015 approximated $19,694, the majority of which serves as collateral for the IRBs.

Approximately 55% of the Corporation s employees are covered by collective bargaining agreements that have expiration dates ranging from December 2016 to November 2019. Collective bargaining agreements expiring in 2016 (which are one-year agreements representing approximately 43% of covered employees) will be negotiated with the intent to secure mutually beneficial, long-term arrangements.

See Note 11 regarding derivative instruments, Note 17 regarding litigation and Note 18 for environmental matters.

NOTE 9 STOCK-BASED COMPENSATION:

In May 2011, the shareholders of the Corporation approved the adoption of the 2011 Omnibus Incentive Plan (Incentive Plan) which authorizes the issuance of up to 1,000,000 shares of the Corporation s common stock for grants of equity-based compensation. Awards under the Incentive Plan may include incentive non-qualified stock options, stock appreciation rights, restricted shares and restricted stock units, performance awards, other stock-based awards or short-term cash incentive awards. Unexercised portions of terminated or forfeited awards are available for new awards. The Incentive Plan is administered by the Compensation Committee of the Board of Directors who has the authority to determine, within the limits of the express provisions of the Incentive Plan, the individuals to whom the awards will be granted; the nature, amount and terms of such awards; and the objectives and conditions for earning such awards.

The Incentive Plan also provides for annual grants of shares of the Corporation s common stock to non-employee directors following the Corporation s annual shareholder meeting. Each annual director award will be for a number of shares having a fair market value equal to $25 and will fully vest as of the grant date. The number of shares of common stock issued to non-employee directors was 14,310 shares in 2015, 12,500 shares in 2014 and 11,656 shares in 2013.

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In 2015, the Compensation Committee granted restricted stock units (RSUs) and performance-based restricted stock units (PSUs) to select individuals in lieu of stock options. Each RSU represents the right to receive one share of common stock of the Corporation at a future date after the RSU has become earned and vested, subject to the terms and conditions of the RSU award agreement. The RSUs vest over a three-year period. The PSUs can be earned depending upon the achievement of a performance condition, a market condition and a time-vesting condition as follows: (1) achievement of a targeted basic earnings per share during the performance period of 2015 through 2017, (2) achievement of a three-year cumulative relative total shareholder return as ranked against other companies included in the Corporation s peer group and (3) remaining continuously employed with the Corporation through December 31, 2017. Earlier vesting of the stock units is permitted under certain conditions, such as upon a change of control of the Corporation.

A total of 90,836 RSUs and 26,263 unvested PSUs were granted during 2015. The weighted-average grant date fair value was $15.72 for the RSUs and $15.89 for the PSUs. The determination of the fair value of these awards takes into consideration the likelihood of achievement of the market condition. Compensation expense for PSUs is also based on the probability of achieving the targeted basic earnings per share and will be adjusted for subsequent changes in the estimated or actual outcome of the performance condition.

In 2014 and 2013, the Compensation Committee granted non-qualified stock options. No stock options were granted during 2015. Options granted under the Incentive Plan have a ten-year life and vest over a three-year period. Options previously granted under earlier incentive plans have a ten-year life with one-third vesting at the date of grant, one-third vesting on the first anniversary date of the date of grant and one-third vesting on the second anniversary date of the date of grant. The exercise prices are equal to the closing prices of the Corporation s common stock on the New York Stock Exchange on the dates of grant. The fair value of the options as of the dates of grant was calculated using the Black-Scholes option-pricing model based on the assumptions outlined below.

	Grant Date	
	2014	2013
Options granted	**176,000**	173,750
Exercise price	**$ 20.00**	$ 17.16
Assumptions:		
Expected life in years	**6**	6
Risk-free interest rate	**1.98%**	1.26%
Expected annual dividend yield	**3.60%**	4.20%
Expected forfeiture rate	**8.00%**	5.00%
Expected volatility	**53.02%**	52.68%
Grant date fair value	**$ 7.40**	$ 5.82
Resulting stock-based compensation expense	**$ 1,199**	$ 961

A summary of stock options outstanding and exercisable and activity for the year ended December 31, 2015 is as follows:

	Shares Under Options	Weighted Average Exercise Price	Remaining Contractual Life In Years	Intrinsic Value
Outstanding at January 1, 2015	1,202,169	$ 24.25	6.0	$ 778
Granted	0	N/A		
Exercised	0	N/A		
Forfeited	(188,833)	25.43		
Outstanding at December 31, 2015	**1,013,336**	**$ 24.03**	**5.2**	**$ 0**
Exercisable at December 31, 2015	**867,586**	**$ 24.86**	**4.7**	**$ 0**
Vested or expected to vest at December 31, 2015	**1,013,336**	**$ 24.03**	**5.2**	**$ 0**

Stock-based compensation expense, including expense for shares to be issued to non-employee directors, approximated $1,328, $1,102 and $1,196 for 2015, 2014 and 2013, respectively. The related income tax benefit recognized in the consolidated statements of operations was $465, $386 and $419 for the respective years. Unrecognized compensation expense equaled $1,701 at December 31, 2015 and is expected to be recognized over a weighted average period of 2 years.

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NOTE 10 ACCUMULATED OTHER COMPREHENSIVE LOSS:

Net change and ending balances for the various components of other comprehensive income (loss) and for accumulated other comprehensive loss as of and for the year ended December 31, 2013, 2014 and 2015 are summarized below.

	Foreign Currency Translation Adjustments	Unrecognized Components of Employee Benefit Plans	Unrealized Holding Gains (Losses) on Securities	Derivatives	Accumulated Other Comprehensive Loss
Balance at January 1, 2013	$ (1,543)	$ (81,783)	$ 633	$ 318	$ (82,375)
Net Change	1,820	34,321	374	(5)	36,510
Balance at December 31, 2013	277	(47,462)	1,007	313	(45,865)
Net Change	(4,703)	(17,934)	(23)	(228)	(22,888)
Balance at December 31, 2014	(4,426)	(65,396)	984	85	(68,753)
Net Change	(3,967)	15,453	(292)	(40)	11,154
Balance at December 31, 2015	**$ (8,393)**	**$ (49,943)**	**$ 692**	**$ 45**	**$ (57,599)**

The following summarizes the line items affected on the consolidated statements of operations for components reclassified from accumulated other comprehensive loss for each of the years ended December 31. Amounts in parentheses represent credits to net income (loss).

	2015	2014	2013
Amortization of unrecognized employee benefit costs:			
Costs of products sold (excluding depreciation)	**$ 3,604**	$ 3,601	$ 5,691
Selling and administrative	**3,354**	1,524	2,241
Other expense	**355**	174	867
Total before income tax	**7,313**	5,299	8,799
Income tax provision	**(2,573)**	(1,841)	(3,156)
Net of income tax	**$ 4,740**	$ 3,458	$ 5,643
Realized gains on sale of marketable securities:			
Selling and administrative	**$ (82)**	$ (171)	$ (87)
Income tax provision	**29**	60	30
Net of income tax	**$ (53)**	$ (111)	$ (57)
Realized gains/losses from settlement of cash flow hedges:			
Net sales (foreign currency sales contracts)	**$ (17)**	$ 33	$ 0
Depreciation (foreign currency purchase contracts)	**(27)**	(27)	(27)
Costs of products sold (excluding depreciation) (futures contracts copper and aluminum)	**751**	146	419
Total before income tax	**707**	152	392
Income tax provision	**(272)**	(57)	(146)
Net of income tax	**$ 435**	$ 95	$ 246

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The income tax expense (benefit) associated with the various components of other comprehensive income (loss) for each of the years ended December 31 is summarized below. Foreign currency translation adjustments exclude the effect of income taxes since earnings of non-U.S. subsidiaries are deemed to be reinvested for an indefinite period of time.

	2015	2014	2013
Income tax expense (benefit) associated with changes in:			
Unrecognized employee benefit costs	**$ (4,731)**	$ 10,265	$ (15,890)
Unrealized holding losses/gains on marketable securities	**134**	(47)	(232)
Fair value of cash flow hedges	**294**	206	149
Income tax expense (benefit) associated with reclassification adjustments:			
Amortization of unrecognized employee benefit costs	**(2,573)**	(1,841)	(3,156)
Realized gains from sale of marketable securities	**29**	60	30
Realized losses from settlement of cash flow hedges	**(272)**	(57)	(146)

NOTE 11 DERIVATIVE INSTRUMENTS:

Certain operations of the Corporation are subject to risk from exchange rate fluctuations in connection with sales in foreign currencies. To minimize this risk, foreign currency sales contracts are entered into which are designated as cash flow or fair value hedges. As of December 31, 2015, approximately $11,566 of anticipated foreign-denominated sales has been hedged which are covered by fair value contracts settling at various dates through April 2017. The fair value of assets held as collateral for the fair value contracts as of December 31, 2015 approximated $800.

Additionally, certain divisions of the Air and Liquid Processing segment are subject to risk from increases in the price of commodities (copper and aluminum) used in the production of inventory. To minimize this risk, futures contracts are entered into which are designated as cash flow hedges. At December 31, 2015, approximately 57% or $2,100 of anticipated copper purchases over the next nine months and 56% or $400 of anticipated aluminum purchases over the next six months are hedged.

The Corporation previously entered into foreign currency purchase contracts to manage the volatility associated with euro-denominated progress payments to be made for certain machinery and equipment. As of December 31, 2010, all contracts had been settled and the underlying fixed assets were placed in service.

No portion of the existing cash flow or fair value hedges is considered to be ineffective, including any ineffectiveness arising from the unlikelihood of an anticipated transaction to occur. Additionally, no amounts have been excluded from assessing the effectiveness of a hedge.

At December 31, 2015, the Corporation has purchase commitments covering 49% or $2,799 of anticipated natural gas usage through 2017 for one of its subsidiaries. The commitments qualify as normal purchases and, accordingly, are not reflected on the consolidated balance sheet. Purchases of natural gas under previously existing commitments approximated $2,452, $2,190 and $2,694 for 2015, 2014 and 2013, respectively.

The Corporation does not enter into derivative transactions for speculative purposes and, therefore, holds no derivative instruments for trading purposes.

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The following summarizes location and fair value of the foreign currency sales contracts recorded on the consolidated balance sheets as of December 31:

	Location	2015	2014
Cash flow hedge contracts	Other current assets	**$ 10**	$ 6
Fair value hedge contracts	Other current assets	**113**	217
	Other noncurrent assets	**0**	15
	Other current liabilities	**258**	399
	Other noncurrent liabilities	**49**	5
Fair value hedged item	Accounts receivable	**27**	69
	Other current assets	**255**	327
	Other noncurrent assets	**39**	4
	Other current liabilities	**116**	218
	Other noncurrent liabilities	**0**	35

The change in the fair value of the cash flow contracts is recorded as a component of accumulated other comprehensive loss. Amounts recognized as and reclassified from accumulated other comprehensive loss are recorded as a component of other comprehensive income (loss) and are summarized below. All amounts are after-tax.

For the Year Ended December 31, 2015	**Comprehensive Income (Loss) Beginning of the Year**	**Plus Recognized as Comprehensive Income (Loss)**	**Less Gain (Loss) Reclassified from Accumulated Other Comprehensive Loss**	**Comprehensive Income (Loss) End of the Year**
Foreign currency sales contracts cash flow hedges	$ 0	$ 14	$ 10	**$ 4**
Foreign currency purchase contracts	258	0	17	**241**
Future contracts copper and aluminum	(173)	(489)	(462)	**(200)**
	$ 85	**$ (475)**	**$ (435)**	**$ 45**
For the Year Ended December 31, 2014				
Foreign currency sales contracts cash flow hedges	$ 0	$ (21)	$ (21)	$ 0
Foreign currency purchase contracts	275	0	17	258
Future contracts copper and aluminum	38	(302)	(91)	(173)
	$ 313	$ (323)	$ (95)	$ 85
For the Year Ended December 31, 2013				
Foreign currency sales contracts cash flow hedges	$ 0	$ 0	$ 0	$ 0
Foreign currency purchase contracts	292	0	17	275
Future contracts copper and aluminum	26	(251)	(263)	38
	$ 318	$ (251)	$ (246)	$ 313

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The change in fair value reclassified or expected to be reclassified from accumulated other comprehensive loss to earnings is summarized below. All amounts are pre-tax.

	Location of Gain (Loss) in Statements of Operations	Estimated to be Reclassified in the Next 12 Months	Year Ended December 31, 2015	2014	2013
Foreign currency sales contracts cash flow hedges	Net sales	**$ 5**	**$ 17**	$ (33)	$ 0
Foreign currency purchase contracts	Depreciation	**27**	**27**	27	27
Futures contracts copper and aluminum	Costs of products sold (excluding depreciation)	**(330)**	**(751)**	(146)	(419)

Losses on foreign exchange transactions included in other expense approximated $(324), $(488) and $(227) for 2015, 2014 and 2013, respectively.

NOTE 12 FAIR VALUE:

The following summarizes financial assets and liabilities reported at fair value on a recurring basis in the accompanying consolidated balance sheets at December 31:

2015	Quoted Prices in Active Markets for Identical Inputs (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Investments				
Other noncurrent assets	$ 3,663	$ 0	$ 0	**$ 3,663**
Foreign currency exchange contracts				
Other current assets	0	378	0	**378**
Other noncurrent assets	0	39	0	**39**
Other current liabilities	0	374	0	**374**
Other noncurrent liabilities	0	49	0	**49**
2014				
Investments				
Other noncurrent assets	$ 4,280	$ 0	$ 0	$ 4,280
Foreign currency exchange contracts				
Other current assets	0	544	0	544
Other noncurrent assets	0	19	0	19
Other current liabilities	0	623	0	623
Other noncurrent liabilities	0	40	0	40

The investments held as other noncurrent assets represent assets held in the Rabbi trust for the purpose of providing benefits under the non-qualified defined benefit pension plan. The fair value of the investments is based on quoted prices of the investments in active markets. The fair value of foreign currency exchange contracts is determined based on the fair value of similar contracts with similar terms and remaining maturities. The fair value of futures contracts is based on market quotations. The fair value of the variable-rate IRB debt approximates its carrying value. Additionally, the fair value of trade receivables and trade payables approximates their carrying value.

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NOTE 13 INCOME TAXES:

Income (loss) before income taxes and equity losses in Chinese joint venture is comprised of the following:

	2015	2014	2013
Domestic	**$ 6,000**	$ (1,182)	$ 25,269
Foreign	**(1,480)**	290	1,911
	$ 4,520	$ (892)	$ 27,180

At December 31, 2015, the Corporation has state net operating loss carryforwards of $22,540, which begin to expire in 2018, foreign net operating loss carryforwards of $23 which begin to expire in 2026 and capital loss carryforwards of $893 which do not expire.

The income tax provision consisted of the following:

	2015	2014	2013
Current:			
Federal	**$ 4,577**	$ 3,458	$ 5,535
State	**378**	210	139
Foreign	**(20)**	122	28
	4,935	3,790	5,702
Deferred:			
Federal	**(2,203)**	(4,678)	(488)
State	**197**	54	133
Foreign	**(296)**	101	622
Reversal of valuation allowance	**0**	(33)	(156)
	(2,302)	(4,556)	111
	$ 2,633	$ (766)	$ 5,813

In 2014 and 2013, the income tax provision was affected by the reversal of valuation allowances previously provided against deferred income tax assets associated with state net operating loss carryforwards.

The difference between statutory U.S. federal income tax and the Corporation s effective income tax was as follows:

	2015	2014[(1)]	2013[(1)]
Computed at statutory rate	**$ 1,402**	$ (683)	$ 6,388
Tax differential on non-U.S. earnings	**106**	128	(340)
State income taxes	**226**	(227)	741
Manufacturers deduction (I.R.C. Section 199)	**(433)**	(359)	(566)
Meals and entertainment	**136**	224	205
Tax credits	**(243)**	(12)	(145)
Reversal of valuation allowance	**0**	(33)	(156)
Change in tax rates	**224**	301	(472)
Change in uncertain tax positions	**91**	(80)	(172)
Acquisition-related costs	**981**	0	0
Other net	**143**	(25)	330
	$ 2,633	$ (766)	$ 5,813

(1) Certain reclassifications have been made to the prior year columns to conform to the current year presentation.

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Deferred income tax assets and liabilities as of December 31, 2015 and 2014 are summarized below. Unremitted earnings of the Corporation s non-U.S. subsidiaries and affiliates are deemed to be permanently reinvested and, accordingly, no deferred income tax liability has been recorded. It is not practical to estimate the income tax effect that might be incurred if cumulative prior year earnings not previously taxed in the United States were remitted to the United States.

	2015	2014
Assets:		
Employment related liabilities	**$ 9,644**	$ 10,726
Pension liability foreign	**2,822**	4,041
Pension liability domestic	**12,934**	15,849
Liabilities related to discontinued operations	**704**	733
Capital loss carryforwards	**223**	253
Asbestos-related liability	**16,356**	18,252
Net operating loss state	**1,445**	2,029
Inventory related	**4,292**	3,458
Impairment charge associated with investment in UES-MG	**2,298**	2,344
Other	**3,311**	3,546
Gross deferred income tax assets	**54,029**	61,231
Valuation allowance	**(2,481)**	(3,254)
	51,548	57,977
Liabilities:		
Depreciation	**(29,223)**	(30,429)
Mark-to-market adjustment derivatives	**(40)**	(23)
Other	**(1,716)**	(1,993)
Gross deferred income tax liabilities	**(30,979)**	(32,445)
Net deferred income tax assets	**$ 20,569**	$ 25,532

The following summarizes changes in unrecognized tax benefits for the year ended December 31:

	2015	2014	2013
Balance at the beginning of the year	**$ 52**	$ 270	$ 442
Gross increases for tax positions taken in the current year	**0**	0	8
Gross increases for tax positions taken in prior years	**283**	2	12
Gross decreases in tax positions due to lapse in statute of limitations	**(20)**	(61)	0
Gross decreases for tax positions taken in prior years	**0**	(17)	(192)
Gross decreases for tax settlements with taxing authorities	**0**	(142)	0
Balance at the end of the year	**$ 315**	$ 52	$ 270

If the unrecognized tax benefits were recognized, $65 would reduce the Corporation s effective income tax rate. The amount of penalties and interest recognized in the consolidated balance sheets as of December 31, 2015 and 2014 and in the consolidated statements of operations for 2015, 2014 and 2013 is insignificant. Unrecognized tax benefits of $97 are to expire due to the lapse in the statute of limitations within the next 12 months.

The Corporation is subject to taxation in the United States, various states and foreign jurisdictions, and remains subject to examination by tax authorities for tax years 2012-2015. The combined Indiana income tax returns for 2010-2013 are under examination by the Indiana Department of Revenue which started during the first quarter of 2015. The examination is still ongoing as of December 31, 2015.

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NOTE 14 OPERATING LEASES:

The Corporation leases certain factory and office space and certain office equipment. Operating lease expense was $1,043 in 2015, $995 in 2014 and $945 in 2013. Operating lease payments for subsequent years are $581 for 2016, $431 for 2017, $329 for 2018, $278 for 2019, $194 for 2020 and $810 thereafter. The reduction between operating lease expense and future years payment is primarily due to expiration of the Corporation s office lease for its headquarters and subsequent relocation to an existing facility in Carnegie, Pennsylvania.

NOTE 15 RESEARCH AND DEVELOPMENT COSTS:

Expenditures relating to the development of new products, identification of products or process alternatives and modifications and improvements to existing products and processes are expensed as incurred. These expenses approximated $1,137 for 2015, $1,328 for 2014 and $1,413 for 2013.

NOTE 16 RELATED PARTIES:

In the ordinary course of business, the Corporation purchases industrial supplies from a subsidiary of The Louis Berkman Company (LB Co). Certain directors of the Corporation are either officers, directors and/or shareholders of LB Co. Purchases from LB Co approximated $1,270 in 2015, $1,358 in 2014 and $1,489 in 2013. In addition, LB Co paid the Corporation approximately $72 in 2015, $100 in 2014 and $150 in 2013 for certain administrative services. The net amount payable to LB Co approximated $93 and $28 at December 31, 2015 and 2014, respectively.

NOTE 17 LITIGATION:

The Corporation and its subsidiaries are involved in various claims and lawsuits incidental to their businesses and are also subject to asbestos litigation as described below.

Asbestos Litigation

Claims have been asserted alleging personal injury from exposure to asbestos-containing components historically used in some products of predecessors of Air & Liquid Systems Corporation (Asbestos Liability). Those subsidiaries, and in some cases the Corporation, are defendants (among a number of defendants, often in excess of 50) in cases filed in various state and federal courts.

Asbestos Claims

The following table reflects approximate information about the claims for Asbestos Liability against the subsidiaries and the Corporation for the two years ended December 31, 2015 and 2014:

	2015	2014
Total claims pending at the beginning of the period	**8,457**	8,319
New claims served	**1,424**	1,466
Claims dismissed	**(3,339)**	(1,094)
Claims settled	**(330)**	(234)
Total claims pending at the end of the period [(1)]	**6,212**	8,457
Gross settlement and defense costs (in 000 s)	**$ 19,199**	$ 20,801
Average gross settlement and defense costs per claim resolved (in 000 s)	**$ 5.23**	$ 15.66

(1) Included as open claims are approximately 430 and 1,647 claims in 2015 and 2014, respectively, classified in various jurisdictions as inactive or transferred to a state or federal judicial panel on multi-district litigation, commonly referred to as the MDL.

A substantial majority of the settlement and defense costs reflected in the above table was reported and paid by insurers. Because claims are often filed and can be settled or dismissed in large groups, the amount and timing of settlements, as well as the number of open claims, can fluctuate significantly from period to period.

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Asbestos Insurance

The Corporation and its Air & Liquid Systems Corporation (Air & Liquid) subsidiary are parties to a series of settlement agreements (Settlement Agreements) with insurers that have coverage obligations for Asbestos Liability (the Settling Insurers). Under the Settlement Agreements, the Settling Insurers accept financial responsibility, subject to the terms and conditions of the respective agreements, including overall coverage limits, for pending and future claims for Asbestos Liability. The Settlement Agreements encompass the substantial majority of insurance policies that provide coverage for claims for Asbestos Liability.

The Settlement Agreements include acknowledgements that Howden North America, Inc. (Howden) is entitled to coverage under policies covering Asbestos Liability for claims arising out of the historical products manufactured or distributed by Buffalo Forge, a former subsidiary of the Corporation (the Products). The Settlement Agreements do not provide for any prioritization on access to the applicable policies or any sublimits of liability as to Howden or the Corporation and Air & Liquid, and, accordingly, Howden may access the coverage afforded by the Settling Insurers for any covered claim arising out of a Product. In general, access by Howden to the coverage afforded by the Settling Insurers for the Products will erode coverage under the Settlement Agreements available to the Corporation and Air & Liquid for Asbestos Liability.

On February 24, 2011, the Corporation and Air & Liquid filed a lawsuit in the United States District Court for the Western District of Pennsylvania against thirteen domestic insurance companies, certain underwriters at Lloyd s, London and certain London market insurance companies, and Howden. The lawsuit seeks a declaratory judgment regarding the respective rights and obligations of the parties under excess insurance policies that were issued to the Corporation from 1981 through 1984 as respects claims against the Corporation and its subsidiary for Asbestos Liability and as respects asbestos bodily-injury claims against Howden arising from the Products. The Corporation and Air & Liquid have reached Settlement Agreements with all but two of the defendant insurers in the coverage action. Those Settlement Agreements specify the terms and conditions upon which the insurer parties are to contribute to defense and indemnity costs for claims for Asbestos Liability. One of the Settlement Agreements entered into by the Corporation and Air & Liquid also provided for the dismissal of claims, without prejudice, regarding two upper-level excess policies issued by one of the insurers. The Court has entered Orders dismissing all claims in the action filed against each other by the Corporation and Air & Liquid, on the one hand, and by the settling insurers, on the other. Howden also reached an agreement with eight domestic insurers addressing asbestos-related bodily injury claims arising from the Products, and claims as to those insurers and Howden have been dismissed. Various counterclaims, cross claims and third party claims have been filed in the litigation and remain pending although only two domestic insurers and Howden remain in the litigation as to the Corporation and Air & Liquid. On September 27, 2013, the Court issued a memorandum opinion and order granting in part and denying in part cross motions for summary judgment filed by the Corporation and Air & Liquid, Howden, and the insurer parties still in the litigation. On February 26, 2015, the Court issued final judgment. One insurer filed a notice of appeal from the judgment to the U.S. Court of Appeals to the Third Circuit; as a result, several other insurers, Howden, the Corporation, and Air & Liquid filed notices of case appeal. The appeals are presently pending, and the parties have been involved in a mediation through the Third Circuit s mediator s office.

Asbestos Valuations

In 2006, the Corporation retained Hamilton, Rabinovitz & Associates, Inc. (HR&A), a nationally recognized expert in the valuation of asbestos liabilities, to assist the Corporation in estimating the potential liability for pending and unasserted future claims for Asbestos Liability. HR&A was not requested to estimate asbestos claims against the inactive subsidiary in dissolution, which the Corporation believes are immaterial. Based on this analysis, the Corporation recorded a reserve for Asbestos Liability claims pending or projected to be asserted through 2013 as of December 31, 2006. HR&A s analysis has been periodically updated since that time. Most recently, the HR&A analysis was updated in 2014, and additional reserves were established by the Corporation as of December 31, 2014 for Asbestos Liability claims pending or projected to be asserted through 2024. The methodology used by HR&A in its projection in 2014 of the operating subsidiaries liability for pending and unasserted potential future claims for Asbestos Liability, which is substantially the same as the methodology employed by HR&A in prior estimates, relied upon and included the following factors:

HR&A s interpretation of a widely accepted forecast of the population likely to have been exposed to asbestos;

epidemiological studies estimating the number of people likely to develop asbestos-related diseases;

HR&A s analysis of the number of people likely to file an asbestos-related injury claim against the subsidiaries and the Corporation based on such epidemiological data and relevant claims history from January 1, 2012 to December 8, 2014;

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an analysis of pending cases, by type of injury claimed and jurisdiction where the claim is filed;

an analysis of claims resolution history from January 1, 2012 to December 8, 2014 to determine the average settlement value of claims, by type of injury claimed and jurisdiction of filing; and

an adjustment for inflation in the future average settlement value of claims, at an annual inflation rate based on the Congressional Budget Office s ten year forecast of inflation.

Using this information, HR&A estimated in 2014 the number of future claims for Asbestos Liability that would be filed through the year 2024, as well as the settlement or indemnity costs that would be incurred to resolve both pending and future unasserted claims through 2024. This methodology has been accepted by numerous courts.

In conjunction with developing the aggregate liability estimate referenced above, the Corporation also developed an estimate of probable insurance recoveries for its Asbestos Liabilities. In developing the estimate, the Corporation considered HR&A s projection for settlement or indemnity costs for Asbestos Liability and management s projection of associated defense costs (based on the current defense to indemnity cost ratio), as well as a number of additional factors. These additional factors included the Settlement Agreements then in effect, policy exclusions, policy limits, policy provisions regarding coverage for defense costs, attachment points, prior impairment of policies and gaps in the coverage, policy exhaustions, insolvencies among certain of the insurance carriers, and the nature of the underlying claims for Asbestos Liability asserted against the subsidiaries and the Corporation as reflected in the Corporation s asbestos claims database, as well as estimated erosion of insurance limits on account of claims against Howden arising out of the Products. In addition to consulting with the Corporation s outside legal counsel on these insurance matters, the Corporation consulted with a nationally-recognized insurance consulting firm it retained to assist the Corporation with certain policy allocation matters that also are among the several factors considered by the Corporation when analyzing potential recoveries from relevant historical insurance for Asbestos Liabilities. Based upon all of the factors considered by the Corporation, and taking into account the Corporation s analysis of publicly available information regarding the credit-worthiness of various insurers, the Corporation estimated the probable insurance recoveries for Asbestos Liability and defense costs through 2024. Although the Corporation believes that the assumptions employed in the insurance valuation were reasonable and previously consulted with its outside legal counsel and insurance consultant regarding those assumptions, there are other assumptions that could have been employed that would have resulted in materially lower insurance recovery projections.

Based on the analyses described above, the Corporation s reserve at December 31, 2014 for the total costs, including defense costs, for Asbestos Liability claims pending or projected to be asserted through 2024 was $189,048 of which approximately 64% was attributable to settlement costs for unasserted claims projected to be filed through 2024 and future defense costs. The reserve at December 31, 2015 was $169,849. While it is reasonably possible that the Corporation will incur additional charges for Asbestos Liability and defense costs in excess of the amounts currently reserved, the Corporation believes that there is too much uncertainty to provide for reasonable estimation of the number of future claims, the nature of such claims and the cost to resolve them beyond 2024. Accordingly, no reserve has been recorded for any costs that may be incurred after 2024.

The Corporation s receivable at December 31, 2014 for insurance recoveries attributable to the claims for which the Corporation s Asbestos Liability reserve has been established, including the portion of incurred defense costs covered by the Settlement Agreements in effect through December 31, 2014, and the probable payments and reimbursements relating to the estimated indemnity and defense costs for pending and unasserted future Asbestos Liability claims, was $140,651 ($125,423 at December 31, 2015).

The following table summarizes activity relating to insurance recoveries for each of the years ended December 31, 2015 and 2014.

	2015	2014
Insurance receivable asbestos, beginning of the year	**$ 140,651**	$ 110,741
Settlement and defense costs paid by insurance carriers	**(15,228)**	(17,159)
Changes in estimated coverage	**0**	47,069
Insurance receivable asbestos, end of the year	**$ 125,423**	$ 140,651

The insurance receivable recorded by the Corporation does not assume any recovery from insolvent carriers and a substantial majority of the insurance recoveries deemed probable was from insurance companies rated A (excellent) or better by A.M. Best Corporation.

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There can be no assurance, however, that there will not be further insolvencies among the relevant insurance carriers, or that the assumed percentage recoveries for certain carriers will prove correct. The difference between insurance recoveries and projected costs is not due to exhaustion of all insurance coverage for Asbestos Liability. The Corporation and the subsidiaries have substantial additional insurance coverage which the Corporation expects to be available for Asbestos Liability claims and defense costs that the subsidiaries and it may incur after 2024. However, this insurance coverage also can be expected to have gaps creating significant shortfalls of insurance recoveries as against claims expense, which could be material in future years.

The amounts recorded by the Corporation for Asbestos Liabilities and insurance receivables rely on assumptions that are based on currently known facts and strategy. The Corporation s actual expenses or insurance recoveries could be significantly higher or lower than those recorded if assumptions used in the Corporation s or HR&A s calculations vary significantly from actual results. Key variables in these assumptions are identified above and include the number and type of new claims to be filed each year, the average cost of disposing of each such new claim, average annual defense costs, compliance by relevant parties with the terms of the Settlement Agreements, the resolution of remaining coverage issues with insurance carriers, and the solvency risk with respect to the relevant insurance carriers. Other factors that may affect the Corporation s Asbestos Liability and ability to recover under its insurance policies include uncertainties surrounding the litigation process from jurisdiction to jurisdiction and from case to case, reforms that may be made by state and federal courts, and the passage of state or federal tort reform legislation.

The Corporation intends to evaluate its estimated Asbestos Liability and related insurance receivables as well as the underlying assumptions on a regular basis to determine whether any adjustments to the estimates are required. Due to the uncertainties surrounding asbestos litigation and insurance, these regular reviews may result in the Corporation incurring future charges; however, the Corporation is currently unable to estimate such future charges. Adjustments, if any, to the Corporation s estimate of its recorded Asbestos Liability and/or insurance receivables could be material to operating results for the periods in which the adjustments to the liability or receivable are recorded, and to the Corporation s liquidity and consolidated financial position.

NOTE 18 ENVIRONMENTAL MATTERS:

The Corporation is currently performing certain remedial actions in connection with the sale of real estate previously owned. Environmental exposures are difficult to assess and estimate for numerous reasons including lack of reliable data, the multiplicity of possible solutions, the years of remedial and monitoring activity required, and identification of new sites. In the opinion of management and in consideration of advice from the Corporation s consultants, the potential liability for all environmental proceedings of approximately $300 at December 31, 2015 is considered adequate based on information known to date.

NOTE 19 BUSINESS SEGMENTS:

The Corporation organizes its business into two operating segments Forged and Cast Engineered Products and Air and Liquid Processing. Summarized financial information concerning the Corporation s reportable segments is shown in the following tables. Corporate assets included under Identifiable Assets represent primarily cash and cash equivalents and other items not allocated to reportable segments. Long-lived assets exclude deferred income tax assets. Corporate costs are comprised of operating costs of the corporate office and other costs not allocated to the segments. Effective May 1, 2015, the Corporation completed an internal reorganization of its back office functions which resulted in certain employees of the segments becoming employees of the Corporation and associated costs (approximately $1,600 for the year ended December 31, 2015) being recorded as other expense, including corporate costs in the following table. Other expense, including corporate costs also includes corporate s portion of the curtailment charge incurred in connection with freezing the U.S. defined benefit pension plan. The accounting policies are the same as those described in Note 1.

	Net Sales			Income (Loss) Before Income Taxes and Equity Losses in Chinese Joint Venture		
	2015	2014	2013	**2015**	2014	2013
Forged and Cast Engineered Products	**$ 152,267**	$ 179,388	$ 187,286	**$ (3,444)**	$ 4,380	$ 13,936
Air and Liquid Processing[1]	**86,213**	93,470	93,764	**23,166**	4,222	24,945
Total Reportable Segments	**238,480**	272,858	281,050	**19,722**	8,602	38,881
Corporate costs, including other income (expense)				**(15,202)**	(9,494)	(11,701)

	$ 238,480	$ 272,858	$ 281,050	**$ 4,520**	$ (892)	$ 27,180

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	Capital Expenditures			Depreciation Expense			Identifiable Assets[(2)]		
	2015	2014	2013	**2015**	2014	2013	**2015**	2014	2013
Forged and Cast Engineered Products	**$ 8,608**	$ 12,884	$ 11,016	**$ 10,468**	$ 10,303	$ 9,976	**$ 228,718**	$ 260,384	$ 263,012
Air and Liquid Processing	**494**	356	757	**1,262**	1,444	1,300	**183,024**	197,518	168,977
Corporate	**305**	69	32	**57**	71	66	**94,414**	78,507	70,684
	$ 9,407	$ 13,309	$ 11,805	**$ 11,787**	$ 11,818	$ 11,342	**$ 506,156**	$ 536,409	$ 502,673

	Net Sales[(3)]			Long-Lived Assets[(4)]			Income (Loss) Before Income Taxes and Equity Losses in Chinese Joint Venture		
Geographic Areas:	**2015**	2014	2013	**2015**	2014	2013	**2015**	2014	2013
United States[(1)]	**$ 126,417**	$ 143,493	$ 134,695	**$ 236,707**	$ 252,739	$ 213,332	**$ 5,855**	$ (1,471)	$ 26,137
Foreign	**112,063**	129,365	146,355	**29,198**	31,359	35,723	**(1,335)**	579	1,043
	$ 238,480	$ 272,858	$ 281,050	**$ 265,905**	$ 284,098	$ 249,055	**$ 4,520**	$ (892)	$ 27,180

	Net Sales by Product Line		
	2015	2014	2013
Forged and cast engineered products[(5)]	**$ 152,267**	$ 179,388	$ 187,286
Heat exchange coils	**32,745**	39,109	42,364
Centrifugal pumps	**33,120**	32,983	32,341
Air handling systems	**20,348**	21,378	19,059
	$ 238,480	$ 272,858	$ 281,050

(1) Income (loss) before income taxes for the Air and Liquid Processing segment for 2015 includes pre-tax asbestos-related proceeds of $14,333 received from two insurance carriers in rehabilitation whereas 2014 includes a pre-tax charge of $4,487 for estimated costs of asbestos-related litigation through 2024 net of estimated insurance recoveries and 2013 includes a pre-tax credit of $16,340 for estimated additional insurance recoveries expected to be available to satisfy asbestos liabilities through 2022 resulting from settlement agreements reached with various insurance carriers.

(2) Identifiable assets for the Forged and Cast Engineered Products segment include investments in joint ventures of $3,097, $3,914 and $5,010 at December 31, 2015, 2014 and 2013, respectively. The change in the identifiable assets of the Air and Liquid Processing segment relates primarily to the movement in asbestos-related insurance receivables, the balances of which equaled $125,423, $140,651 and $110,741 at December 31, 2015, 2014 and 2013, respectively.

(3) Net sales are attributed to countries based on location of the customer. Sales to individual countries were less than 10% of consolidated net sales each of the years.

(4) Foreign long-lived assets represent primarily investments in joint ventures of $3,097, $3,914 and $5,010 at December 31, 2015, 2014 and 2013, respectively, and assets of the U.K. operations. Long-lived assets of the U.S. include noncurrent asbestos-related insurance receivables of $108,423, $123,651 and $86,241 for 2015, 2014 and 2013, respectively.

(5) For the Forged and Cast Engineered Products segment, two customers accounted for 33% of its net sales for 2015, 29% of its net sales for 2014 and 26% of its net sales for 2013.

NOTE 20 SUBSEQUENT EVENT:

On March 3, 2016, Union Electric Steel acquired Åkers AB and certain of its affiliated companies (excluding Åkers AB s operations in France and Belgium) from Altor Fund II GP Limited. The business is a part of the Forged and Cast Engineered Products segment. The acquisition adds roll production facilities in Sweden, the United States, Slovenia, and China; 14 sales offices; and a service capability in the United States. It enables cast roll production in the United States, forged roll production in Europe, and a low-cost product alternative for customers. The base purchase price of $75,000 (which is subject to certain post-closing adjustments) was payable $29,000 in cash, $26,000 in the form of a three-year note, and $20,000 in shares of common stock of the Corporation. Future consolidated financial statements of the Corporation will include the results of operations of the acquired entities from the date of acquisition.

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QUARTERLY INFORMATION UNAUDITED

(in thousands, except per share amounts)	**First Quarter**	**Second Quarter**	**Third Quarter**	**Fourth Quarter**
2015				
Net sales	**$ 65,087**	**$ 59,973**	**$ 58,094**	**$ 55,326**
Gross profit[(a)]	**13,043**	**11,776**	**9,439**	**8,131**
Net income (loss)[(b)]	**72**	**(520)**	**(1,511)**	**3,332**
Net income (loss) per common share:				
Basic[(b)]	**0.01**	**(0.05)**	**(0.14)**	**0.32**
Diluted[(b)]	**0.01**	**(0.05)**	**(0.14)**	**0.32**
Comprehensive income (loss)[(c)]	**3,692**	**2,789**	**(2,250)**	**8,296**
2014				
Net sales	$ 62,913	$ 69,949	$ 65,409	$ 74,587
Gross profit[(a)]	12,850	14,541	12,165	14,705
Net income (loss)[(d)]	78	1,121	(343)	(2,043)
Net income (loss) per common share:				
Basic[(d)]	0.01	0.11	(0.03)	(0.20)
Diluted[(d)]	0.01	0.11	(0.03)	(0.20)
Comprehensive income (loss)[(e)]	1,298	7,992	(2,701)	(30,664)

(a) *Gross profit excludes depreciation.*

(b) *Fourth quarter of 2015 includes an after-tax credit of $6,140 or $0.59 per common share for the net benefit of proceeds received from an insurance carrier in rehabilitation offset by acquisition-related costs.*

(c) *First quarter of 2015 includes a net-of-tax adjustment to recognize the effect of a plan amendment to the other postretirement benefit plan of $4,163. Fourth quarter of 2015 includes a net-of-tax adjustment to reflect the funded status of the various pension and other postretirement benefit plans of $5,231.*

(d) *Fourth quarter of 2014 includes an after-tax charge of $2,916 or $0.28 per common share for estimated costs of asbestos-related litigation through 2024 net of estimated insurance recoveries.*

(e) *Second quarter of 2014 includes a net-of-tax adjustment to recognize the effect of a plan amendment to the other postretirement benefit plan of $4,776. Fourth quarter of 2014 includes a net-of-tax adjustment to reflect the funded status of the various pension and other postretirement benefit plans of $(27,252).*

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of Ampco-Pittsburgh Corporation

We have audited the accompanying consolidated balance sheets of Ampco-Pittsburgh Corporation and subsidiaries (the Corporation) as of December 31, 2015 and 2014, and the related consolidated statements of operations, comprehensive income (loss), shareholders equity, and cash flows for each of the three years in the period ended December 31, 2015. These financial statements are the responsibility of the Corporation 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, such consolidated financial statements present fairly, in all material respects, the financial position of Ampco-Pittsburgh Corporation and subsidiaries as of December 31, 2015 and 2014, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2015, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Corporation s internal control over financial reporting as of December 31, 2015, based on the criteria established in *Internal Control Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 15, 2016 expressed an unqualified opinion on the Corporation s internal control over financial reporting.

Pittsburgh, Pennsylvania
March 15, 2016

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

The Corporation did not experience any changes in, or disagreements with its accountants on, accounting and financial disclosure during the period covered.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures. An evaluation of the effectiveness of the Corporation s disclosure controls and procedures as of the end of the period covered by this report was carried out under the supervision, and with the participation, of management, including the principal executive officer and principal financial officer. Disclosure controls and procedures are defined under Securities and Exchange Commission (SEC) rules as controls and other procedures that are designed to ensure that information required to be disclosed by a company in the reports that it files under the Exchange Act is recorded, processed, summarized and reported within required time periods. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by an issuer in the reports that it files or submits under the Exchange Act is accumulated and communicated to the issuer s management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate, to allow timely decisions regarding required disclosure. Based on that evaluation, the Corporation s management, including the principal executive officer and principal financial officer, has concluded that the Corporation s disclosure controls and procedures were effective at the reasonable assurance level as of December 31, 2015.

Management s Annual Report on Internal Control Over Financial Reporting. The Corporation s management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a 15(f) under the Securities Exchange Act of 1934, as amended). Internal control over financial reporting cannot provide absolute assurance of achieving financial reporting objectives because of its inherent limitations. Effective internal control over financial reporting can only provide reasonable assurance that the objectives of the control process are met. Internal control over financial reporting is a process that involves human diligence and compliance and is subject to lapses in judgment and breakdowns resulting from human failures. Internal control over financial reporting also can be circumvented by collusion or improper management override. Because of such limitations, there is a risk that material misstatements may not be prevented or detected on a timely basis by internal control over financial reporting. However, these inherent limitations are known features of the financial reporting process. Therefore it is possible to design into the process safeguards to reduce, though not eliminate, this risk. Further, the design of internal control over financial reporting includes the consideration of the benefits of each control relative to the cost of the control.

Management assessed the effectiveness of internal control over financial reporting as of December 31, 2015. In making this assessment, management used the criteria set forth in *Internal Control Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on those criteria and management s assessment, management, including the principal executive officer and principal financial officer, concluded that the Corporation s internal control over financial reporting was effective as of December 31, 2015.

The Corporation s independent registered public accounting firm, Deloitte & Touche LLP, has issued an attestation report on the Corporation s internal control over financial reporting which is included herein.

Changes in Internal Control Over Financial Reporting. There were no changes in the Corporation s internal control over financial reporting during the quarter ended December 31, 2015 that have materially affected, or are reasonably likely to materially affect, its internal control over financial reporting.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of Ampco-Pittsburgh Corporation

We have audited the internal control over financial reporting of Ampco-Pittsburgh Corporation and subsidiaries (the Corporation) as of December 31, 2015, based on criteria established in *Internal Control Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Corporation 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 Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Corporation 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, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and 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 by, or under the supervision of, the company s principal executive and principal financial officers, or persons performing similar functions, and effected by the company s board of directors, management, and other personnel 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 the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the 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, the Corporation maintained, in all material respects, effective internal control over financial reporting as of December 31, 2015, based on the criteria established in *Internal Control Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements as of and for the year ended December 31, 2015 of the Corporation and our report dated March 15, 2016 expressed an unqualified opinion on those financial statements.

Pittsburgh, Pennsylvania
March 15, 2016

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ITEM 9B. OTHER INFORMATION

None

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information about the Corporation s directors required by Item 401 of Regulation S-K and not otherwise set forth below is contained under the caption Proposal 1: Election of Directors in the Corporation s definitive Proxy Statement for the 2016 Annual Meeting of Shareholders (the Proxy Statement) which the Company anticipates filing with the Securities and Exchange Commission, pursuant to Regulation 14A, not later than 120 days after the end of the Corporation s fiscal year, and is incorporated herein by reference. The information required by Item 401 of Regulation S-K regarding executive officers is set forth in Part I, Item 1 of this report under Executive Officers.

The information required by Item 405 of Regulation S-K is contained under the caption Security Ownership of Certain Beneficial Owners and Management of the Proxy Statement and is incorporated by reference.

The Corporation and its subsidiaries have adopted a Code of Business Conduct and Ethics that applies to all of their officers, directors and employees, as well as an additional Code of Ethics that applies to the Corporation s Chief Executive Officer and Chief Financial Officer, are available on the Corporation s website at www.ampcopittsburgh.com.

The information required by Items 407(c)(3), (d)(4) and (d)(5) of Regulation S-K is included under the captions Corporate Governance Director Nominating Procedures and Board Committees and Related Matters Audit Committee of the Proxy Statement and is incorporated by reference.

ITEM 11. EXECUTIVE COMPENSATION

The information required for this Item 11 is contained in the Proxy Statement under the captions Director Compensation, Compensation Discussion and Analysis, Potential Payments upon Change in Control, Compensation Committee Interlocks and Insider Participation and Compensation Committee Report.

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

The information required by Item 201(d) of Regulation S-K relating to securities authorized for issuance under equity compensation plans is contained under the caption Outstanding Equity Awards at Fiscal Year End of the Proxy Statement and is incorporated by reference.

The information required by Item 403 of Regulation S-K is contained under the captions Security Ownership of Certain Beneficial Owners and Management of the Proxy Statement and is incorporated by reference.

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

The information required by Item 404(a) of Regulation S-K is contained under the caption Certain Relationships and Related Transactions in the Proxy Statement and is incorporated by reference.

The information required by Item 407(a) of Regulation S-K is contained under the caption Corporate Governance Board Independence of the Proxy Statement 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 Ratification of the Appointment of Deloitte & Touche as the Independent Registered Public Accounting Firm for 2016 is incorporated herein.

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PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

THE FOLLOWING DOCUMENTS ARE FILED AS PART OF THIS REPORT:

1. Financial Statements

Consolidated Balance Sheets

Consolidated Statements of Operations

Consolidated Statements of Comprehensive Income (Loss)

Consolidated Statements of Shareholders Equity

Consolidated Statements of Cash Flows

Notes to Consolidated Financial Statements

Report of Independent Registered Public Accounting Firm

2. Financial Statement Schedules

The following additional financial data should be read in conjunction with the consolidated financial statements in this Annual Report on Form 10-K. Schedules not included with this additional financial data have been omitted because they are not applicable or the required information is shown in the financial statements or notes thereto:

	Schedule Number	Page Number
Index to Ampco-Pittsburgh Corporation Financial Data		67
Report of Independent Registered Public Accounting Firm		68
Valuation and Qualifying Accounts	II	69

3. Exhibits

Exhibit No.

(3) Articles of Incorporation and By-laws

a. Articles of Incorporation, as corrected by a Certificate of Correction filed on January 20, 2016

Incorporated by reference to the Quarterly Report on Form 10-Q for the quarter ended March 31, 1983; the Quarterly Report on Form 10-Q for the quarter ended March 31, 1984; the Quarterly Report on Form 10-Q for the quarter ended March 31, 1985; the Quarterly Report on Form 10-Q for the quarter ended March 31, 1987; the Registration Statement on Form 8-A dated September 30, 1998.

b. Amended and Restated By-laws

Incorporated by reference to Form 8-K dated December 23, 2015.

(10) Material Contracts

a. 1988 Supplemental Executive Retirement Plan, as amended and restated December 17, 2008, and further amended on July 1, 2015, incorporated by reference to the 2008 Annual Report on Form 10-K and Quarterly Report on Form 10-Q filed on August 10, 2015.

b. Ampco-Pittsburgh Corporation 2008 Omnibus Incentive Plan, incorporated by reference to the Proxy Statement dated March 6, 2008.

c. Ampco-Pittsburgh Corporation 2011 Omnibus Incentive Plan, incorporated by reference to the Proxy Statement dated March 22, 2011.

d. Retirement and Consulting Agreement between Ampco-Pittsburgh Corporation and Robert A. Paul effective January 1, 2015, incorporated by reference to the 2014 Annual Report on Form 10-K.

e. Offer Letter between the Corporation and John S. Stanik dated November 25, 2014, incorporated by reference to the 2014 Annual Report on Form 10-K filed on March 16, 2015.

f. Change in Control Agreement between Ampco-Pittsburgh Corporation and John S. Stanik dated January 31, 2015, incorporated by reference to the 2014 Annual Report on Form 10-K filed on March 16, 2015.

g. Change in Control Agreement between Ampco-Pittsburgh Corporation and Maria Trainor, incorporated by reference to the Quarterly Report on Form 10-Q filed on August 10, 2015.

h. Amendment No. 1 to Amended and Restated Union Electric Steel Corporation Retirement Restoration Plan for Robert G. Carothers, effective as of July 1, 2015, incorporated by reference to the Quarterly Report on Form 10-Q filed on August 10, 2015.

i. Amended and Restated Change in Control Agreements between Ampco-Pittsburgh Corporation and certain officers of Ampco-Pittsburgh Corporation and certain of its subsidiaries, incorporated by reference to the Quarterly Report on Form 10-Q filed on November 6, 2015.

j. Share Sale and Purchase Agreement, dated as of December 2, 2015, by and between, inter alia, Åkers Holdings AB and Ampco-Pittsburgh Corporation, incorporated by reference to Current Report on Form 8-K filed on December 8, 2015.

k. Amendment to Retirement and Consulting Agreement between Ampco-Pittsburgh Corporation and Robert A. Paul, dated March 2, 2016.

l. Addendum to Share Sale and Purchase Agreement, dated March 1, 2016, among Ampco-Pittsburgh Corporation, Ampco UES Sub, Inc., Altor Fund II GP Limited, and Åkers Holding AB, incorporated by reference to Current Report on Form 8-K filed on March 7, 2016.

m. Second Addendum to Share Sale and Purchase Agreement, dated March 3, 2016, among Ampco-Pittsburgh Corporation, Ampco UES Sub, Inc., Altor Fund II GP Limited, and Åkers Holding AB, incorporated by reference to Current Report on Form 8-K filed on March 7, 2016.

n. Converting Note, issued by Ampco-Pittsburgh Corporation to Svenska Handelsbanken AB (publ) on March 3, 2016, incorporated by reference to Current Report on Form 8-K filed on March 7, 2016.

o. Promissory Note, issued by Ampco-Pittsburgh Corporation to Altor Fund II GP Limited on March 3, 2016, incorporated by reference to Current Report on Form 8-K filed on March 7, 2016.

p. Promissory Note, issued by Ampco-Pittsburgh Corporation to Svenska Handelsbanken AB (publ) on March 3, 2016, incorporated by reference to Current Report on Form 8-K filed on March 7, 2016.

q. Note Sale and Purchase Agreement, dated March 3, 2016, by and among Ampco-Pittsburgh Corporation, Altor Fund II GP Limited and Svenska Handelsbanken AB (publ), incorporated by reference to Current Report on Form 8-K filed on March 7, 2016.

r.

Shareholder Support Agreement, dated March 3, 2016, by and between Ampco-Pittsburgh Corporation and Altor Fund II GP Limited, incorporated by reference to Current Report on Form 8-K filed on March 7, 2016.

(21) Significant Subsidiaries

(23.1) Consent of Deloitte & Touche LLP

(23.2) Consent of Hamilton, Rabinovitz & Associates, Inc.

(31.1) Certification of Principal Executive Officer pursuant to Section 302 of The Sarbanes-Oxley Act of 2002.

(31.2) Certification of Principal Financial Officer pursuant to Section 302 of The Sarbanes-Oxley Act of 2002.

(32.1) Certification of Principal Executive Officer pursuant to Section 906 of The Sarbanes-Oxley Act of 2002.

(32.2) Certification of Principal Financial Officer pursuant to Section 906 of The Sarbanes-Oxley Act of 2002.

(101) Interactive Data File (XBRL)

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

March 15, 2016

AMPCO-PITTSBURGH CORPORATION
By:
Name: **John S. Stanik**
Title: Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in their capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
/s/ John S. Stanik	Director and Chief Executive Officer (Principal Executive Officer)	March 15, 2016
Marliss D. Johnson	Chief Financial Officer and Treasurer (Principal Financial and Accounting Officer)	March 15, 2016
James J. Abel	Director	March 15, 2016
Leonard M. Carroll	Director	March 15, 2016
Michael I. German	Director	March 15, 2016
Paul A. Gould	Director	March 15, 2016
William K. Lieberman	Director	March 15, 2016

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SIGNATURE	TITLE	DATE
Laurence E. Paul	Director	March 15, 2016
Stephen E. Paul	Director	March 15, 2016
Carl H. Pforzheimer, III	Director	March 15, 2016
Ernest G. Siddons	Director	March 15, 2016
J. Fredrik Strömholm	Director	March 15, 2016

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of Ampco-Pittsburgh Corporation

We have audited the consolidated financial statements of Ampco-Pittsburgh Corporation and subsidiaries (the Corporation) as of December 31, 2015 and 2014, and for each of the three years in the period ended December 31, 2015, and the Corporation s internal control over financial reporting as of December 31, 2015, and have issued our reports thereon dated March 15, 2016; such reports are included elsewhere in this Form 10-K. Our audits also included the consolidated financial statement schedule of the Corporation listed in Item 15. The consolidated financial statement schedule is the responsibility of the Corporation s management. Our responsibility is to express an opinion based on our audits. In our opinion, such consolidated 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.

Pittsburgh, Pennsylvania

March 15, 2016

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SCHEDULE II

Valuation and Qualifying Accounts

For the Years Ended December 31, 2015, 2014 and 2013

(in thousands)

		Additions				
Description	**Balance at Beginning of Period**	**Charged to Costs and Expenses**	**Charged to Other Accounts**	**Deductions**	**Other[4]**	**Balance at End of Period**
Year ended December 31, 2015						
Allowance for doubtful accounts	$ 1,374	$ 408	$ (762)[1]	$ (25)	$ (12)	$ 983
Valuation allowance against gross deferred income tax assets	$ 3,254	$ 0	$ (715)[2]	$ 0	$ (58)	$ 2,481
Year ended December 31, 2014						
Allowance for doubtful accounts	$ 551	$ 1,381	$ 0	$ (531)	$ (27)	$ 1,374
Valuation allowance against gross deferred income tax assets	$ 2,639	$ 0	$ 721[2]	$ (33)[3]	$ (73)	$ 3,254
Year ended December 31, 2013						
Allowance for doubtful accounts	$ 519	$ 33	$ 0	$ (3)	$ 2	$ 551
Valuation allowance against gross deferred income tax assets	$ 2,887	$ 0	$ 35[2]	$ (156)[3]	$ (127)	$ 2,639

(1) Represents collection of receivables previously provided for in the allowance for doubtful accounts.

(2) Represents valuation allowances established for deferred income tax assets since it is more likely than not that the assets will not be realized.

(3) Reduction in valuation allowances reflects primarily changes in the amount of deferred income tax assets expected to be realized, resulting in credit to the income tax provision in the consolidated statements of operations.

(4) Represents primarily impact from changes in foreign currency exchange rates and income tax rates.