

Tronox Ltd  
Form 10-K  
February 25, 2016

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UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549  
Form 10-K

(Mark One)

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

For the 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 \_\_\_\_\_

1-35573  
(Commission file number)

TRONOX LIMITED

(ACN 153 348 111)

(Exact name of registrant as specified in its charter)

Western Australia, Australia  
(State or other jurisdiction of incorporation or organization)

98-1026700  
(I.R.S. Employer Identification No.)

263 Tresser Boulevard, Suite 1100  
Stamford, Connecticut 06901

Lot 22 Mason Road  
Kwinana Beach WA 6167  
Australia

Registrant's telephone number, including area code: (203) 705-3800

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

Title of each class	Name of each exchange on which registered
Class A Ordinary Shares, par value \$0.01 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 No

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

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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

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

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

The aggregate market value of the ordinary shares held by non-affiliates of the registrant as of June 30, 2015 was approximately \$1,691,775,060.

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Section 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court. Yes No

As of January 29, 2016, the registrant had 64,596,857 shares of Class A ordinary shares and 51,154,280 shares of Class B ordinary shares outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's proxy statement for its 2016 annual general meeting of shareholders are incorporated by reference in this Form 10-K in response to Part III Items 10, 11, 12, 13 and 14.

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TRONOX LIMITED  
 ANNUAL REPORT ON FORM 10-K  
 FOR THE FISCAL YEAR ENDED DECEMBER 31, 2015  
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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

We have made statements under the captions “Business,” “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations”, and in other sections of this Form 10-K that are forward-looking statements. Forward-looking statements also can be identified by words such as “future,” “anticipates,” “believes,” “estimates,” “expects,” “intends,” “plans,” “predicts,” “will,” “would,” “could,” “can,” “may,” and similar terms. These forward-looking statements, which are subject to known and unknown risks, uncertainties and assumptions about us, may include projections of our future financial performance based on our growth strategies and anticipated trends in our business. These statements are only predictions based on our current expectations and projections about future events. There are important factors that could cause our actual results, level of activity, performance or achievements to differ materially from the results, level of activity, performance or achievements expressed or implied by the forward-looking statements. In particular, you should consider the numerous risks and uncertainties outlined in “Risk Factors.”

These risks and uncertainties are not exhaustive. Other sections of this Form 10-K may include additional factors, which could adversely impact our business and financial performance. Moreover, we operate in a very competitive and rapidly changing environment. New risks and uncertainties emerge from time to time, and it is not possible for our management to predict all risks and uncertainties, nor can management assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

Although we believe the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, level of activity, performance or achievements. Moreover, neither we nor any other person assumes responsibility for the accuracy or completeness of any of these forward-looking statements. You should not rely upon forward-looking statements as predictions of future events. We are under no duty to update any of these forward-looking statements after the date of this Form 10-K to conform our prior statements to actual results or revised expectations and we do not intend to do so.

We are committed to providing timely and accurate information to the investing public, consistent with our legal and regulatory obligations. To that end, we use our website to convey information about our businesses, including the anticipated release of quarterly financial results, quarterly financial and statistical and business-related information. Investors can link to the Tronox Limited website through <http://www.tronox.com>. Our website and the information contained therein or connected thereto shall not be deemed to be incorporated into this Form 10-K.

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PART I

For the purposes of this discussion, references to “we,” “us,” and, “our” refer to Tronox Limited, together with its consolidated subsidiaries (collectively referred to as “Tronox”), when discussing the business following the completion of the Exxaro Transaction, and to Tronox Incorporated, together with its consolidated subsidiaries (collectively referred to as “Tronox Incorporated”), when discussing the business prior to the completion of the Exxaro Transaction.

Item 1. Business

Tronox is a public limited company registered under the laws of the State of Western Australia. We are a global leader in the production and marketing of titanium bearing mineral sands and titanium dioxide (“TiO<sub>2</sub>”) pigment, and the world’s largest producer of natural soda ash. Titanium feedstock is primarily used to manufacture TiO<sub>2</sub>. Our TiO<sub>2</sub> products are critical components of everyday applications such as paint and other coatings, plastics, paper, and other uses, and our related mineral sands product streams include titanium feedstock, zircon, and pig iron. Zircon, a hard, glossy mineral, is used for the manufacture of ceramics, refractories, TV screen glass, and a range of other industrial and chemical products. Pig iron is a metal material used in the steel and metal casting industries to create wrought iron, cast iron, and steel.

We produce natural soda ash from a mineral called trona, which we mine at two facilities we own near Green River, Wyoming. At these facilities we process the trona ore into chemically pure soda ash and specialty sodium products such as sodium bicarbonate (baking soda) and sodium sesquicarbonate (S-Carb® and Sesqui™). We sell soda ash directly to customers in the United States, Canada and the European Community, European Free Trade Association and South African Customs Union and to the American Natural Soda Ash Corporation (“ANSAC”), a non-profit foreign sales association in which we and two other U.S. soda ash producers are members. ANSAC then resells the soda ash to customers around the world. Our soda ash is used primarily by customers in the glass, detergent, and chemicals manufacturing industries. We use a portion of our soda ash at Green River to produce specialty sodium products such as sodium bicarbonate and sodium sesquicarbonate that have uses in food, animal feed, pharmaceutical, and medical applications.

In June 2012, Tronox Limited issued Class B ordinary shares (“Class B Shares”) to Exxaro Resources Limited (“Exxaro”) and one of its subsidiaries in consideration for 74% of Exxaro’s South African mineral sands business, and the existing business of Tronox Incorporated was combined with the mineral sands business in an integrated series of transactions whereby Tronox Limited became the parent company (the “Exxaro Transaction”). Exxaro has agreed not to acquire any additional voting shares of Tronox Limited if, following such acquisition, Exxaro will have a voting interest in Tronox Limited of 50% or more unless Exxaro brings any proposal to make such an acquisition to the Board of Directors of Tronox Limited on a confidential basis. In the event an agreement regarding the proposal is not reached, Exxaro is permitted to make a takeover offer for all the shares of Tronox Limited not held by affiliates of Exxaro, subject to certain non-waivable conditions. At December 31, 2015, Exxaro held approximately 44% of the voting securities of Tronox Limited. See Note 24 for additional information regarding Exxaro transactions.

Principal Business Segments

We currently operate our business in two operating and reportable segments, TiO<sub>2</sub> and Alkali.

On April 1, 2015 we completed the acquisition of 100% of the Alkali business (“Alkali”) from FMC Corporation (“FMC”) for an aggregate purchase price of \$1.65 billion in cash (the “Alkali Transaction”). Prior to the Alkali Transaction, we had two operating and reportable segments, Mineral Sands and Pigment, based on the way the management team was organized and our Chief Operating Decision Maker (“CODM”) monitored performance, aligned strategies and allocated resources. As a result of the increased interdependency between the Mineral Sands and Pigment businesses, and related organizational changes, our CODM determined that it was better to review the Mineral Sands and Pigment

businesses, along with our electrolytic business, as a combined segment, TiO<sub>2</sub>, and to assess performance and allocate resources at that level. Following the Alkali Transaction, we restructured our organization to reflect two integrated businesses, TiO<sub>2</sub> and Alkali, as our two operating and reportable segments.

#### TiO<sub>2</sub> Segment

TiO<sub>2</sub> is used in a wide range of products due to its ability to impart whiteness, brightness, and opacity. TiO<sub>2</sub> is used extensively in the manufacture of paint and other coatings, plastics and paper, and in a wide range of other applications, including inks, fibers, rubber, food, cosmetics, and pharmaceuticals. Moreover, it is a critical component of everyday consumer applications due to its superior ability to cover or mask other materials effectively and efficiently relative to alternative white pigments and extenders. TiO<sub>2</sub> is considered to be a quality of life product, and some research indicates that consumption generally increases as disposable income increases. At present, it is our belief that there is no effective mineral substitute for TiO<sub>2</sub> because no other white pigment has the physical properties for achieving comparable opacity and brightness, or can be incorporated as cost effectively.

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Our TiO<sub>2</sub> segment includes the following:

- exploration, mining, and beneficiation of mineral sands deposits;
- production of titanium feedstock (including chloride slag, slag fines, rutile, synthetic rutile and leucoxene), pig iron, and zircon;
- production and marketing of TiO<sub>2</sub>; and
- electrolytic manganese dioxide manufacturing and marketing, which is primarily focused on advanced battery materials and specialty boron products.

### Exploration, Mining and Beneficiation of Mineral Sands Deposits

“Mineral sands” refers to concentrations of heavy minerals in an alluvial environment (sandy or sedimentary deposits near a sea, river or other water source). Our exploration, mining and beneficiation of mineral sands deposits are comprised of the following:

Our KwaZulu-Natal (“KZN”) Sands operations located in South Africa consist of the Fairbreeze mine (which we expect will enter into commercial production in early 2016), a concentration plant, a mineral separation plant, and a smelter complex with two furnaces;

Our Namakwa Sands operations located in South Africa include the Namakwa Sands mine, a primary concentration plant, a secondary concentration plant, a mineral separation plant, and a smelter complex with two furnaces; and

Our Western Australia operations, which consist of the Cooljarloo Sands mine and concentration plant and the Chandala processing plant, which includes a mineral separation plant, and a synthetic rutile plant.

### Exploration

**Ilmenite** - Ilmenite is the most abundant titanium mineral, with naturally occurring ilmenite having a titanium dioxide content ranging from approximately 45% to 65%, depending on its geological history. The weathering of ilmenite in its natural environment results in oxidation of the iron, which increases titanium content.

**Rutile** - Rutile is essentially composed of crystalline titanium dioxide and, in its pure state, would contain close to 100% titanium dioxide. Naturally occurring rutile, however, usually contains minor impurities and therefore, commercial concentrates of this mineral typically contain approximately 94% to 96% titanium dioxide.

**Leucoxene** - Leucoxene is a natural alteration of ilmenite with a titanium dioxide content ranging from approximately 65% to more than 90%. The weathering process is responsible for the alteration of ilmenite to leucoxene, which results in the removal of iron, leading to an upgrade in titanium dioxide content.

**Titanium Slag** - The production of titanium slag involves smelting ilmenite in an electric arc furnace under reducing conditions, normally with anthracite (coal) used as a reducing agent. The slag forms a liquid layer on top a layer of liquid pig iron. Slag, containing the bulk of the titanium and impurities other than iron, and a high purity pig iron are both produced in this process. The final quality of the slag is highly dependent on the quality of the original ilmenite and the ash composition of the anthracite used in the furnace. Titanium slag has a titanium dioxide content of approximately 75% to 91%. Our slag typically contains 85% to 88% titanium dioxide.

Titanium Slag Fines - For titanium slag to be suitable for use in the chloride process, it needs to be milled down to a particle size range which allows it to be processed effectively during the chlorination step of the chloride process. The milling of titanium slag results in the generation of a smaller size than can readily be used by chloride producers, which is separated and sold as a separate product. These slag fines are mostly sold to pigment producers who operate the sulfate process.

Synthetic Rutile - A number of processes have been developed for the beneficiation of ilmenite into products containing between approximately 90% and 95% titanium dioxide. These products are known as synthetic rutile or upgraded ilmenite. The processes employed vary in terms of the extent to which the ilmenite grain is reduced, and the precise nature of the reducing reaction and the conditions used in the subsequent removal of iron. All of the existing commercial processes are based on the reduction of ilmenite in a rotary kiln, followed by leaching under various conditions to remove the iron from the reduced ilmenite grains. Our synthetic rutile has a titanium dioxide content of approximately 90% to 93%.

Zircon - Zircon is frequently, but not always, found in the mineral sands deposits containing ilmenite. It is extracted, alongside ilmenite and rutile, as part of the initial mineral sands beneficiation process.

### Mining

The mining of mineral sands deposits is conducted either “wet,” by dredging or hydraulic water jets, or “dry,” using earth-moving equipment to excavate and transport the sands. Dredging, as used at the Cooljarloo mine, is generally the favored method of mining mineral sands, provided that the ground conditions are suitable and water is readily available. In situations involving hard ground, discontinuous ore bodies, small tonnage, high slimes contents or very high grades, dry mining techniques are generally preferred.



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**Dredge Mining** - Dredge mining, or wet mining, is best suited to ore reserves located below the water table. A floating dredge removes the ore from the bottom of an artificial pond through a large suction pipe. The bulk sand material is fed as slurry through a primary, or “wet,” concentrator that is typically towed behind the dredge unit. The dredge slowly advances across the pond and deposits clean sand tailings behind the pond for subsequent revegetation and rehabilitation. Because of the high capital cost involved in the manufacturing and location, dredge mining is most suitable for large, long-life deposits. The dredging operations at Cooljarloo use two large floating dredges in a purpose-built pond. The slurry is pumped to a floating concentrator, which recovers heavy minerals from the sand and clay.

**Hydraulic Mining** - At our Fairbreeze mine in KZN, we employ a hydraulic mining method for mineral sands due to the topography of the ore body and the ore characteristics. A jet of high-pressure water is aimed at the mining face, thereby cutting into and loosening the sand so that it collapses on the floor. The water acts as a carrier medium for the sand, due to the high fines (mineral particles that are too fine to be economically extracted and other materials that remain after the valuable fraction of an ore has been separated from the uneconomic fraction) content contained in the ore body. The slurry generated by the hydraulic monitors flows to a collection sump where oversize material is removed and the slurry is then pumped to the primary concentration plant.

**Dry Mining** - Dry mining is suitable where mineral deposits are shallow, contain hard bands of rock, or are in a series of unconnected ore bodies. Dry mining is performed at Namakwa Sands, which is located in an arid region on the west coast of South Africa. The ore is mined with front end loaders in a load and carry operation, dumping the mineral bearing sands onto a conveyor belt system that follows behind the mining face. The harder layers are mined using hydraulic excavators in a backhoe configuration or by bulldozer. Namakwa Sands does not use blasting in its operations. The mined material is transported by trucks to the mineral sizers where primary reduction takes place.

## Processing and Mineral Separation

**Processing** - Both wet and dry mining techniques utilize wet concentrator plants to produce a high grade of heavy mineral concentrate (typically approximately 90% to 98% heavy mineral content). Screened ore is first deslimed, a process by which slimes are separated from larger particles of minerals, and then washed through a series of spiral separators that use gravity to separate the heavy mineral sands from lighter materials, such as quartz. Residue from the concentration process is pumped back into either the open pits or slimes dams for rehabilitation and water recovery. Water used in the process is recycled into a clean water dam with any additional water requirements made up from pit dewatering or rainfall.

**Mineral Separation** - The non-magnetic (zircon and rutile) and magnetic (ilmenite) concentrates are passed through a dry separation process, known as the “dry mill” to separate out the minerals. Electrostatic and dry magnetic methods are used to further separate the ilmenite, rutile and zircon. Electrostatic separation relies on the difference in surface conductivity of the materials to be separated. Conductive minerals (such as ilmenite, rutile and leucoxene) behave differently from non-conductive minerals (such as zircon) when subjected to electrical forces. Magnetic separation techniques are dependent on the iron content of a mineral. Magnetic minerals (such as ilmenite) will separate from non-magnetic minerals (such as rutile and leucoxene) when subjected to a magnetic field. A combination of gravity and magnetic separation is used to separate zircon from the non-magnetic portion of the heavy mineral concentrate. The heavy mineral concentrate at KZN Sands and Namakwa Sands is passed through wet high-intensity magnetic separation to produce a non-magnetic fraction and a magnetic fraction.

## Production of titanium feedstock, pig iron, and zircon

Our TiO<sub>2</sub> operations have a combined annual production capacity of approximately 753,000 metric tons (“MT”) of titanium feedstock, which is comprised of 71,000 MT of rutile, 20,000 MT of leucoxene, 220,000 MT of synthetic rutile, and 410,000 MT of titanium slag. Our TiO<sub>2</sub> operations also have the capability to produce approximately

220,000 MT of zircon and 221,000 MT of pig iron.

Titanium Feedstock - Ilmenite, rutile, leucoxene, titanium slag and synthetic rutile are all used primarily as feedstock for the production of  $TiO_2$ . Titanium feedstock can be segmented based on the level of titanium contained within the feedstock, with substantial overlap between each segment. Different grades of titanium feedstock have similar characteristics. As such,  $TiO_2$  producers generally source and supply a variety of feedstock grades, and often blend them into one feedstock. The lower amount of titanium used in the  $TiO_2$  manufacturing process, the more feedstock required and waste material produced. Naturally occurring high-grade titanium minerals required for the production of  $TiO_2$  are limited in supply. Two processes have been developed commercially: one for the production of titanium slag and the other for the production of synthetic rutile. Both processes use ilmenite as a raw material, and involve the removal of iron oxides and other non-titanium material.

Titanium Slag - Ilmenite at KZN Sands and Namakwa Sands is processed further through direct current arc furnaces to produce titanium slag with a titanium content of approximately 86% to 89%. The smelting process comprises the reduction of ilmenite to produce titanium slag and pig iron. Ilmenite and anthracite are fed in a tightly controlled ratio into an operating furnace where the endothermic reduction of ilmenite occurs. The resultant titanium slag has a lower density than the iron, and separation of the two liquid products occurs inside the furnace. The slag and iron are tapped periodically from separate sets of tapholes located around the circumference of the furnace. Slag is tapped into steel pots and cooled for several hours in the pots before the slag blocks are tipped out. The blocks are subsequently transported to the blockyard where they are cooled under water sprays for a number of days. They are then crushed, milled, and separated according to size fractions, as required by the customers. The tapped pig iron is re-carburized, de-sulfurized, and cast into pigs.

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**High Purity Pig Iron** -The process by which ilmenite is converted into titanium slag results in the production of high purity iron containing low levels of manganese. When iron is produced in this manner, the molten iron is tapped from the ilmenite furnace during the smelting process, alloyed by adding carbon and silicon and treated to reduce the sulfur content, and is then cast into ingots, or “pigs.” The pig iron produced as a co-product of our titanium slag production is known as low manganese pig iron.

**Synthetic Rutile Production** -Ilmenite may also be upgraded into synthetic rutile. Synthetic rutile, or upgraded ilmenite, is a chemically modified form of ilmenite that has the majority of the ferrous, non-titanium components removed, and is also suitable for use in the production of titanium metal or  $TiO_2$  using the chloride process. Ilmenite is converted to synthetic rutile in a two-stage pyrometallurgical and chemical process. The first stage involves heating ilmenite in a large rotary kiln. Coal is used as a heat source and, when burned in an oxygen deficient environment, it produces carbon monoxide, which promotes a reducing environment that converts the iron oxide contained in the ilmenite to metallic iron. The intermediate product, called reduced ilmenite, is a highly magnetic sand grain due to the presence of the metallic iron. The second stage involves the conversion of reduced ilmenite to synthetic rutile by removing the metallic iron from the reduced ilmenite grain. This conversion is achieved through aeration (oxidation), accelerated through the use of ammonium chloride as a catalyst, and acid leaching of the iron to dissolve it out of the reduced ilmenite. Activated carbon is also produced as a co-product of the synthetic rutile production process.

## Zircon

Zircon ( $ZrSiO_4$ ) is a mineral which is primarily used as an additive in ceramic glazes to add hardness, which makes the ceramic glaze more water, chemical and abrasion resistant. It is also used for the production of zirconium metal and zirconium chemicals, in refractories, as molding sand in foundries, and for TV screen glass, where it is noted for its structural stability at high temperatures and resistance to abrasive and corrosive conditions. Zircon typically represents a relatively low proportion of the in-situ heavy mineral sands deposits, but has a relatively higher value compared to other heavy mineral products. Refractories containing zircon are expensive and are only used in demanding, high-wear and corrosive applications in the glass, steel and cement industries. Foundry applications use zircon when casting articles of high quality and value where accurate sizing is crucial, such as aerospace, automotive, medical, and other high-end applications.

## Competitive Conditions

Globally, there are a small number of large mining companies or groups that are involved in the production of titanium feedstock, and these are dominated by close relationships between miners and consumers (predominately pigment producers).

## Production and Marketing of $TiO_2$

We operate three  $TiO_2$  pigment facilities at the following locations: Hamilton, Mississippi; Botlek, the Netherlands; and Kwinana, Western Australia, representing an aggregate annual  $TiO_2$  production capacity of 465,000 MT.

## Production

$TiO_2$  is produced using a combination of processes involving the manufacture of base pigment particles followed by surface treatment, drying and milling (collectively known as finishing). Two commercial production processes are used by manufacturers: the chloride process and the sulphate process. All of our  $TiO_2$  is produced using the chloride process. We are one of a limited number of  $TiO_2$  producers in the world with chloride production technology. We believe that we are one of the largest global producers and marketers of  $TiO_2$  manufactured via chloride technology.  $TiO_2$  produced using the chloride process is preferred for some of the largest end-use applications.

We believe the chloride process has several advantages over the sulphate process: it generates less waste, uses less energy, is less labor intensive, permits the direct recycle of chlorine, a major process chemical, back into the production process, and produces what is considered a high quality product. In the chloride process, high quality feedstock (slag, synthetic rutile, natural rutile or, in limited cases, high titanium content ilmenite ores) are reacted with chlorine (the chlorination step) and carbon to form titanium tetrachloride (“TiCl<sub>4</sub>”) in a continuous fluid bed reactor. Purification of TiCl<sub>4</sub> to remove other chlorinated products is accomplished using a distillation process. The purified TiCl<sub>4</sub> is then oxidized in a vapor phase form to produce raw pigment particles and chlorine gas. The latter is recycled back to the chlorination step for reuse. Raw pigment is then typically slurried with water and dispersants prior to entering the finishing step. The chloride process currently accounts for substantially all of the industry-wide TiO<sub>2</sub> production capacity in North America, and approximately 45% of industry-wide capacity globally.

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Commercial production of TiO<sub>2</sub> results in one of two different crystal forms: rutile, which is manufactured using either the chloride process or the sulphate process, or anatase, which is only produced using the sulfate process. All of our global production capacity utilizes the chloride process to produce rutile TiO<sub>2</sub>. Rutile TiO<sub>2</sub> is preferred over anatase TiO<sub>2</sub> for many of the largest end-use applications, such as coatings and plastics, because its higher refractive index imparts better hiding power at lower quantities than the anatase crystal form and it is more suitable for outdoor use because it is more durable. Although rutile TiO<sub>2</sub> can be produced using either the chloride process or the sulphate process, some customers prefer rutile produced using the chloride process because it typically has a bluer undertone and greater durability.

The primary raw materials used in the production of TiO<sub>2</sub> include titanium feedstock, chlorine and coke. Chemicals used in the production of TiO<sub>2</sub> include oxygen and nitrogen. Other chemicals used in the production of TiO<sub>2</sub> are purchased from various companies under long-term supply contracts. In the past we have been, and we expect that we will continue to be, successful in obtaining short-term and long-term extensions to these and other existing supply contracts prior to their expiration. We expect the raw materials purchased under these contracts, and contracts that we may enter into in the near term, to meet our requirements over the next several years.

## Marketing

We supply and market TiO<sub>2</sub> under the brand name TRONOX<sup>®</sup> to approximately 1,200 customers in approximately 90 countries, including market leaders in each of the key end-use markets for TiO<sub>2</sub>, and we have supplied each of our top ten customers with TiO<sub>2</sub> for more than 10 years. For information regarding 2015 sales volume by geography and end-use market, see section “Segment and Geographic Revenue Information”.

In addition to price and product quality, we compete on the basis of technical support and customer service. Our direct sales and technical service organizations execute our sales and marketing strategy, and work together to provide quality customer service. Our direct sales staff is trained in all of our products and applications. Due to the technical requirements of TiO<sub>2</sub> applications, our technical service organization and direct sales offices are supported by a regional customer service staff located in each of our major geographic markets.

We believe the integrated nature of our TiO<sub>2</sub> operations provides us with a significant unit cash cost advantage over most of our TiO<sub>2</sub> producing peers. This is of particular importance as it positions us to be competitive through all facets of the TiO<sub>2</sub> cycle. Moreover, our three TiO<sub>2</sub> production facilities are strategically positioned in key geographies. The Hamilton facility is one of the largest TiO<sub>2</sub> production facilities in the world, and has the size and scale to service customers in North America and around the globe. Our Kwinana plant, located in Australia, is well positioned to service the growing demand from Asia. Our Botlek facility, located in the Netherlands, services our European customers and certain specialized applications globally.

Our sales and marketing strategy focuses on effective customer management through the development of strong relationships. We develop customer relationships and manage customer contact through our sales team, technical service organization, research and development team, customer service team, plant operations personnel, supply chain specialists, and senior management visits. We believe that multiple points of customer contact facilitate efficient problem solving, supply chain support, formula optimization and co-development of products.

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The global market in which our TiO<sub>2</sub> business operates is highly competitive. Competition is based on a number of factors such as price, product quality, and service. We face competition not only from chloride process pigment producers, but from sulfate process pigment producers as well. Moreover, because transportation costs are minor relative to the cost of our product, there is also competition between products produced in one region versus products produced in another region.

We face competition from competitors with facilities in multiple regions, including Chemours, Cristal Global, Huntsman and Kronos Worldwide Inc. In addition to the major competitors discussed above, we compete with numerous regional producers, including producers in China such as Sichuan Lomon, Henan Billions, CNNC and Blue Star.

## Electrolytic Manganese Dioxide Manufacturing and Marketing

Our electrolytic and other chemical products operations are primarily focused on advanced battery materials and specialty boron products. We closed our sodium chlorate business line in the second quarter of 2015.

Electrolytic manganese dioxide (“EMD”) — EMD is the active cathode material for alkaline batteries used in flashlights, electronic games, and medical and industrial devices. We believe that we are one of the largest producers of EMD for the global alkaline battery industry. EMD quality requirements for alkaline technology are much more demanding than for zinc carbon technology and, as a result, alkaline-grade EMD commands a higher price than zinc carbon-grade EMD. The United States primary battery market, predominantly based on alkaline-grade EMD, is the largest in the world followed by China and Japan according to the Freedonia Group. As such, we expect demand for alkaline-grade EMD to be sustained by the long-term growth of consumer electronics devices, partly offset by the trend toward smaller battery sizes and rechargeable batteries. The older zinc carbon technology remains in developing countries such as China and India. As the economies of China and India continue to mature, and the need for more efficient energy sources develops, we anticipate that the demand for alkaline-grade EMD will increase.

Boron — Specialty boron product end-use applications include semiconductors, pharmaceuticals, high-performance fibers, specialty ceramics and epoxies, as well as igniter formulations. According to publicly available industry reports, we are one of the leading suppliers of boron trichloride, along with JSC Aviabor, Sigma-Aldrich Corporation, and several Asian manufacturers. We anticipate demand for boron trichloride will remain positive, driven primarily by the growth of the semiconductor industry. We believe we hold a similar leading position in the elemental boron market. We expect demand for elemental boron will continue to be largely flat following the trends in the defense and automotive industries in the United States.

## Alkali Segment

Our Alkali business is the world’s largest natural soda ash producer. We provide our soda ash to a variety of industries such as flat glass, container glass, detergent and chemical manufacturing. Soda ash, also known by its chemical name sodium carbonate (Na<sub>2</sub>CO<sub>3</sub>) is a highly valued raw material in the manufacture of glass due to its properties of lowering the melting point of silica in the batch. Soda ash is also valued by detergent manufacturers for its absorptive and water softening properties. We produce our products from trona, which we mine at two sites in the Green River Basin, Wyoming. The vast majority of the world’s accessible trona reserves are located in the Green River Basin. According to historical production statistics, approximately one-quarter of global soda ash is produced from trona, with the remainder being produced synthetically, which requires chemical transformation of limestone and salt using a significantly higher amount of energy. Production of soda ash from trona is significantly less expensive than producing it synthetically. In addition, life-cycle analyses reveal that production from trona consumes less energy and produces less carbon dioxide and fewer undesirable by-products than synthetic production.

Our Alkali segment includes the following:

- Dry mining of trona ore underground at our Westvaco facility;
- Secondary recovery of trona from previously dry mined areas underground at our Westvaco and Granger facilities through solution mining;
  - Refining of raw trona ore into soda ash and specialty sodium alkali products;  
and
- Marketing, sale and distribution of alkali products.

Our Alkali segment currently produces approximately 4 million tons of soda ash and downstream specialty products. All mining and processing activities related to our products take place in our facilities located in the Green River Basin of Wyoming, United States.

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### Dry mining of Trona Ore

Trona is dry mined underground at our Westvaco facility primarily through the operation of our single longwall mining machine. Longwall mining provides higher recovery rates leading to extended mine life compared to other dry mining techniques. Development of the “tunnels” necessary to access and ventilate our longwall is through room and pillar mining completed primarily by our fleet of bore miners. The ore is conveyed underground to two hoisting operations where it travels about 1,600 feet vertically to the surface where it is either taken directly into the processing facilities or stored on outdoor stockpiles for future consumption.

### Secondary Recovery Solution Mining

We solution mine trona at both our Westvaco and Granger sites using secondary recovery techniques. Our secondary recovery mining starts with the recovery of water streams from our operations and non-trona solids (“insolubles”) left over from the processing of dry mined trona. The water and insolubles are injected through a number of wells into the old dry mine workings at both our Westvaco and Granger sites. The insolubles settle out while the water travels through the old workings, dissolving trona that was left behind during previous dry mining. Multiple pumping systems are used to pump the enriched solution to the surface for processing.

### Refining of Trona into Finished Alkali Products

Our Sesqui and Mono plants, located at our Westvaco site, convert dry-mined trona into soda ash. Crushing, dissolution in water, filtration, and crystallization techniques are used to produce the desired final products. In the Mono process, the ore is calcined with heat prior to dissolution, in order to convert the trona to soda ash via the removal of water and carbon dioxide. A final drying step using steam produces a dense soda ash product from the Mono process. In our Sesqui plant the calcination is instead performed at the end of the process, producing a light density soda ash that is preferred in applications desiring increased absorptivity. The Sesqui process also has the ability to produce refined sodium sesquicarbonate, (which we sell under the names S-Carb ® and Sesqui™) for use as a buffer in animal feed formulations and in cleaning and personal care applications.

Solution mined trona is converted into dense soda ash in our ELDM operation at the Westvaco site and at our Granger facility. The steps to produce soda ash are similar to the dry mined processes, except the crushing and dissolving steps are eliminated because the trona is already in a water solution as it leaves the mine.

Intermediate, semi-refined products are extracted from our soda ash processes at Westvaco at strategic locations for use as feedstocks for production of sodium bicarbonate and 50% caustic soda (NaOH).

### Marketing, Sale and Distribution of Alkali Products

We sell our alkali-products to customers directly in the United States, Canada, the European Community, the European Free Trade Area and the South African Customs Union. We sell through ANSAC exclusively in all other markets. ANSAC is a nonprofit foreign sales association in which we and two other U.S. soda ash producers are members, whose purpose is to promote export sales of U.S. produced soda ash in conformity with the Webb-Pomerene Act.

All of our alkali-products are shipped by rail and truck from our facilities in the Green River Basin. We operate a fleet of nearly 3,300 covered hopper cars which we use to deliver nearly 90% of the sales of alkali-products from the Green River facilities, all of which are shipped via a single rail line owned and operated by Union Pacific Railroad. Tronox leases these railcars from banks and leasing companies and from FMC under agreements with varying term-lengths. We recover costs of leasing through mileage credits paid under agreements with customers and carriers in accordance with established industry practices and government requirements.



### Soda Ash

Alkali sells most of its product as soda ash. Soda ash is the only product we sell to ANSAC. Soda ash is highly valued by manufacturers of flat and container glass because it lowers the temperature of the batch in a glass furnace. It is also valued by detergent manufacturers for its absorptive qualities. Demand for soda ash in the United States has been relatively flat over the last five years. Sales of soda ash in rapidly developing economies have grown more rapidly as a growing middle class demands more products that use soda ash, such as glass for housing and autos and detergents for cleaning.

### Specialty Alkali Products

Alkali markets sodium bicarbonate to private label manufacturers who package it for sale to retail grocery customers as baking soda. Alkali also sells sodium bicarbonate to manufacturers of packaged baked goods and similar products. Animal feed is an important market for sodium bicarbonate, which is mixed with feed to increase the yield of dairy cows and improve the health of poultry and other livestock. Sodium bicarbonate is also sold to customers who use it in hemodialysis applications and as an active ingredient in pharmaceutical products.

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### Customers

ANSAC is Alkali's largest customer, with total sales representing 35% of total sales in the segment. Apart from ANSAC, Alkali is not dependent on any single or small group of customers, the loss of one of which would not have a material adverse effect on the Company.

### Competitive Conditions

The global market in which our Alkali business operates is competitive. Competition is based on a number of factors such as price, favorable logistics and consistent customer service. In North America, our primary competition is from other U.S.-based natural soda ash operations: Solvay Chemicals, Ciner Resources, L.P., Tata Chemicals Soda Ash Partners in Wyoming, and Searles Valley Minerals, in California. Because of the cost advantages of natural soda ash production in the United States, imports have not been an important source of competition in North America. Sales of alkali-products outside of North America (principally through ANSAC) face competition from a variety of others, in most cases producers of soda ash using the synthetic method, but to a lesser extent producers of natural soda ash based in Turkey, China and Africa. Our specialty Alkali products also experience significant competition from producers of sodium bicarbonate, such as Church & Dwight Co., Solvay Chemicals and Natural Soda LLC.

### Research and Development

We have research and development facilities that service our products, and focus on applied research and development of both new and existing processes. Our research and development facilities supporting our mineral sands business are located in South Africa, while the majority of scientists supporting our pigment and electrolytic research and development efforts are located in Oklahoma City, Oklahoma. We also have research and development capabilities that support our Alkali business at our Green River, Wyoming facility.

New process developments are focused on increased throughput, efficiency gains and general processing equipment-related improvements. Ongoing development of process technology contributes to cost reduction, enhanced production flexibility, increased capacity, and improved consistency of product quality. In 2015, our product development and commercialization efforts were focused on several TiO<sub>2</sub> products that deliver added value to customers across all end use segments by way of enhanced properties of the pigment. Alkali is a leader in trona solution mining and our development efforts are focused on continued improvement of our extraction and processing efficiencies.

### Patents, Trademarks, Trade Secrets and Other Intellectual Property Rights

Protection of our proprietary intellectual property is important to our business. At December 31, 2015, we held 44 U.S. patents, 11 patent applications, and approximately 223 in foreign counterparts, including both issued patents and pending patent applications. Our U.S. patents have expiration dates ranging through 2131. Additionally, we have 5 trademark registrations and no pending trademark registration in the U.S., as well as 39 trademark registrations and 2 pending trademark registrations in foreign counterparts.

We rely upon, and have taken steps to secure our unpatented proprietary technology, know-how and other trade secrets. The substantial majority of business patents relate to our chloride products and production technology. Our proprietary chloride production technology is an important part of our overall technology position. However, much of the fundamental intellectual property associated with both chloride and sulfate pigment production is no longer subject to patent protection. At Namakwa Sands, we rely on intellectual property for our smelting technology, which was granted to us in perpetuity by Anglo American South Africa Limited for use on a worldwide basis, pursuant to a non-exclusive license. Our Alkali business has long been a leader in new technology development; having patented the leading process for producing dense soda ash from trona in the 1960's and for producing soda ash from solution

feeds in the 1990's. Much of the core intellectual property used today for production of natural soda ash is no longer subject to patent protection. Accordingly, we hold many of our proprietary process improvements in longwall mining, solution mining, and solution feed processing as trade secrets to protect our technological leadership.

We protect the trademarks that we use in connection with the products we manufacture and sell, and have developed value in connection with our long-term use of our trademarks; however, there can be no assurance that the trademark registrations will provide meaningful protection against the use of similar trademarks by competitors, or that the value of our trademarks will not be diluted. The same can be said for our patents and patent applications, which may in the future be the subject of a challenge regarding validity as well as ownership, requiring a defense of the patent/application through legal proceedings which inherently introduce a degree of business uncertainty and risk. We also use and rely upon unpatented proprietary knowledge, continuing technological innovation and other trade secrets to develop and maintain our competitive position. We conduct research activities and protect the confidentiality of our trade secrets through reasonable measures, including confidentiality agreements and security procedures. While certain patents held for our products and production processes are important to our long-term success, more important is the operational knowledge we possess.

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Employees

As of December 31, 2015, Tronox had approximately 4,400 employees worldwide, of which 1,700 are located in the United States, 600 in Australia, 1,800 in South Africa, and 300 in the Netherlands and other international locations. Our TiO<sub>2</sub> segment employees in the United States are not represented by a union or collective bargaining agreement. Nearly 66% of the employees at the Alkali segment's mining and manufacturing facility in Green River, Wyoming are members of a union and subject to a collective bargaining agreement. In South Africa, over 70% of our workforce belongs to a union. In Australia, most employees are not currently represented by a union, but approximately 50% are represented by a collective bargaining agreement. In the Netherlands, approximately 50% of our employees are represented by a collective bargaining agreement and 30% are members of a union. We consider relations with our employees and labor organizations to be good.

Environmental, Health and Safety Authorizations

Mining

Our facilities and operations are subject to extensive general and industry-specific environmental, health and safety regulations in the United States, South Africa and Australia. These regulations include those relating to mine rehabilitation, liability provision, water management, the handling and disposal of hazardous and non-hazardous materials, and occupational health and safety. The various legislation and regulations are subject to a number of internal and external audits. We believe our mineral sands operations are in compliance, in all material respects, with existing health, safety and environmental legislation and regulations.

Regulation of the Mining Industry in the United States

We have the right to mine soda ash through leases we hold from the U.S. Federal government, the State of Wyoming and an affiliate of Anadarko Petroleum ("Anadarko"). Our leases with the U.S. government are issued under the provisions of the Mineral Leasing Act of 1920 (30 U.S.C. 18 et. Seq.) and are administered by the U.S. Bureau of Land Management ("BLM") and our leases with the state of Wyoming are issued under Wyoming Statutes 36-6-101 et. seq. Anadarko is the successor to rights originally granted to the Union Pacific Railroad in connection with the construction of the first transcontinental railroad in North America. For more information please see discussion of Mining and Mineral Tenure in "Part I, Item 2 Properties".

We pay royalties to the BLM, the State of Wyoming and Anadarko. These royalties are calculated based upon the gross value of soda ash and related products at a certain stage in the mining process. We are obligated to pay minimum royalties or annual rentals to our lessors regardless of actual sales and in the case of Anadarko to pay royalties in advance based on a formula based on the amount of trona produced and sold in the previous year which is then credited against production royalties owed. The royalty rates we pay to our lessors and licensor may change upon our renewal of such leases; however, we anticipate being able to renew all material leases at the appropriate time. In the past, the U.S. Congress has passed legislation to cap royalties collected by BLM at a rate lower than the rate stated in our federal leases.

Our mining operations in Wyoming are subject to several mine permits issued by the Land Quality Division of the Wyoming Department of Environmental Quality ("WDEQ"). WDEQ imposes detailed reclamation obligations on us as a holder of mine permits. WDEQ has permitted us to "self-bond" our reclamation obligations as long as our Alkali Wyoming subsidiary maintains a minimum net worth. As of December 31, 2015, the amount of the self-bond was approximately \$80 million. The amount of the bond is subject to change based upon periodic re-evaluation by WDEQ.

The health and safety of our employees working underground and on the surface are subject to detailed regulation. The safety of our operations at Westvaco are regulated the U.S. Mine Safety and Health Administration ("MSHA") and

our Granger Facility by the Wyoming Occupational Safety and Health Administration (“Wyoming OSHA”). MSHA administers the provisions of the Federal Mine Safety and Health Act of 1977 and enforces compliance with that statute’s mandatory safety and health standards. As part of MSHA’s oversight, representatives perform at least four unannounced inspections (approximately once quarterly) each year at Westvaco. Wyoming OSHA regulates the health and safety of non-mining operations under a plan approved by the U.S. Occupational Health and Safety Administration. When our Granger facility was restarted in 2009 on solution mine feed (i.e. without any miners working underground). Wyoming OSHA assumed responsibility for the facility.

#### Regulation of the Mining Industry in South Africa

There are numerous mining-related laws and regulatory authorizations that may impact the performance of our business. These include but are not limited to: the Mineral and Petroleum Resources Royalty Act, which imposes a royalty on refined and unrefined minerals payable to the South African government; the Mineral and Petroleum Resources Development ACT (the “MPRDA”), which governs the acquisition, use and disposal of mineral rights; the South African Minerals Act, which requires each new mine to prepare an Environmental Management Program Report for approval by the South African Department of Mineral Reserves; the Revised South African Mining Charter, effective September 2010, which requires, among other conditions, that mining entities achieve a 26% historically disadvantaged persons ownership of mining assets and the Black Economic Empowerment (“BEE”) legislation in South Africa.

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### Regulation of the Mining Industry in Australia

Mining operations in Western Australia are subject to a variety of environmental protection regulations including but not limited to: the Environmental Protection Act, the primary source of environmental regulation in Western Australia, and, the Environment Protection and Biodiversity Conservation Act 1999 (Cth), which established the federal environment protection regime and prohibits the carrying out of a “controlled action” that may have a significant impact on a “matter of national environmental significance.”

Prescriptive legislation regulates health and safety at mining workplaces in Western Australia. The principal general occupational health and safety legislation and regulations are the Occupational Safety and Health Act 1984 (WA), the Occupational Health and Safety Regulations 1996 (WA) and the guidelines. The Mines Safety and Inspection Act 1994 (WA) and Mines Safety and Inspection Regulations 1995 (WA) and guidelines provide the relevant legislation for mining operations in Western Australia. The Dangerous Goods Act 2004 (WA) applies to the safe storage, handling and transport of dangerous goods.

Each Australian state and territory has its own legislation regulating the exploration for and mining of minerals. Our operations are principally regulated by the Western Australian Mining Act 1978 (WA) and the Mining Regulations 1981 (WA).

State Agreements are contracts between the State of Western Australia and the proponents of major resources projects, and are intended to foster resource development and related infrastructure investments. These agreements are approved and ratified by the Parliament of Western Australia. The State Agreement relevant to our Australian operations and our production of mineral sands is the agreement authorized by the Mineral Sands (Cooljarloo) Mining and Processing Agreement Act 1988 (WA). State Agreements may only be amended by mutual consent, which reduces the sovereign risk and increases the security of tenure, however Parliament may enact legislation that overrules or amends the particular State Agreement.

### Regulation of Finished Product Manufacturing

Our business is subject to extensive regulation by federal, state, local and foreign governments. Governmental authorities regulate the generation and treatment of waste and air emissions at our operations and facilities. At many of our operations, we also comply with worldwide, voluntary standards developed by the International Organization for Standardization (“ISO”), a nongovernmental organization that promotes the development of standards and serves as a bridging organization for quality and environmental standards, such as ISO 9002 for quality management and ISO 14001 for environmental management.

Our Alkali business is subject to extensive regulation by federal, state, local and foreign governments. U.S. Federal and Wyoming state authorities regulate the generation and treatment of waste and air emissions at our operations and facilities. Several of Alkali’s production operations are subject to regulation by the U.S. FDA. Our sodium bicarbonate plant is a registered facility for the production of food and pharmaceutical grade ingredients and we comply with strict CGMP requirements in our operations. The U.S. Food Safety Modernization Act will require that parts of our facility that produce animal nutrition products comply with new more rigorous manufacturing standards. We have a program in place to comply with these requirements in 2016. We also comply with industry standards developed by various private organizations such as U.S. Pharmacopeia, Organic Materials Review Institute and the Orthodox Union. Alkali has also sought and received certification of its Wyoming facilities under ISO 9002.

### Chemical Registration

The European Union adopted a regulatory framework for chemicals in 2006 known as Registration, Evaluation and Authorization of Chemicals (“REACH”). Manufacturers and importers of chemical substances must register information

regarding the properties of their existing chemical substances with the European Chemicals Agency. The timeline for existing chemical substances to be registered is based on volume and toxicity. The first group of chemical substances was required to be registered in 2010, with additional registrations due in 2013 and 2018. We registered those products requiring registration by the 2010 and 2013 deadlines. The REACH regulations also require chemical substances which are newly imported or manufactured in the European Union to be registered before being placed on the market. We are now focused on the authorization phase of the REACH process, and are making efforts to address “Substances of Very High Concern” and evaluating potential business implications. As a chemical manufacturer with global operations, we are also actively monitoring and addressing analogous regulatory regimes being considered or implemented outside of the EU, for example, in Korea and Taiwan. We do not expect the costs of REACH compliance to be material to our operations at this time.

We registered soda ash as a foreign manufacturer under REACH prior to the 2010 deadline and will register our sodium bicarbonate and sodium sesquicarbonate prior the 2018 deadline if we plan to sell such products in the EU. None of our Alkali production operations are located in the EU. None of our Alkali products are listed as a “Substance of Very High Concern.”

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## Greenhouse Gas Regulation

Globally, our operations are subject to regulations that seek to reduce emissions of “greenhouse gases” (“GHGs”). We currently report and manage GHG emissions as required by law for sites located in areas requiring such managing and reporting (European Union/Australia). While the United States has not adopted any federal climate change legislation, the United States Environmental Protection Agency (“EPA”) has introduced some GHG programs. For example, under the EPA’s GHG “Tailoring Rule,” expansions or new construction could be subject to the Clean Air Act’s Prevention of Significant Deterioration requirements. Some of our facilities are currently subject to GHG emissions monitoring and reporting. We have sought and obtained a GHG emissions permit to cover a planned expansion of our Granger soda ash facility in Wyoming. Changes or additional requirements due to GHG regulations could impact our capital and operating costs; however, it is not possible at the present time to estimate any financial impact to these U.S. operating sites. Also, some in the scientific community believe that increasing concentrations of GHGs in the atmosphere may result in climatic changes. Depending on the severity of climatic changes, our operations could be adversely affected.

## Segment and Geographic Revenue Information

The tables below summarize Tronox Limited 2015 sales volume by geography and end-use market:

## 2015 Sales Volume by Geography

North America	42%
Latin America	10%
Europe	23%
Asia-Pacific	25%

## 2015 Sales Volume by End-Use Market

Paints and Coatings	55%
Plastics	13%
Paper and Specialty	3%
Flat Glass	7%
Container and Other Glass	8%
Detergents	4%
Chemical Manufacturing	6%
Other	4%

Financial information by segment and geographic region is set forth in Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations and Note 25 of Notes to Consolidated Financial Statements.

## Available Information

Our public internet site is <http://www.tronox.com>. The content of our internet site is available for information purposes only. It should not be relied upon for investment purposes, nor is it incorporated by reference into this annual report unless expressly noted. We make available, free of charge, on or through the investor relations section of our internet site, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statements and Forms 3, 4 and 5 filed on behalf of directors and executive officers, as well as any amendments to those reports filed or furnished pursuant to the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish it to, the U.S. Securities and Exchange Commission (the “SEC”).

We file current, annual and quarterly reports, proxy statements and other information required by the Exchange Act of 1934 with the SEC. You may read and copy any document we file at the SEC’s public reference room located at 100 F Street, N.E., Washington, D.C. 20549, USA, or by calling +1-800-SEC-0330. Our SEC filings are also available to the



public from the SEC's internet site at <http://www.sec.gov>.

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Item 1A. Risk Factors

You should carefully consider the risk factors set forth below, as well as the other information contained in this Form 10-K, including our consolidated financial statements and related notes. This Form 10-K contains forward-looking statements that involve risks and uncertainties. Any of the following risks could materially and adversely affect our business, financial condition or results of operations. Additional risks and uncertainties not currently known to us or those we currently view to be immaterial may also materially and adversely affect our business, financial condition or results of operations.

Market conditions, as well as global and regional economic downturns that adversely affect the demand for our end-use products could adversely affect the profitability of our operations and the prices at which we can sell our products, negatively impacting our financial results.

Our TiO<sub>2</sub> segment revenue and profitability is dependent on direct sales of TiO<sub>2</sub> to end user customers and sales of TiO<sub>2</sub> feedstock to TiO<sub>2</sub> producers, while our Alkali segment revenue and profitability is dependent on sales of soda ash products to customers. TiO<sub>2</sub> and soda ash are chemicals used in many “quality of life” products for which demand historically has been linked to global, regional and local GDP and discretionary spending, which can be negatively impacted by regional and world events or economic and market conditions. Such events can cause a decrease in demand for our products and market prices to fall which may have an adverse effect on our results of operations and financial condition. A substantial portion of our products and raw materials are commodities that reprice as market supply and demand fundamentals change. Accordingly, product margins and the level of our profitability tend to vary with changes in the business cycle. Our TiO<sub>2</sub> prices may do so in the near term as ore prices and pigment prices are expected to remain depressed in the short term and potentially to fluctuate over the next few years.

A significant portion of the demand for our products comes from manufacturers of paint and plastics, glass manufacturers, and other industrial customers. Companies that operate in the industries that these industries serve, including the automotive, construction and glass container industries, may experience significant fluctuations in demand for their own end products because of economic conditions, changes in consumer demand, or increases in raw material and energy costs. In addition, many large end users of our products depend upon the availability of credit on favorable terms to make purchases of raw materials such as soda ash and TiO<sub>2</sub>. As interest rates increase or if our customers’ creditworthiness deteriorates, this credit may be expensive or difficult to obtain. If these customers cannot obtain credit on favorable terms, they may be forced to reduce their purchases. These and other factors may lead some customers to seek renegotiation or cancellation of their arrangements with our businesses, which could have a material adverse effect on our results of operations. Additionally, Chinese producers are significant participants in both the TiO<sub>2</sub> and Alkali markets and Chinese exports while suffering from a number of disadvantages can also affect demand and the price for our products.

TiO<sub>2</sub> pigment and feedstock pricing has declined in recent years and continues under pressure. Additionally, soda ash prices have been and in the future may be volatile. Price declines for our products will negatively affect our financial position and results of operations.

The TiO<sub>2</sub> price environment continues to be weak based on market dynamics. Producers are competing for share in many markets where supply exceeds demand, keeping pricing under pressure.

Additionally, historically, the global market and, to a lesser extent, the domestic market for soda ash have been volatile, and those markets are likely to remain volatile in the future. Prices for soda ash may fluctuate in response to relatively minor changes in the supply of and demand for soda ash, market uncertainty and other factors beyond our control.

Factors that affect the price of our products include, among other things:

- overall economic conditions;
- the level of customer demand, including in the glassmaking, paint and plastics industries;
- the level of production and exports our products globally;
- the level of production and cost of materials used to produce  $\text{TiO}_2$  and soda ash, including trona ore or synthetic materials, globally;
- the cost of energy consumed in the production of  $\text{TiO}_2$  and soda ash, including the price of natural gas, electricity and coal;
- the impact of competitors increasing their capacity and exports;
  - domestic and foreign governmental relations, regulations and taxes; and
- political conditions or hostilities and unrest in regions where we export our  $\text{TiO}_2$  products or ANSAC where we export soda ash.

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Continued TiO<sub>2</sub> pigment pricing pressure and volatility in soda ash prices can make it difficult to predict the cash we may have on hand at any given time, and a prolonged period of price declines may materially and adversely affect our financial position, liquidity, ability to finance planned capital expenditures and results of operations.

The markets for many of our TiO<sub>2</sub> products have seasonally affected sales patterns.

The demand for TiO<sub>2</sub> during a given year is subject to seasonal fluctuations. Because TiO<sub>2</sub> is widely used in paint and other coatings, titanium feedstocks are in higher demand prior to the painting season in the Northern Hemisphere (spring and summer), and pig iron is in lower demand during the European summer holidays, when many steel plants and foundries undergo maintenance. Zircon generally is a non-seasonal product; however, it is negatively impacted by the winter and Chinese New Year celebrations due to reduced zircon demand from China. We may be adversely affected by existing or future cyclical changes, and such conditions may be sustained or further aggravated by anticipated or unanticipated changes in regional weather conditions. For example, poor weather conditions in a region can lead to an abbreviated painting season, which can depress consumer sales of paint products that use TiO<sub>2</sub>.

Increased use of glass substitutes and recycled glass may affect demand for soda ash, which could adversely affect our result of operations.

Increased use of glass substitutes or recycled glass in the container industry could have a material adverse effect on our results of operations and financial condition. Container glass production is one of the principal end markets for soda ash. Competition from increased use of glass substitutes, such as plastic and recycled glass, has had a negative effect on demand for soda ash. We believe that the use of containers containing alternative materials such as plastic and aluminum could negatively affect the growth in demand for soda ash.

Our results of operations may be adversely affected by fluctuations in currency exchange rates.

The financial condition and results of operations of our operating entities outside the United States are reported in various foreign currencies, primarily the South African Rand, Australian Dollars and Euros, and then converted into U.S. dollars at the applicable exchange rate for inclusion in the financial statements. As a result, any volatility of the U.S. dollar against these foreign currencies creates uncertainty for and may have a negative impact on reported sales and operating margin. We have made a U.S. dollar functional currency election for both Australian financial reporting and federal income tax purposes. On this basis, our Australian entities report their results of operations on a U.S. dollar basis. In addition, our operating entities often need to convert currencies they receive for their products into currencies in which they purchase raw materials or pay for services, which could result in a gain or loss depending on fluctuations in exchange rates.

In order to manage this risk, we have, from time to time, entered into forward contracts to buy and sell foreign currencies as “economic hedges” for these foreign currency transactions.

Our operations may be negatively impacted by inflation.

Our profits and financial condition could be adversely affected when cost inflation is not offset by devaluation in operating currencies or an increase in the price of our products. Our operations have been affected by inflation in the countries in which they have operated in recent years. Working costs and wages in South Africa and Australia have increased in recent years, resulting in significant cost pressures for the mining industry.

As an emerging market, South Africa poses a challenging array of long-term political, economic, financial and operational risks.

South Africa has continued undergoing political and economic challenges and the local currency has devalued significantly over the past year. Changes to or instability in the economic or political environment in South Africa, especially if such changes create political instability, actual or potential shortages of production materials or labor unrest, could result in production delays and production shortfalls, and materially impact our production and results of operations.

In South Africa, our mining and smelting operations depend on electrical power generated by Eskom, the state-owned sole energy supplier. South African electricity prices have risen during the past few years, and future increases are likely. Additionally, our KZN Sands operations currently use 245,277 gigajoules of Sasol gas, which is available only from Sasol Limited; however, we could replace approximately 30% to 40% of our current Sasol gas usage with furnace off-gas produced by KZN Sands, if necessary. In order to reduce demand across South Africa, Eskom introduced “load shedding” at certain times in the past year, meaning that on a regular basis certain areas would be without power for a specified number of hours.

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We use significant amounts of water in our operations, which could impose significant costs. Use of water in South Africa is governed by water-use licenses. Our KZN mining operation in South Africa uses water to transport the slimes or sand from reclaimed areas to the processing plant and to the tailings facilities. Additionally, South Africa is currently experiencing a drought resulting in water restrictions being imposed in certain areas, including the KZN region. A prolonged drought in South Africa may lead to continued, or more severe water restrictions, either of which could have a material adverse effect on our business, financial condition or results of operations. Under South African law, our South African mining operations are subject to water-use licenses that govern each operation. These licenses require, among other conditions, that mining operations achieve and maintain certain water quality limits for all water discharges, where applicable. Our South African operations that came into existence after the adoption of the National Water Act, No. 36 of 1998 have applied for and been issued the required water-use licenses. However, changes to water-use licenses could affect our operational results and financial condition.

The South African government may intervene in mining through various means including increased taxation, greater control and conditions on the distribution of mineral rights, poverty alleviation, and job creation. Such measures have not yet been defined, and the impact the measures may have on our business remains uncertain.

Changes to the revised MPRDA have been incorporated into the 2013 MPRDA amendment, and are awaiting consideration by the South African Parliament before being promulgated. Some of the proposed changes may have an adverse effect on our business, operating results and financial condition. Although we expect the bulk of the original act to remain intact, there could be substantial changes, based on the current draft. This could have adverse effects on our business, operating results and financial condition.

South Africa's exchange control regulations require resident companies to obtain the prior approval of the South African Reserve Bank to raise capital in any currency other than the Rand, and restrict the export of capital from South Africa. While the South African government has relaxed exchange controls in recent years, it is difficult to predict whether or how it will further change or abolish exchange control measures in the future. These exchange control restrictions could hinder our financial and strategic flexibility, particularly our ability to use South African capital to fund acquisitions, capital expenditures, and new projects outside of South Africa.

Our operations in South Africa are reliant on services provided by the state agency, Transnet, for limited rail transport services at Namakwa Sands. Furthermore, they provide extensive dock-side services at both the ports of Richards Bay and Saldanha Bay. Delays, particularly industrial actions, could have a negative impact on our business, operating results and financial condition.

South African law governs the payment of compensation and medical costs to a compensation fund against which mining employees and other people at sites where ancillary mining activities are conducted can claim for mining activity-related illnesses or injuries. Should claims against the compensation fund rise significantly due to our mining activity or if claims against us are not covered by the compensation fund, the amount of our contribution or liability to claimants may increase, which could adversely impact our financial condition. In addition, the HIV/AIDS epidemic in South Africa poses risks to our South African operations in terms of potentially reduced productivity, and increased medical and other costs. If there is a significant increase in the incidence of HIV/AIDS infection and related diseases among the South African workforce over the next several years, our operations, projects and financial condition may be adversely affected.

Our flexibility in managing our labor force maybe adversely affected by labor and employment laws in the jurisdictions in which we operate, many of which are more onerous than those of the United States; and some of our labor force has substantial workers' council or trade union participation, which creates a risk of disruption from labor disputes and new laws affecting employment policies.

Labor costs constituted approximately 27% of our production costs in 2015. The majority of our employees are located outside the United States. In most of those countries, labor and employment laws are more onerous than in the United States and, in many cases, grant significant job protection to employees, including rights on termination of employment.

At our Green River, Wyoming facility, most of our employees are covered by a collective bargaining agreement. In South Africa, over 70% of our workforce belongs to a union. In Australia, most employees are not currently represented by a union, but approximately 50% are represented by a collective bargaining agreement. In the Netherlands, approximately 50% of our employees are represented by a collective bargaining agreement and 30% are members of a union.

Our South African operations have entered into various agreements regulating wages and working conditions at our mines. There have been periods when various stakeholders have been unable to agree on dispute resolution processes, leading to threats of disruptive labor disputes, although only two strikes have ever occurred in the history of these operations. Due to the high level of employee union membership, our South African operations are at risk of production stoppages for indefinite periods due to strikes and other labor disputes. Although we believe that we have good labor relations with our South African employees, we may experience labor disputes in the future.

South African employment law, which is based on the minimum standard set by the International Labour Organization, sets out minimum terms and conditions of employment for employees. Although these may be improved by agreements between an employer and the trade unions, prescribed minimum terms and conditions form the benchmark for all employment contracts. Our South African operations are required to submit a report to the South African Department of Labour under South African employment law detailing the progress made towards achieving employment equity in the workplace. Failing to submit this report in a timely manner could result in substantial penalties. In addition, future legislative developments that affect South African employment policies may increase production costs or negatively impact relationships with employees and trade unions, which may have an adverse effect on our business, operating results and financial condition.

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The collective bargaining agreement with the union that represents hourly employees at our Wyoming facilities expires on July 1, 2016. Although we believe our relationship with our union workforce is good, there can be no assurance that we will be able to renegotiate the collective bargaining agreement on commercially favorable terms, if at all. Our efforts at negotiating a new collective bargaining agreement could fail to reach settlement by the expiration date of the agreement, in which case we could experience work stoppages or strikes at our operations. If we fail to resolve a work stoppage rapidly, such failure could have an adverse effect on our business, operating results and financial condition.

We are required to consult with, and seek the consent or advice of, various employee groups or works' councils that represent our employees for any changes to our activities or employee benefits. This requirement could have a significant impact on our flexibility in managing costs and responding to market changes.

Given the nature of our chemical, mining and smelting operations, we face a material risk of liability, delays and increased cash costs of production from environmental and industrial accidents and operational breakdowns.

Our business involves significant risks and hazards, including environmental hazards, industrial accidents, and breakdowns of equipment and machinery. Our business is exposed to hazards associated with chemical process manufacturing and the related storage, handling and transportation of raw materials, products and wastes, and our furnace operations that are subject to explosions, water ingress and refractory failure, and our open pit (also called open-cut) and dredge mining operations that are subject to flooding and accidents associated with rock transportation equipment and conveyor belts. We mine our soda ash in underground mines where our mining methods result in the release of significant amount of methane which must be removed from the mine by ventilation to ensure safe operations. Our underground mining and related processing activities at our soda ash operations are subject to the danger of underground fires and explosions and present inherent risks of injury to persons and damage to equipment. Furthermore, during operational breakdowns, the relevant facility may not be fully operational within the anticipated timeframe, which could result in further business losses. The occurrence of any of these or other hazards could delay production, suspend operations, increase repair, maintenance or medical costs and, due to the integration of our facilities, could have an adverse effect on the productivity and profitability of a particular manufacturing facility or on our business as a whole. Over our operating history, we have incurred incidents of this nature. Although insurance policies provide limited coverage for these risks, such policies will not fully cover some of these risks.

There is also a risk that our key raw materials or our products may be found to have currently unrecognized toxicological or health-related impact on the environment or on our customers or employees. Such hazards may cause personal injury and loss of life, damage to property and contamination of the environment, which could lead to government fines or work stoppage injunctions and lawsuits by injured persons. In part of the Alkali business that sells to pharmaceutical and food customers, these risks include potential responsibility for the cost of product recalls, whether ordered by governmental authorities or undertaken voluntarily. If such actions are required, we may have inadequate insurance to cover such claims, or insufficient cash flow to pay for such claims. Such outcomes could adversely affect our financial condition and results of operations.

Equipment upgrades, equipment failures and deterioration of assets may lead to production curtailments, shutdowns or additional expenditures.

Our operations depend upon critical equipment that require scheduled upgrades and maintenance and may suffer unanticipated breakdowns or failures. As a result, our mining operations and processing may be interrupted or curtailed, which could have a material adverse effect on our results of operations.

In addition, assets critical to our mining and chemical processing operations may deteriorate due to wear and tear or otherwise sooner than we currently estimate. Such deterioration may result in additional maintenance spending and additional capital expenditures. If these assets do not generate the amount of future cash flows that we expect, and we



are not able to refurbish them or procure replacement assets in an economically feasible manner, our future results of operations may be materially and adversely affected.

If any of the equipment on which we depend were severely damaged or were destroyed by fire, abnormal wear and tear, flooding, or otherwise, we may be unable to replace or repair it in a timely manner or at a reasonable cost, which would impact our ability to produce and ship our products, which would have a material adverse effect on our business, financial condition or results of operations.

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We are a holding company that is dependent on cash flows from our operating subsidiaries to fund our debt obligations, capital expenditures and ongoing operations.

All of our operations are conducted and all of our assets are owned by our operating companies, which are our subsidiaries. We intend to continue to conduct our operations at the operating companies and any future subsidiaries. Consequently, our cash flow and our ability to meet our obligations or make cash distributions depends upon the cash flow of our operating companies and any future subsidiaries, and the payment of funds by our operating companies and any future subsidiaries in the form of dividends or otherwise. The ability of our operating companies and any future subsidiaries to make any payments to us depends on their earnings, the terms of their indebtedness, including the terms of any credit facilities, or indentures, and legal restrictions regarding the transfer of funds.

Our ability to service our debt and fund our planned capital expenditures and ongoing operations will depend on our ability to generate and increase cash flow, and our access to additional liquidity sources. Our ability to generate and increase cash flow is dependent on many factors, including:

- the impact of competition from other chemical and materials manufacturers and diversified companies;
- the transfer of funds from subsidiaries in the United States to certain foreign subsidiaries;
- general world business conditions, economic uncertainty or downturn and the significant downturn in housing construction and overall economies;
- the selling price of our products;
- political and social instability;
- our ability to obtain raw materials at reasonable prices or to raise prices to offset, in whole or in part, the effects of higher raw material costs;
- our ability to adequately deliver customer service and competitive product quality; and
- the effects of governmental regulation on our business.

Many of these factors are beyond our control. A general economic downturn can result in reduced spending by customers, which will impact our revenues and cash flows from operating activities. At reduced performance, if we are unable to generate sufficient cash flow or access additional liquidity sources, we may not be able to service and repay our existing debt, operate our business, respond to competitive challenges, or fund our other liquidity and capital needs.

Our industry and the end-use markets in which we compete are highly competitive. This competition may adversely affect our results of operations and operating cash flows.

Each of our markets is highly competitive. Competition in TiO<sub>2</sub> segment industry is based on a number of factors such as price, product quality, and service. We face significant competition from major international and smaller regional competitors. Our most significant competitors include major chemical and materials manufacturers and diversified companies, a number of which have substantially larger financial resources, greater personnel, and larger facilities than we do. We also compete with numerous smaller, regional producers as well as Chinese producers that have significantly expanded their sulphate TiO<sub>2</sub> production capacity during the previous five years and have also commenced the commercial production of TiO<sub>2</sub> via chloride technology.

Zircon producers generally compete on the basis of price, quality, logistics, delivery, and payment terms and consistency of supply. Although we believe we have competitive quality, long-term relationships with customers and product range, our primary competitive disadvantage relative to our major competitors is our distance from our main consumers (i.e., Asia and Europe).

Within the end-use markets in which we compete, competition between products is intense. We face substantial risk that certain events, such as new product development by competitors, changing customer needs, the commercial production of  $\text{TiO}_2$  via chloride technology, production advances for competing products, or price changes in raw materials, could cause our customers to switch to our competitors' products. If we are unable to develop and produce or market our products to compete effectively against our competitors following such events, our results of operations and operating cash flows may suffer.

Producers of alkali-products compete based on price, logistics costs and consistent customer service. If we do not maintain Alkali's favorable cost position vis-à-vis foreign manufacturers using synthetic production methods, or our cost position relative to our North American competitors, our ability to maintain favorable pricing and market share will erode and our sales and profitability could be materially adversely affected.

An increase in the price of energy or other raw materials, or an interruption in our energy or other raw material supply, could have a material adverse effect on our business, financial condition or results of operations.

Our mining and production processes consume significant amounts of energy and raw materials, the costs of which can be subject to worldwide, as well as, local supply and demand, as well as other factors beyond our control. In 2015, raw materials used in the production of  $\text{TiO}_2$  constituted approximately 26% of our operating expenses. Fuel and energy linked to commodities, such as diesel, heavy fuel oil and coal, and other consumables, such as chlorine, illuminating paraffin, electrodes, and anthracite, consumed in our  $\text{TiO}_2$  manufacturing and mining operations form an important part of our  $\text{TiO}_2$  operating costs. We have no control over the costs of these consumables, many of which are linked to some degree to the price of oil and coal, and the costs of many of these raw materials may fluctuate widely for a variety of reasons, including changes in availability, major capacity additions or reductions, or significant facility operating problems. These fluctuations could negatively affect our  $\text{TiO}_2$  operating margins, our profitability or planned capital expenditures. As these costs rise, our operating expenses will increase and could adversely affect our business, especially if we are unable to pass price increases in raw materials through to our customers.

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Our Alkali business relies on two fuel sources as the main energy source in its soda ash production process: coal and natural gas. Natural gas prices, and to a lesser extent, coal prices have historically been volatile. The coal industry is under regulatory pressure in the United States, which depending on the direction of such regulations could affect the future availability and cost of coal used in our operations. We receive coal by rail and truck from a single mine in Western Wyoming under a long term contract. Any disruption at this coal mine or an unexpected increase in the costs of transporting coal to our facility could adversely affect our future results of operations. Furthermore, the price of natural gas could increase as a result of reduced domestic drilling and production activity. Drilling and production operations are subject to extensive federal, state, local and foreign laws and government regulations concerning, among other things, emissions of pollutants and greenhouse gases, hydraulic fracturing, and the handling of natural gas and other substances used in connection with natural gas operations, such as drilling fluids and wastewater. In addition, natural gas operations are subject to extensive federal, state and local taxation. More stringent legislation, regulation or taxation of natural gas drilling activity in the United States could directly curtail such activity or increase the cost of drilling, resulting in reduced levels of drilling activity and therefore increased natural gas prices.

Additionally, any material increase in energy or other raw material prices could adversely impact our operations by making us less competitive. With respect to our Alkali business, if U.S. energy prices were to increase to a level where foreign soda ash producers were able improve their competitive position on a unit cost basis, this would negatively affect our competitive cost position.

A substantial portion of the delivered cost of soda ash to a customer is attributable to transportation and freight costs. Increases in freight costs or a change in rail policies on reimbursement for fleet costs could increase our costs significantly and adversely affect our results of operations.

Transportation costs represent a substantial portion of the total delivered cost of soda ash to the customer. Although most soda ash is priced on an Ex-Works basis, the Alkali business arranges for transportation of its soda ash by rail or truck to domestic customers, meaning that the competitive position of the business can be affected by changes in transportation costs or any change in the ways with which railroads incentivize us to maintain our rail fleet such as by payment of mileage credits. ANSAC prices soda ash on a delivered price basis, meaning that changes in transportation costs, rail and ocean freight, has a direct impact on the prices paid by ANSAC for our soda ash. As a result, our business and financial results are sensitive to increases in rail freight, trucking and ocean vessel rates. Increases in transportation costs, including increases resulting from emission control requirements, port taxes and fluctuations in the price of fuel, could make soda ash a less competitive product for glass manufacturers when compared to glass substitutes or recycled glass, or could make Alkali's soda ash less competitive than soda ash produced by competitors that have other means of transportation or are located closer to their customers. We may be unable to pass on its freight and other transportation costs in full because market prices for soda ash are determined by supply and demand forces.

Approximately 90% of the Alkali soda ash is shipped via a single rail line. Interruptions of service on this rail line could adversely affect the results of operations of our Alkali business.

For the year ended December 31, 2015, the Alkali business shipped over 90% of its soda ash from its facility on a single rail line. Rail operations are subject to various risks that may result in a delay or lack of service at Alkali's manufacturing facility, including mechanical problems, extreme weather conditions, work stoppages, labor strikes, terrorist attacks and operating hazards. Moreover, if our railcar provider's financial condition was adversely affected, it could decide to cease or suspend service to the facility. If we are unable to ship soda ash by rail, it would be impracticable to ship all of our soda ash by truck and it would be cost-prohibitive to construct a rail connection to the closest alternative rail line. Any delay or failure in the rail services on which we rely could have a material adverse effect on our financial condition and results of operations.

The agreements and instruments governing our debt contain restrictions and limitations that could affect our ability to operate our business, as well as impact our liquidity.

As of December 31, 2015, our total principal amount of long-term debt was approximately \$3 billion. Our credit facilities contain covenants that could adversely affect our ability to operate our business, our liquidity, and our results of operations. These covenants restrict, among other things, our and our subsidiaries' ability to:

- incur or guarantee additional indebtedness;

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- complete asset sales, acquisitions or mergers;
- make investments and capital expenditures;
- prepay other indebtedness;
- enter into transactions with affiliates; and
- fund additional dividends or repurchase shares.

Certain of our facilities, excluding the Term Loan, the \$900 million aggregate principal amount of senior notes due 2020 (the “Senior Notes due 2020”) and the \$600 million aggregate principal amount of senior notes due 2022 (the “Senior Notes due 2022”), include requirements relating to the ratio of adjusted earnings before interest, taxes, depreciation and amortization (“EBITDA”) to indebtedness or certain fixed charges. The breach of any covenants or obligations in our credit facilities, not otherwise waived or amended, could result in a default under the applicable debt obligations (and cross-defaults to certain other debt obligations) and could trigger acceleration of those obligations, which in turn could trigger other cross defaults under other future agreements governing our long-term indebtedness. In addition, the secured lenders under the credit facilities could foreclose on their collateral, which includes equity interests in our subsidiaries, and exercise other rights of secured creditors. Any default under those credit facilities could adversely affect our growth, our financial condition, our results of operations and our ability to make payments on our credit facilities, and could force us to seek the protection of bankruptcy laws.

A large portion of our shares are owned by a single shareholder, Exxaro.

At December 31, 2015, Exxaro held approximately 44% of the voting securities of Tronox Limited, and had three representatives serving as Directors on our nine-member board. Additionally, in the future, Exxaro may exchange its retained interest in the mineral sands business for additional Class B Shares.

Due to Exxaro’s significant ownership interest, it is entitled to certain rights under the Constitution and the Shareholder’s Deed of Tronox Limited. For example, the Constitution provides that, for as long as the Class B voting interest is at least 10% of the total voting interest in Tronox Limited, there must be nine directors on our board; of which the holders of Class A ordinary shares (“Class A Shares”) will be entitled to vote separately to elect a certain number of directors to our board (which we refer to as Class A Directors), and the holders of Class B Shares will be entitled to vote separately to elect a certain number of directors to our board (which we refer to as Class B Directors). If the Class B voting interest is greater than or equal to 30%, our board will consist of six Class A Directors and three Class B Directors. If the Class B voting interest is greater than or equal to 20% but less than 30%, our board of directors will consist of seven Class A Directors and two Class B Directors. If the Class B voting interest is greater than or equal to 10% but less than 20%, our board will consist of eight Class A Directors and one Class B Director.

The Constitution also provides that, subject to certain limitations, for as long as the Class B voting interest is at least 20%, a separate vote by holders of Class A Shares and Class B Shares is required to approve certain types of merger or similar transactions that will result in a change in control or a sale of all or substantially all of our assets or any reorganization or transaction that does not treat Class A and Class B Shares equally.

Under the terms of the Shareholder’s Deed entered into upon completion of the Exxaro Transaction, Exxaro has agreed not to acquire any voting shares of Tronox Limited if, following such acquisition, Exxaro will have a voting interest in Tronox Limited of 50% or more unless Exxaro brings any proposal to make such an acquisition to the board of directors of Tronox Limited on a confidential basis. In the event an agreement regarding the proposal is not reached, Exxaro is permitted to make a takeover offer for all the shares of Tronox Limited not held by affiliates of Exxaro provided that binding acceptances are received from a majority of the shares not held by affiliates of Exxaro.

Moreover, Exxaro is not contractually obligated to maintain its 44% share ownership in us. Although Exxaro is required to comply with applicable law and our constituent documents (including our Shareholders' Agreement which sets forth the requirements by which Exxaro is obligated to continue to empower our two South African subsidiaries under BEE legislation), there is no assurance that Exxaro will not reduce its 44% stake in the future through a sale, disposition or other permissible transfer. If Exxaro substantially reduces its ownership interest through a sale, disposition or other permissible transfer which results in the Class B shares converting to Class A shares, the increase in the number of Class A shares outstanding could cause the market price of our shares to decline.

As a result of Exxaro's significant ownership interest and its governance rights, Exxaro may be able to exert substantial influence over our management, operations and potential significant corporate transactions, including a change in control or the sale of all or substantially all of our assets. Exxaro's influence may have an adverse effect on the trading price of our ordinary shares.

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Our South African operations may lose the benefit of the BEE status under South African legislation, resulting in the need to implement a remedial solution or introduce a new minority shareholder, which could negatively impact our South African operations.

BEE legislation was introduced into South Africa as a means to seek to redress the inequalities of the previous Apartheid system. Under BEE legislation, South African businesses are required to become “empowered”. In order for South African mining companies to be deemed “empowered”, the South African Mining Charter specifies certain requirements that such companies must continually satisfy, including a requirement that at least 26% of the shares in such companies are held by BEE “empowered” entities. Exxaro, a BEE “empowered” company, retains a 26% direct ownership interest in each of Tronox KZN Sands (Pty) Ltd and Tronox Mineral Sands (Pty) Ltd in order for these two entities to comply with the requirements of the MPRDA and the South African Mining Charter ownership requirements under the BEE legislation.

Pursuant to our Shareholders’ Agreement with Exxaro, Exxaro has agreed to maintain its direct ownership for a period of the shorter of the date on which the requirement to maintain a direct ownership stake in each of Tronox KZN Sands (Pty) Ltd and Tronox Mineral Sands (Pty) Ltd no longer applies or June 2022 (unless it transfers the direct ownership interests to another qualified buyer under the BEE legislation. If either Tronox KZN Sands (Pty) Ltd or Tronox Mineral Sands (Pty) Ltd ceases to qualify under the BEE legislation, Tronox Limited and Exxaro have agreed to jointly seek a remedial solution. If Tronox Limited and Exxaro cannot successfully implement a solution and the reason for this failure is due to anything other than a change in law, then we may dispose of Exxaro’s shares in the non-qualifying company to another BEE compliant, qualifying purchaser. During any period of any non-qualification, our South African operations may be in violation of their mining or prospecting rights, as well as the requirements of the MPRDA and the South African Mining Charter, which could result in a suspension or revocation of the non-qualifying company’s mining and prospecting rights and could expose us to operating restrictions, lost business opportunities and delays in receiving further regulatory approvals for our South African operations and expansion activities. In addition, if Exxaro’s direct ownership in Tronox KZN Sands (Pty) Ltd and Tronox Mineral Sands (Pty) Ltd is sold to another purchaser, we could be required to share control of our South African operations with a minority shareholder, which may impact our operational and financial flexibility and could impact profitability, expansion opportunities and our results of operations. The question of whether the “once empowered always empowered” principle applies in the mining industry in South Africa is subject to current litigation between the Chamber of Mines and the Department of Mineral Resources. An adverse outcome in connection with such litigation could adversely affect our business, financial condition and results of operations.

A significant portion of the Alkali business’ international sales of soda ash are to ANSAC, a U.S. export trade association, and therefore adverse developments at ANSAC or its customers, or in any of the markets in which the Alkali Chemicals business makes direct international sales, could adversely affect its ability to compete in certain international markets.

The Alkali business, along with two other U.S. trona-based soda ash producers, utilizes ANSAC as its exclusive export vehicle for sales to customers in all countries excluding Canada, the European Community, the European Free Trade Association and the South African Customs Union, which provides us with the benefits of large purchases of soda ash and significant economies of scale in managing international sales and logistics. Because ANSAC makes sales to its end customers directly and then allocates a portion of such sales to each member, we do not have direct access to ANSAC’s customers and we have no direct control over the credit or other terms ANSAC extends to its customers. As a result, we are indirectly vulnerable to ANSAC’s customer relationships and the credit and other terms ANSAC extends to its customers. Any adverse change in ANSAC’s customer relationships could have a direct impact on ANSAC’s ability to make sales and our ability to make sales to ANSAC. In addition, to the extent ANSAC extends credit or other favorable terms to its end customers and those customers subsequently default under sales contracts or otherwise fail to perform, we would have no direct recourse against them.



Furthermore, from time to time international competition authorities have conducted inquiries into ANSAC's activities. An unfavorable outcome in any such investigation could result in our having to pay fines or penalties, either on our own behalf or as a member of ANSAC, or otherwise adversely affect the ability of ANSAC to continue serving export markets. In the event of an unfavorable outcome in any such investigation, the withdrawal of one of the other two members of ANSAC or the dissolution of ANSAC, we would be forced to use alternative methods to facilitate additional direct export sales of soda ash, resulting in less favorable arrangements in respect of logistics or sales. Any of these developments could lead us to incur significant additional costs and may result in lower pricing for its export sales, which could have a negative impact on our results of operations and financial condition.

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Estimations of our ore resources and reserve estimates are based on a number of assumptions, including mining and recovery factors, future cash costs of production and ore demand and pricing. As a result, ore resources and reserve quantities actually produced may differ from current estimates.

The mineral resource and reserve estimates are estimates of the quantity and ore grades in our mines based on the interpretation of geological data obtained from drill holes and other sampling techniques, as well as from feasibility studies. The accuracy of these estimates is dependent on the assumptions and judgments made in interpreting the geological data. The assessment of geographical characteristics, such as location, quantity, quality, continuity of geology and grade, is made with varying degrees of confidence in accordance with established guidelines and standards. We use various exploration techniques, including geophysical surveys and sampling through drilling and trenching, to investigate resources and implement applicable quality assurance and quality control criteria to ensure that data is representative. Our mineral reserves represent the amount of ore that we believe can be economically mined and processed, and are estimated based on a number of factors, which have been stated in accordance with SEC Industry Guide 7, the South African Code for Reporting of Exploration Results, Mineral Resources and Mineral Reserves 2007 version, as amended 2009 (SAMREC) and the Australian code for Reporting of Exploration Results, Mineral Resources the Joint Ore Reserves Committee Code (2012)(JORC).

There is significant uncertainty in any mineral reserve or mineral resource estimate. Factors that are beyond our control, such as the ability to secure mineral rights, the sufficiency of mineralization to support mining and beneficiation practices and the suitability of the market may significantly impact mineral resource and reserve estimates. The actual deposits encountered and the economic viability of mining a deposit may differ materially from our estimates. Since these mineral resources and reserves are estimates based on assumptions related to factors discussed above, we may revise these estimates in the future as we become aware of new developments. To maintain TiO<sub>2</sub> feedstock production beyond the expected lives of our existing mines or to increase production materially above projected levels, we will need to access additional reserves through exploration or discovery.

We may be unable to obtain, maintain or renew leases and permits necessary for our soda ash operations, which could adversely affect our results of operations.

Our Alkali facilities and operations require us to obtain a number of permits that impose strict regulations on various environmental and operational matters in connection with mining trona ore and producing soda ash products. These include permits issued by various federal, state and local agencies and regulatory bodies. The permitting rules, and the interpretations of these rules, are complex, change frequently and are subject to discretionary interpretations by our regulators, all of which may make compliance difficult or impractical and may impair our existing operations or the development of future facilities. The public, including non-governmental organizations, environmental groups and individuals, have certain statutory rights to comment upon and submit objections to requested permits and environmental impact statements prepared in connection with applicable regulations and otherwise engage in the permitting process, including bringing citizen's lawsuits to challenge the issuance or renewal of permits, the validity of environmental impact statements or the performance of mining activities. If permits are not issued or renewed in a timely fashion or at all or are conditioned in a manner that restricts our ability to conduct our operations economically, our cash flows may decline, which could limit our ability to pay debt and distribute earnings to shareholders.

All of our soda ash reserves are held under leases with the State of Wyoming, the BLM and Anadarko. As of December 31, 2015, leases covering more than 51% of our acreage were scheduled to expire in the next five years. If we are not able to renew our leases, it will have a material adverse effect on our results of operations.

If we are unable to innovate and successfully introduce new products, or new technologies or processes reduce the demand for our products or the price at which we can sell products, our profitability could be adversely affected.

Our industries and the end-use markets into which we sell our products experience periodic technological change and product improvement. Our future growth will depend on our ability to gauge the direction of commercial and technological progress in key end-use markets and on our ability to fund and successfully develop, manufacture and market products in such changing end-use markets. We must continue to identify, develop and market innovative products or enhance existing products on a timely basis to maintain our profit margins and our competitive position. We may be unable to develop new products or technology, either alone or with third parties, or license intellectual property rights from third parties on a commercially competitive basis. If we fail to keep pace with the evolving technological innovations in our end-use markets on a competitive basis, our financial condition and results of operations could be adversely affected.

In addition, new technologies or processes have the potential to replace or provide lower-cost alternatives to our products, such as new processes that reduce  $\text{TiO}_2$  in consumer products or the use of chloride slag in the production of  $\text{TiO}_2$ , which could result in  $\text{TiO}_2$  producers using less chloride slag, or to reduce the need for  $\text{TiO}_2$  in consumer products, which could depress the demand and pricing for  $\text{TiO}_2$ . With respect to our Alkali business, changing customer requirements could affect demand for our alkali products. Over time, detergent manufacturers have introduced liquid products to replace dry powder detergents that typically include soda ash as a major ingredient. This trend has caused demand for soda ash to fall in this market segment. The growing preference of many food and beverage manufacturers to use plastic containers has reduced the demand for glass containers and the demand for soda ash. Future innovations in glass making, food packaging and detergent manufacture may continue to reduce the demand for soda ash in the future. We cannot predict whether technological innovations will, in the future, result in a lower demand for our products or affect the competitiveness of our business. We may be required to invest significant resources to adapt to changing technologies, markets and competitive environments.

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Violations or noncompliance with the extensive environmental, health and safety laws and regulations to which we are subject or changes in laws or regulations governing our operations could result in unanticipated loss or liability.

Our operations and production facilities are subject to extensive environmental and health and safety laws and regulations at national, international and local levels in numerous jurisdictions relating to use of natural resources, pollution, protection of the environment, mine site remediation, transporting and storing raw materials and finished products, and storing and disposing of hazardous wastes among other materials. The costs of compliance with the extensive environmental, health and safety laws and regulations or the inability to obtain, update or renew permits required for operation or expansion of our business could reduce our profitability or otherwise adversely affect our business. If we fail to comply with the conditions of our permits governing the production and management of regulated materials, mineral sands mining licenses or leases or the provisions of the applicable United States, South African or Australian law, these permits, mining licenses or leases and mining rights could be canceled or suspended, and we could be prevented from obtaining new mining and prospecting rights, which could materially and adversely affect our business, operating results and financial condition. Additionally, we could incur substantial costs, including fines, damages, criminal or civil sanctions and remediation costs, or experience interruptions in our operations, for violations arising under these laws and regulations. In the event of a catastrophic incident involving any of the raw materials we use, or chemicals or mineral products we produce, we could incur material costs as a result of addressing the consequences of such event.

Changes to existing laws governing operations, especially changes in laws relating to transportation of mineral resources, the treatment of land and infrastructure, contaminated land, the remediation of mines, tax royalties, exchange control restrictions, environmental remediation, mineral rights, ownership of mining assets, or the rights to prospect and mine may have a material adverse effect on our future business operations and financial performance. There is risk that onerous conditions may be attached to authorizations in the form of mining rights, water-use licenses, miscellaneous licenses and environmental approvals, or that the grant of these approvals may be delayed or not granted.

Our current operations involve the production and management of regulated materials that are subject to various environmental laws and regulations and are dependent on obtaining and the periodic renewal of permits from various governmental agencies. The inability to obtain, update or renew permits related to the operation of our businesses, or the costs required in order to comply with permit standards, could have a material adverse effect on us.

Moreover, certain environmental laws impose joint and several, strict liability for costs to clean up and restore sites where pollutants have been disposed or otherwise spilled or released. We are currently addressing certain areas of known contamination on our own properties, none of which we presently anticipate will result in any material costs or adverse impacts on our business or operations. However, we cannot be certain that we will not incur significant costs and liabilities for remediation or damage to property, natural resources or persons as a result of spills or releases from our operations or those of a third party.

Our dependence on burning coal to generate electrical energy and steam could mean that governmental initiatives to limit the emission of greenhouse gas (“GHG”) could have an adverse effect in the future on our costs and therefore our results of operations.

Our U.S.-based operations are also subject to EPA’s regulations regarding GHG emissions and, depending upon the nature and scope of any future regulations, could become subject to additional costs or limitations. Current requirements include an obligation to monitor and report the GHG emissions from our facilities and to comply with the Clean Air Act’s Prevention of Significant Deterioration requirements in connection with any new or modified major sources of GHG emissions. Although we believe our operations are currently in compliance with these obligations, EPA has continued to pursue additional GHG regulations, including the currently proposed Clean Power Plan for existing sources of GHGs in the power generating sector. In addition, several states have taken legal measures

to reduce emissions of GHGs, including through the planned development of GHG emission inventories and/or regional GHG “cap and trade” programs. Although our facilities are not currently subject to any such program, the expansion or further adoption of such programs in jurisdictions where we operate could impose additional compliance obligations on our facilities. As a result, such programs could result in an increase in fuel or energy costs for our businesses or, if we are directly regulated, an additional cost to acquire necessary allowances. We cannot assure you that the costs of compliance with either the existing or future federal or State regulations will not materially and adversely affect our business, operating result and financial condition.

We may be subject to litigation, the disposition of which could have a material adverse effect on our results of operations.

The nature of our operations exposes us to possible litigation claims, including disputes with competitors, customers, equipment vendors, environmental groups and other non-governmental organizations or NGOs, and providers of shipping services. Some of the lawsuits may seek fines or penalties and damages in large amounts, or seek to restrict our business activities. Because of the uncertain nature of litigation and coverage decisions, we cannot predict the outcome of these matters or whether insurance claims may mitigate any damages to us. Litigation is very costly, and the costs associated with prosecuting and defending litigation matters could have a material adverse effect on our results of operations.

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Expansion or improvement of our existing facilities may not result in revenue increases and will be subject to regulatory, environmental, political, legal and economic risks, which could adversely affect our results of operations and financial condition.

One of the ways we may grow our business is through the expansion or improvement of our existing facilities. The construction of additions or modifications to our existing facilities involve numerous regulatory, environmental, political, legal and economic uncertainties that are beyond our control. Such expansion or improvement projects may also require the expenditure of significant amounts of capital, and financing may not be available on economically acceptable terms or at all. If we undertake these projects, they may not be completed on schedule, at the budgeted cost, or at all. Moreover, our revenue may not increase immediately upon the expenditure of funds on a particular project. As a result, we may not be able to realize our expected investment return, which could adversely affect our results of operations and financial condition.

We compete with other mining and chemical businesses for key human resources in the countries in which we operate, and our business will suffer if we are unable to hire highly skilled employees or if our key officers or employees discontinue employment with us.

We compete with other chemical and mining companies, and other companies generally, in the countries in which we operate to attract and retain key human resources at all levels with the appropriate technical skills and operating and managerial experience necessary to continue operating and expanding our businesses. These operations use modern techniques and equipment and accordingly require various types of skilled workers. The success of our business will be materially dependent upon the skills, experience and efforts of our key officers and skilled employees. Competition for skilled employees is particularly severe in southwestern Wyoming, Western Australia and at Namakwa Sands, which may cost us in terms of higher labor costs or reduced productivity. As a result, we may not be able to attract and retain skilled and experienced employees. Should we lose any of our key personnel or fail to attract and retain key qualified personnel or other skilled employees, our business may be harmed and our operational results and financial condition could be affected.

There may be difficulty in effecting service of legal process and enforcing judgments against us and our directors and management.

We are registered under the laws of Western Australia, Australia, and substantial portions of our assets are located outside of the United States. In addition, certain members of our board of directors reside outside the United States. As a result, it may be difficult for investors to effect service of process within the United States upon Tronox Limited or such other persons residing outside the United States, or to enforce judgments outside the United States obtained against such persons in U.S. courts in any action, including actions predicated upon the civil liability provisions of the U.S. federal securities laws. In addition, it may be difficult for investors to enforce rights predicated upon the U.S. federal securities laws in original actions brought in courts in jurisdictions located outside the United States.

Third parties may develop new intellectual property rights for processes and/or products that we would want to use, but would be unable to do so; or, third parties may claim that the products we make or the processes that we use infringe their intellectual property rights, which may cause us to pay unexpected litigation costs or damages or prevent us from making, using or selling products we make or require alteration of the processes we use.

Results of our operations may also be negatively impacted if a competitor develops or has the right to use intellectual property rights for new processes or products and we cannot obtain similar rights on favorable terms or are unable to independently develop non-infringing competitive alternatives.

Although there are currently no known pending or threatened proceedings or claims that are material relating to alleged infringement, misappropriation or violation of the intellectual property rights of others, we may be subject to

legal proceedings and claims in the future in which third parties allege that their patents or other intellectual property rights are infringed, misappropriated or otherwise violated by us or our products or processes. In the event that any such infringement, misappropriation or violation of the intellectual property rights of others is found, we may need to obtain licenses from those parties or substantially re-engineer our products or processes to avoid such infringement, misappropriation or violation. We might not be able to obtain the necessary licenses on acceptable terms or be able to re-engineer our products or processes successfully. Moreover, if we are found by a court of law to infringe, misappropriate or otherwise violate the intellectual property rights of others, we could be required to pay substantial damages or be enjoined from making, using or selling the infringing products or technology. We also could be enjoined from making, using or selling the allegedly infringing products or technology pending the final outcome of the suit. Any of the foregoing could adversely affect our financial condition and results of operations.

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If our intellectual property were compromised or copied by competitors, or if competitors were to develop similar intellectual property independently, our results of operations could be negatively affected.

Our success depends to a significant degree upon our ability to protect and preserve our intellectual property rights. Although we own and have applied for numerous patents and trademarks throughout the world, we may have to rely on judicial enforcement of our patents and other proprietary rights. Our patents and other intellectual property rights may be challenged, invalidated, circumvented, and rendered unenforceable or otherwise compromised. A failure to protect, defend or enforce our intellectual property could have an adverse effect on our financial condition and results of operations.

We also rely upon unpatented proprietary technology, know-how and other trade secrets to maintain our competitive position. While we maintain policies to enter into confidentiality agreements with our employees and third parties to protect our proprietary expertise and other trade secrets, these agreements may not be enforceable or, even if legally enforceable, we may not have adequate remedies for breaches of such agreements. We also may not be able to readily detect breaches of such agreements. The failure of our patents or confidentiality agreements to protect our proprietary technology, know-how or trade secrets could result in significantly lower revenues, reduced profit margins or loss of market share.

In addition, we may be unable to determine when third parties are using our intellectual property rights without our authorization. We also have licensed certain of our intellectual property rights to third parties, and we cannot be certain that our licensees are using our intellectual property only as authorized by the applicable license agreement. The undetected or unremedied unauthorized use of our intellectual property rights or the legitimate development or acquisition of intellectual property related to our industry by third parties could reduce or eliminate any competitive advantage we have as a result of our intellectual property, adversely affecting our financial condition and results of operations. If we must take legal action to protect, defend or enforce our intellectual property rights, any suits or proceedings could result in significant costs and diversion of our resources and our management's attention, and we may not prevail in any such suits or proceedings. A failure to protect, defend or enforce our intellectual property rights could have an adverse effect on our financial condition and results of operations.

If our intangible assets or other long-lived assets become impaired, we may be required to record a significant noncash charge to earnings.

We have a significant amount of intangible assets and other long-lived assets on our consolidated balance sheets. Under generally accepted accounting principles in the United States ("U.S. GAAP"), we review our intangible assets and other long-lived assets for impairment when events or changes in circumstances indicate the carrying value may not be recoverable. Factors that may be considered a change in circumstances, indicating that the carrying value of our intangible assets and other long-lived assets may not be recoverable, include, but are not limited to, a significant decline in share price and market capitalization, changes in the industries in which we operate, particularly the impact of a downturn in the global economy, as well as competition or other factors leading to reduction in expected long-term sales or profitability. We may be required to record a significant noncash charge in our financial statements during the period in which any impairment of our intangible assets and other long-lived assets is determined, negatively impacting our results of operations.

A material weakness in our internal controls over financial reporting could have a material adverse effect on our business and results of operations.

Our management is responsible for establishing and maintaining adequate internal control over our financial reporting. As more fully described in Controls and Procedures in Part II, Item 9A of this report, in connection with the audit of our financial statements for the year ended December 31, 2014, management identified material weaknesses in our internal control over financial reporting relating to (i) controls over the information and communication related to our



South African operations that were improperly designed and not effective, as information required to execute control activities to completely and accurately record and disclose transactions was not communicated timely to the individuals responsible for executing control activities. The controls over our calculation for accrued royalty expenses relating to our mining operations in Namakwa South African were improperly designed and not effective; and (ii) controls over restricted access and segregation of duties within our SAP systems that were improperly designed and not effective as certain personnel have inappropriate access to execute conflicting transactions, as well as the ability to prepare and post journal entries without an independent review required by someone other than the preparer.

As more fully described in Controls and Procedures in Part II, Item 9A of this report we completed the implementation of remediation measures and remediated the material weaknesses in 2015. However, there is no assurance that we will not have material weaknesses in our internal control over financial reporting in the future which could have a material adverse effect on our business and results of operations.

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Our results of operations and financial condition could be seriously impacted by security breaches, including cybersecurity incidents.

Failure to effectively prevent, detect and recover from security breaches, including attacks on information technology and infrastructure by hackers; viruses; breaches due to employee error or actions; or other disruptions could result in misuse of our assets, business disruptions, loss of property including trade secrets and confidential business information, legal claims or proceedings, reporting errors, processing inefficiencies, negative media attention, loss of sales and interference with regulatory compliance. We have determined that such attacks could result in unauthorized parties gaining access to at least certain confidential business information. However, to date, we have not experienced any material financial impact, changes in the competitive environment or business operations that we attribute to these attacks. Although management does not believe that we have experienced any material losses to date related to security breaches, including cybersecurity incidents, there can be no assurance that we will not suffer such losses in the future. We actively manage the risks within our control that could lead to business disruptions and security breaches. As these threats continue to evolve, particularly around cybersecurity, we may be required to expend significant resources to enhance our control environment, processes, practices and other protective measures. Despite these efforts, such events could materially adversely affect our business, financial condition or results of operations.

We may need additional capital in the future and may not be able to obtain it on favorable terms.

Our TiO<sub>2</sub> and Alkali businesses are capital intensive, and our success depends to a significant degree on our ability to develop and market innovative products and to update our facilities and process technology. We may require additional capital in the future to finance our growth and development, implement further marketing and sales activities, fund ongoing research and development activities and meet general working capital needs. Our capital requirements will depend on many factors, including acceptance of, and demand for our products, the extent to which we invest in new technology and research and development projects, and the status and timing of these developments, as well as general availability of capital from debt and/or equity markets. Additional financing may not be available when needed on terms favorable to us, or at all. Further, the terms of our debt may limit our ability to incur additional indebtedness or issue additional equity. If we are unable to obtain adequate funds on acceptable terms, we may be unable to develop or enhance our products, take advantage of future opportunities or respond to competitive pressures, which could harm our business.

## Item 1B. Unresolved Staff Comments

There are no unresolved comments that were received from the SEC staff.

## Item 2. Properties

Below are our offices and facilities at December 31, 2015. We believe our properties are in good operating condition, and are well maintained. Pursuant to separate financing agreements, substantially all of our U.S. properties are pledged or encumbered to support or otherwise provide the security for our indebtedness.

## Corporate

Our corporate offices consisted of the following:

Location	Owned/Leased	Offices
Stamford, Connecticut	Leased	263 Tresser Boulevard, Suite 1100
Kwinana Beach, Western Australia	Owned	Lot 22 Mason Road, Kwinana Beach WA 6167, Australia

## TiO<sub>2</sub> Segment

## Mining Operations

We lease office space located at 115 West Street, Sandton, South Africa for our TiO<sub>2</sub> minerals management offices.

Our KZN Sands operations consist of the Fairbreeze mine (which we expect will enter into commercial production in early 2016), a concentration plant, a mineral separation plant and a smelter complex with two furnaces.

Our Namakwa Sands operations include the Namakwa Sands mine, a primary concentration plant, a secondary concentration plant, a separation plant, and a smelter complex with two furnaces.

Our Western Australia operations consist of the Cooljarloo Sands mine, a concentration plant and the Chandala processing plant, which includes a mineral separation plant and a synthetic rutile plant.

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## Pigment Operations

Our office at 3301 NW 150<sup>th</sup> Street in Oklahoma City, Oklahoma is used for our pigment management operations and research and development, and is shared with certain corporate services.

Our pigment facilities consist of the physical assets necessary and appropriate to produce, distribute and supply our TiO<sub>2</sub>, and consist mainly of manufacturing and distribution facilities. The following table summarizes our TiO<sub>2</sub> production facilities and production capacity (in gross MT per year), by location:

Facility	Production	TiO <sub>2</sub> Capacity	Process	Property Owned/Leased	Facility Owned/Leased
Hamilton, Mississippi	TiO <sub>2</sub>	225,000	Chloride	Owned	Owned
Kwinana, Western Australia	TiO <sub>2</sub>	150,000	Chloride	Owned	Owned
Botlek, the Netherlands	TiO <sub>2</sub>	90,000	Chloride	Leased	Owned

## Electrolytic Operations

We have an electrolytic manufacturing and distribution facility as follows:

Facility	Product	Property Owned/Leased	Facility Owned/Leased
Henderson, Nevada	EMD, Boron products	Leased	Owned

Alkali Segment

Our office at 1735 Market Street, Philadelphia, Pennsylvania is used for our Alkali management operations.

Our Alkali production facilities are located at our mine sites which are both located in the Green River Basin in southwestern Wyoming, USA. The following table summarizes our Alkali production facilities:

Facility	Product	Property Owned/Leased	Facility Owned/Leased
Westvaco	Soda ash, sodium bicarbonate, S-Carb®, (1) Sesqui™	(1)	Owned
Granger	Soda ash	(1)	Owned

(1) We own in fee simple surface land on which our principal surface processing facilities are located. We have the right to use track owned by the Union Pacific Railroad under track lease agreements. Mining and mining-related assets are located in areas where we operate under the authority of our mineral leases and mining permits and access to these operations is granted under the mineral leases themselves and, in some cases, separate surface rights agreements with the BLM, State of Wyoming and Anadarko, as well as with private surface users in and adjacent to our mine permit areas.

## Mineral Properties

As of December 31, 2015, we had estimated mineral ore reserves at our two business segments, TiO<sub>2</sub> and Tronox Alkali. Our three mineral sands operations in South Africa and Western Australia mine titanium-bearing heavy mineral sands to provide titanium mineral feedstock for our TiO<sub>2</sub> value chain and commercial-grade co-products for external sale. Our Alkali business extracts trona, a natural hydrous sodium carbonate mineral used in the production of

soda ash in southwestern Wyoming, USA. Soda ash, the commercial term for sodium carbonate ( $\text{Na}_2\text{CO}_3$ ), is a basic ingredient in many consumer goods and a raw material used in a diversity of manufacturing processes.

Each mining operation maintains a Life-of-Mine Plan (“LOMP”), which is a strategic business plan for short and long-term mine planning and decision-making. The LOMP is based in part on estimated mineral reserves and can serve as a road map for mine development and planning, resource development, production targets, marketing, and financial management.

#### Reporting of Ore Reserve and Mineral Resources

U.S. registrants are required to report ore reserves under SEC Industry Guide 7, “Description of Property by Issuers Engaged or To Be Engaged in Significant Mining Operations”. Industry Guide 7 requires that sufficient technical and economic studies have been completed to reasonably assure economic extraction of the declared reserves, based on the parameters and assumptions current to the end of the reporting period.

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The mineral reserve estimates are based on detailed geological, geotechnical, mine engineering and mineral processing, and financial models developed and reviewed by Tronox employees/management in South Africa, Australia and United States, who possess years of experience directly related to the resources, mining and processing characteristics or financial performance of our operations. Additionally, our management and technical staff includes senior personnel who have remained closely involved with each of our active mining and mineral processing operations since the operations commenced.

Our estimates of heavy mineral and trona reserves are derived from successive generations of in-house reserve and economic analyses and are subject to periodic audits or reviews by third party consultants. All of our mineral reserve disclosures comply with US SEC Industry Guide 7. Our heavy mineral reserve estimates are guided by the mineral resource reporting standards of SAMREC, or the JORC. Definitions and determination of Proven and Probable Reserve estimates under Industry Guide 7 are equivalent in all material respects to the ore reserve classifications under SAMREC and JORC, two members of international family of mineral resource codes designed to ensure data validity, standardize methodologies for estimating the size and grades of mineral deposits, guide classifications of mineral resources and reserves, and enhance the transparency of mineral resource disclosures. Annual Mineral Resource and Ore Reserve Statements are generated and authorized by experienced Tronox resource professionals for each of our three heavy mineral sand operating units, using inputs from a range of disciplines. Individuals responsible for our estimates of heavy mineral ore reserves are certified by the organizations that administer their respective country codes.

Our heavy mineral reserve estimates under SAMREC and JORC follow similar prescribed methodologies to classify portions of a mineral deposit as measured, indicated or inferred resources according to the level of geological confidence. Portions of those categories determined to be economic by more rigorous modeling at the time of the evaluation may be upgraded to “proved” or “probable” ore reserves. Both SAMREC and JORC require technical resource reports to be written or supervised by a professional certified as a “Competent Person” (CP) by one or more of the organizations responsible for development and maintenance of the reporting standards.

Our reserve estimates for our Alkali operations at Green River Wyoming follow accepted mining industry practice and are also influenced by our long-term experience in extraction of trona ore from underground mining and sodium carbonate from solution mining in the district. Estimates of recoverable reserves for both techniques are routinely reconciled with actual production, and our Alkali ore reserves are compliant with SEC Industry Guide 7.

SEC Industry Guide 7 differs from the SAMREC and JORC codes, but the methodologies for determination of mineral reserves, or “ore reserves,” and definitions of reserve classifications are essentially equivalent. Therefore, the Proven and Probable HM reserves stated in the table below are unmodified from the Proven and Probable HM reserves declared in the Mineral Resources and Reserves Statements submitted by our South African and Australian operations. Under SEC Industry Guide 7, SAMREC and JORC, Proven (or “Proved”) reserves are the highest category of ore reserve estimates, whereby the quantity and quality have been computed from detailed sampling and modeling, while Probable reserves provide slightly lower geologic assurance.

## Mining and Mineral Tenure

SEC Industry Guide 7 requires us to describe our rights to access and mine the minerals we report as ore reserves and to disclose any change in mineral tenure of material significance. Our heavy mineral exploration and mining activities in South Africa and Australia are regulated by the South African Department of Mineral Resources and the Western Australia Department of Mines and Petroleum respectively. Mineral tenure for our trona mining operations in Wyoming USA is secured through private and federal government leases, regulated by the BLM and WDEQ. All of our exploration and mining operations are subject to multiple levels of environmental regulatory review, that include approvals of environmental programs and public comment periods as pre-conditions to granting of mineral tenure. General descriptions of the rights and regulatory framework for minerals of relevance to Tronox follow here, and

additional details are provided in the individual descriptions of our four major mineral extraction and processing operations.

#### Mineral Tenure - South Africa

The South African Department of Mineral Resources (“DMR”) is the regulatory administrator of mineral rights in South Africa, subject to the provisions of the MPRDA, enacted on May 1, 2004 and amended April 21, 2009. The MPRDA vests all mineral rights in South Africa in the national government and establishes conditions for grant and retention of mining rights, including royalty payments. Four principal authorizations for mineral access are granted under the MPRDA: (i) permission, (ii) right, (iii) mining and (iv) retention permit. Prospecting rights are initially granted for a maximum period of five years and can be renewed once upon application for an extension of up to three years. Mining rights are valid for a maximum period of 30 years and may be extended by 30-year renewals. The MPRDA provisions for retention permits are limited to a term of three years and allow one two-year renewal.

Mining rights are subject to approval of an Environmental Management Program (“EMP”) granted by the DMR, and approvals from the Department of Environmental Affairs (“DEA”) of the EMP and an Integrated Water and Waste Use License by the DEA. Mining rights may be revoked if the conditions of the EMP are breached, inaccurate or misleading information is submitted in an Environmental Management Plan report, or for any other contravention of the MPRDA. Environmental permitting and compliance is co-administered by Provincial authorities, the Western Cape DEA and Development Planning for Namakwa Sands and the KZN DEA relative to KZN Sands.

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Mineral Tenure - Australia

The primary legal mineral and mining instrument in Australia is the Western Australia Mining Act of 1978 and the Mining Regulations 1981. Mining laws and regulations in Australia are enacted at the State (or Territorial) level for a range of tenement categories, including prospecting, exploration, retention and mining. Minerals in Australia are reserved to the Crown, with the exception of some historic “common law” mineral titles transferred under early land grants to private parties prior to 1899.

Mineral Tenure, exploration and mining licenses and most non-environmental mining matters are administered by the Western Australia Department of Mines and Petroleum. Mining operations in Western Australia are subject to a variety of environmental protection laws and regulations, including the Environmental Protection Act, the primary environmental regulatory framework in Western Australia; and the Environment Protection and Biodiversity Conservation Act of 1999 (EPBCA), which establishes jurisdiction over environmental matters of potential national significance.

State Agreements -- contracts between the State of Western Australia and the proponents of major resources projects -- are intended to foster resource development and related infrastructure investments. These agreements are approved and ratified by the Parliament of Western Australia. Our Cooljarloo mining operation is authorized by the Mineral Sands (Cooljarloo) Mining and Processing Agreement Act 1988 (WA). State Agreements may only be amended by mutual consent, thus reducing sovereign risk and enhancing security of tenure, however the WA Parliament has the authority to revoke or amend the State Agreement.

Mineral Tenure — Wyoming

Ownership of land and minerals relative to trona beds in the Green River Basin of southwestern Wyoming is divided between the Federal Government (56%), Anadarko Petroleum (38%) and the State of Wyoming (6%). Anadarko’s acquisition in 2000 of the Union Pacific Resources Group (“UPRG”) included the land and mineral ownership originally granted to UPRG’s parent company, the Union Pacific Railroad.

Leasing of Federal minerals under 41 Stat. 437, 30 U.S. Code § 124 (Section 23), “Agricultural entry or purchase of lands withdrawn or classified as containing sodium or sulphur,” is authorized by the Mineral Leasing Act of February 25, 1920, and subsequent amendments. The U.S. Government’s interests are administered by the BLM which has designated an area of 700,000 acres (283,280 hectares) as the Known Sodium Leasing Area (“KSLA”). In 1993, the BLM established a Mechanical Mining Trona Area (“MMTA”) within the KSLA and suspended oil and gas leasing within the boundary. Our mineral tenure and assets at Green River are strengthened by the KSLA and MMTA.

Mineral leasing authority by the State of Wyoming is granted in W.S. 36-6-101(b). The primary environmental regulatory authority with respect to trona extraction is the WDEQ. The WDEQ is the primary issuer of the environmental permits relevant to our operations, including air quality permits, mining and reclamation permits, as well as class III and class IV underground injection control permits.

Mineral Sands – South Africa and Western Australia

Heavy mineral sands are naturally-concentrated granular minerals of high densities (conventionally above about 2.9 gm/cm<sup>3</sup>), which is typically formed by erosion, transport and concentration. The heavy minerals (“HM”) contained in ore sand can usually be recovered at relatively low cost by gravity separation techniques. Not all of the HM have commercial value, and a distinction is made between the Total Heavy Minerals (“THM”) and the portion of the THM composed of Valuable Heavy Minerals (“VHM”). In our disclosures, we express grade in terms of percentage of THM by weight in the ore, and express individual VHM as percentages of the total heavy minerals.





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Our TiO<sub>2</sub> business explores and mines deposits of heavy mineral sands, separates heavy mineral concentrates (“HMC”) into commercial grades of VHM co-products, and upgrades the titanium mineral, ilmenite, into high-grade feedstock for our TiO<sub>2</sub> manufacturing facilities. A diagram of our heavy mineral sand mining and processing — TiO<sub>2</sub> pigment value chain is as follows:

All of our HM mining operations extract ilmenite, a titanium-iron oxide mineral, rutile, a premium TiO<sub>2</sub> mineral feedstock and zircon, a zirconium silicate, (ZrSiO<sub>4</sub>) mineral valuable for its application in a diverse range of industrial and construction end-uses. Other heavy minerals present in our heavy mineral assemblages may have commercial value, subject to their recovery from HMC feed to our mineral separation plants. We recover and market staurolite, an aluminum silicate mineral used in sand-blasting and other applications, at our Chandala mineral separation plant from the HMC feed from our Cooljarloo mine. Other mineral constituents of potential value include garnet and monazite. Our reserve estimates are based solely upon the value of extractable and recoverable zircon, rutile, ilmenite and leucoxene.

All three of our TiO<sub>2</sub> feedstock operating centers integrate heavy mineral sand mining and mineral separation with metallurgical beneficiation. Our Northern Operations in Western Australia is further integrated with TiO<sub>2</sub> pigment manufacturing. In 2015, we mined valuable heavy minerals, including ilmenite, rutile, leucoxene, and zircon, at two integrated operations: Namakwa Sands, Western Cape South Africa and Cooljarloo, Western Australia. A new mine, Fairbreeze, in KZN, South Africa is now in commissioning and we expect will be fully operational in early 2016. Fairbreeze will be the mining component of our integrated KZN Sands operation.

## TRONOX MINSAND CAPACITIES

Capacity (metric tons per year)	Namakwa Sands	KZN Sands (1)	Northern Operations	Total
Rutile (2)	27,000	25,000	62,000	114,000
Synthetic rutile	—	—	250,000	250,000
Titanium slag	190,000	220,000	—	410,000
Zircon	105,000	55,000	70,000	230,000
Pig iron	100,000	121,000	—	221,000
Reserve life of mine	20+ Years	12+ Years	15+ Years	
Exploration rights & undeveloped reserves	Yes	Yes	Yes	

(1) Includes Fairbreeze mine development project that we expect will enter commercial production in early 2016.

(2) Rutile includes natural rutile and leucoxene.

## Namakwa Sands, Western Cape, South Africa

A large heavy mineral deposit is mined in two open-cut shovel-and-truck dry mines, each with a dedicated primary wet concentration plant, and a common secondary concentration plant at Brand-se-Baai; a mineral separation plant (“dry mill”) at Koekenaap for separation of HMC into individual VHM and a two-furnace smelter complex at Saldanha Bay, for upgrading of ilmenite to titanium slag with by-product pig iron, and export facilities.

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## Tronox Western Australia

The Cooljarloo mining complex, approximately 170 km north of Perth, includes a dredge with a floating concentrator and infrastructure. The long-term LOMP brings new reserves into the production stream from reserves at the adjacent Cooljarloo West deposit and from Dongara, an advanced-stage heavy mineral sand project 28 km southeast of Port Denison and about 370 km north of Perth. The Northern Operations also include the Chandala metallurgical complex near Muchea, about 60 km north of Perth with a mineral separation plant (“dry mill”) and synthetic rutile (“SR”) plant to upgrade ilmenite to high-TiO<sub>2</sub> feedstock for our integrated TiO<sub>2</sub> pigment plant at Kwinana and export facilities for co-products at the port of Bunbury, WA.

## KZN Sands, KwaZulu-Natal, South Africa

Heavy mineral concentrate from the Fairbreeze mine, located about 45 km south of Richards Bay, will be separated into valuable co-products at our Central Processing Complex (CPC) at Empangeni, about 20 km west of Richards Bay. Ilmenite will be fed to a dual-furnace electric arc smelter. Titanium slag and pig iron from the smelter and valuable mineral concentrates will be exported from Richards Bay, one of the world’s largest bulk shipping ports.

Namakwa Sands was acquired in January 2007 by Exxaro Sands (Proprietary) Ltd from a subsidiary of Anglo American plc. The June 2012 transaction that combined a 74% interest in the mineral sands business of Exxaro Resources Ltd of South Africa and Tronox led to the dissolution of the Tiwest Joint Venture in Western Australia and placed the Tiwest mining-processing-TiO<sub>2</sub> chain, Namakwa Sands and KZN Sands under the management control of Tronox. Our heavy mineral production and reserves data are reported in MT on a 100% basis, unless otherwise noted.

The approximate annual production of our heavy mineral sand mining are shown below. Multiple of grades of mineral products may be combined in some categories.

Tronox 2015 TiO<sub>2</sub> and Co-Products (000’s tonnes)

Tronox Operation	Rutile (1)	Zircon (2)	Synthetic Rutile	Titanium Slag	Pig Iron
	(In thousands of MT)				
Namakwa Sands	28	115	—	155	89
KZN Sands (3)	—	—	—	194	82
Tronox W.A.	57	84	227	—	—
2015 Total	85	199	227	349	171

(1) Rutile includes natural rutile + leucoxene

(2) Zircon = all grades of commercial zircon

(3) Does not include the expected production from the Fairbreeze mine

Following our 2012 acquisition of the mineral sands business of Exxaro, our South African and Australian mineral sands strategic focus has been coordinated under a resource development group comprising of key personnel with complementary expertise and experience. A high priority is the assurance of long-term supply of titanium feedstocks to our vertically-integrated value chain. This strategy is manifested by the new Fairbreeze mine in KZN, now in commissioning, ore reserve extensions at Namakwa Sands, and a newly-revised LOMP for our Northern Operations in Western Australia. The three core heavy mineral operations are individually described below.

We believe our fully integrated titanium mining-to-titanium dioxide value chain is the largest in the world, and the TiO<sub>2</sub> business of Tronox is the world’s only mining-mineral processing chain with production of both titanium slag and synthetic rutile. Our captive slag from South Africa, synthetic rutile from Western Australia, and natural rutile

from all three operations satisfy over 100% of our  $\text{TiO}_2$  feedstock requirements. Excess  $\text{TiO}_2$  feedstock can be marketed externally or stockpiled for future internal consumption. Our  $\text{TiO}_2$  value chain is unique in the industry and allows us to synchronize our titanium mineral, feedstock and  $\text{TiO}_2$  production to current market conditions.

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Natural rutile, synthetic rutile, and titanium slag are to a certain extent fungible as titanium feedstocks for chloride-route pigment production. However, each titanium mineral and beneficiated mineral product has a discreet commercial market, and the commercial value of titanium feedstock is a function not only of TiO<sub>2</sub> content and supply and demand balances, but also particle size, trace element geochemistry, logistics and other factors. The global TiO<sub>2</sub> industry is a valued-added supply chain, with final product prices, such as for TiO<sub>2</sub> pigment, typically higher than that of ilmenite, the base load titanium mineral of the industry. The revenue assumptions for titanium feedstocks applied in the determination of heavy mineral ore reserve estimates are based on our sales contracts, pricing assumptions in our integrated TiO<sub>2</sub> value chain, and market intelligence.

Our LOMP and reserve estimates are derived from detailed 3-D block modeling of individual deposits built from geological and analytical databases. Mining parameters, processing recoveries, and economic inputs using current costs and long-term revenues are added and adjusted as necessary. The ore boundaries used for our reserve estimates are therefore not determined by simple cut-off grades but by three-dimensional techno-economic models. Nominal cut-off grades listed in the notations below the reserves table are “rule-of-thumb” minimum grade factors, provided to satisfy reporting guidelines and may not accurately reflect pit limits at the time of extraction.

## Heavy Mineral Reserves

Ore reserves are mineralized material that can be economically and legally mined and processed at the time of the reserves determination. All ore reserves reported are on the basis of in-place, economically extractable ore, as determined from 3-D mining-economic models, inclusive of dilution and mining losses. Classification as Probable or Proven Ore is based on increasing levels of confidence.

The following table summarizes our heavy mineral ore reserves and their contained in situ THM and heavy mineral assemblages as of December 31, 2015. Downward or upward movements in our total heavy mineral estimates from December 31, 2014 to December 31, 2015 are indicated.

MINE / DEPOSIT	Reserve Category	Ore (million MT)	Average Grade (% THM)	In-Place THM (million MT)	VHM Assemblage (% of THM)			Change from 2014 (± %)
					Ilmenite	Rutile and Leucozene	Zircon	
Namakwa Sands	Proven	222	8.9	19.7	35.5	7.9	9.1	
Western Cape RSA	Probable	503	5.6	28.1	49.6	9.7	10.8	
Open Pit Dry Mine	Proven and Probable	725	6.6	47.8	43.8	8.9	10.1	1.3 %
KZN Sands	Proven	139	7.1	9.9	62.1	5.2	8.4	
KZN, RSA	Probable	45	4.6	2.1	53.1	5.0	7.3	
Open Hydraulic Mine	Proven and Probable	184	6.5	12.0	60.5	5.2	8.2	
South Africa - All Reserves		909		59.8				1.0 %
Total Reserves South Africa (Equity 74%)		673		44.2				
Western Australia	Proven	252	1.8	4.6	60.6	7.3	9.6	
Operating Dredge Mine	Probable	200	1.8	3.6	61.1	7.9	11.4	
Mine	Proven and Probable	452	1.8	8.2	60.8	7.6	10.4	21.0 %
Dongara - Western Australia	Proven	65	5.1	3.3	48.9	8.9	11.2	
Planned Open Pit Dry Mines	Probable	—	—	—	—	—	—	—

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	Proven and							
Dongara Total Reserves	Probable	65	5.1	3.3	48.9	8.9	11.2	
Australia - All Reserves		517		11.5				14.1 %
Global Reserves (Tronox 100%)		1,426		71.3				2.9 %

Notations for the above HM reserves table:

MT — All measures of mass are expressed in MT, including Ore Reserves based on the in-place content of THM metric tonnes (1 MT = 0.9072 short tons)

Ore Reserves —The portions of our inventories of mineralized material that can be economically and legally mined and processed at the time of the reserves determination. Reserves are supported by iterative technical and economic evaluations that allow for mining and processing recoveries and estimated costs, marketing costs and assumptions, environmental, regulatory, social and other relevant factors. Ore reserves are classified as either Probable Reserves or Proven Reserves according to an increasing level of confidence. Our reserve estimates may include small amounts of low-grade material that would not be economic on their own merits, but have spatial relationships with more profitable ore that justifies their mining and processing.

HM — minerals of densities >2.9 g/cm<sup>3</sup>

THM — reported as weight per cent of ore and as millions of in-place MT. Changes in in-place THM from December 31, 2014 to December 31, 2015 are reported as ± per cent of total THM.

VHM — Ilmenite, Rutile, Leucoxene & Zircon reported as % of THM. Multiple grades of individual VHM may be produced from an individual mining operation.

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Change from 2014 to 2015 — Increases or decreases in reserves are expressed as + or – percentages of in-place THM resulting from depletion, reserve additions and adjustments to financial assumptions in the LOMP model.

Tronox Direct Equity interest in Namakwa Sands and KZN Sands is through its 74% interest in Tronox Mineral Sands (Pty) Ltd. The remaining 26% interest in Tronox Mineral Sands (Pty) Ltd is owned by Exxaro Sands (Pty) Ltd or its affiliates.

Reserve Life-Of-Mine (LOM) remaining years of production in current LOMP, adjusted downward if necessary to allow for years supported by reserves. Long-term LOMP are strategic operating plans and subject to change in response to variable conditions. LOMP typically include minor amounts of non-reserve mineralized material (“measured and indicated resources”), which are excluded from the computation disclosed here in order to comply with SEC Industry Guide 7. The LOM Plan for Tronox Western Australia combines Cooljarloo, Cooljarloo West and Dongara into a single supply source to sustain the feed to our HMC-Chandala-Kwinana TiO<sub>2</sub> production chain.

Key Assumptions — economic viability is determined by 3D techno-economic block modeling constructed from geological, analytical and geotechnical databases, mining parameters, metallurgical recovery assumptions, pit optimizations, and economic assumptions based on current operating costs, forex, and projected product sales prices at time of production). Nominal cut-off grades are 0.2% zircon at Namakwa Sands, 1.5 % ilmenite at KZN Sands, and 1.3% THM (1% VHM) at Cooljarloo and Cooljarloo West.

Our estimated production of commercial-quality titanium mineral and zircon concentrates from reserves is based on the heavy mineral assemblage distributions within the mine block model and our experience in metallurgical recoveries from comparable ore, mining and processing techniques. Mining recoveries are typically at or near 100%. Metallurgical recoveries vary widely as a function of geology, mineralogy and other factors. Processing efficiencies are affected by many characteristics, including grain size, morphology and diversity of the heavy minerals, liberation of HM from their host, clays, surface coatings, and other nuances. To a practical extent, mineral separation technology is customized for specific ore types to exploit subtle differences in grain size, density, magnetic susceptibility, and conductivity to separate valuable minerals from gangue. Cumulative metallurgical recovery factors for the VHM in our mine concentrates, inclusive of primary and secondary heavy mineral concentration at the mine site and dry and wet techniques at the mineral separation plant are in the general range of 60% to 95%. Actual recoveries are applied to our economic models used for reserve estimates. Unrecovered VHM in certain dry mill tailings streams are stockpiled, but their hypothetical value is not considered in our revenue assumptions.

Tronox heavy mineral sand operations in South Africa include similar material flows from integrated mine mineral separation smelter value chains on the west and east coasts of South Africa. In the Western Cape Province, valuable heavy minerals are recovered at the Koekenaap mineral separation plant from heavy mineral concentrate produced at the Namakwa Sands mine near Brand-se-Baai. Ilmenite is fed to the integrated smelter at Saldanha Bay. Slag, pig iron, rutile and zircon are exported from the Saldanha Bay deepwater port. A similar material flow at KZN Sands on the east coast is expected to re-start in 2016 with the startup of our new Fairbreeze mine. HMC from Fairbreeze will be separated into VHM concentrates at the Central Processing Complex at Empangeni. Ilmenite is converted to slag and pig iron in our adjacent smelter, and all commercial products, including slag consumed by our own TiO<sub>2</sub> pigment plants are exported from Richards Bay.

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The following table compares the heavy mineral reserves reported for the three years ending December 31, 2015, 2014 and 2013:

3-Year Reserves (Mt In-Place THM)				
	Reserve Life-Of-Mine	December 31,		
		2015	2014	2013
(In millions of MT)				
Namakwa Sands	>25 years	47.8	47.2	49.6
KZN Sands	>12 years	12.0	12.0	12.0
Total South Africa		59.8	59.2	61.6
Cooljarloo		8.2	6.8	4.3
Dongara		3.3	3.3	3.3
Total Western Australia >20 years		11.5	10.1	7.6
Total Tronox (100%)		71.3	69.3	69.2

Three-year THM reserves for the Tronox Mineral Sands Division, expressed as millions of MT in-place total heavy minerals for 2013 through 2015. Reserve Life-of-Mine in the table above refers to the number of years in the current LOMP that are supported by our proved and probable total heavy mineral reserves. The actual mined material in the LOMP's include non-reserve mineralized material not currently determined to be reserves under the guidelines of SEC Industry Guide 7, and are therefore of longer duration than the years shown above.

#### Heavy Mineral Deposit Geology and Mining Operations

Our vertical TiO<sub>2</sub> integration business is anchored by our three large heavy mineral mining and processing operations: Namakwa Sands and KZN Sands on the West Coast and East Coast, respectively, of South Africa and Tronox Western Australia.

Heavy minerals (HM) are defined by densities of at least 2.9 grams per cm<sup>3</sup>, and heavy mineral placers are accumulations of high-density minerals sufficiently durable to survive erosion and water transport to co-depositional sites, as a consequence of their similar hydrodynamic characteristics. However, placers of the titanium minerals ilmenite and rutile accompanied by significant percentages of zircon (ZrSiO<sub>4</sub>) are a distinctive class of heavy mineral deposit that provides most of the world's supply of titanium and zirconium raw materials.

All ore deposits are accidents of geology resulting from unusual circumstances, and large deposits with mine lives measured in decades are very rare. However, our three integrated mineral sands operations include a very large HM deposit at Namakwa Sands and large resources at KZN Sands and in the Cooljarloo district on the Western Australian coast. All three deposits are on coastal plains and are all members of the same general class of mineral deposit, but their mineralogy and ore characteristics differ greatly, and extraction methods are different as well. Heavy mineral assemblages are inherited from their source, usually very old crystalline basement, and their settling characteristics during often complicated histories of erosion-deposition cycles. All three heavy mineral mining centers are on coastal plains constructed from detrital sediment shed from adjacent crystalline terrains.

The cumulative capacity of our three mineral sands operations allows us flexibility in supplying TiO<sub>2</sub> feedstock to satisfy our vertically-integrated TiO<sub>2</sub> manufacturing needs and gives us the option to sell or stockpile feedstock in the excess.

#### Namakwa Sands, Western Cape, South Africa

Our interest in Namakwa Sands is held through our subsidiary, Tronox Mineral Sands (Pty) Ltd, which owns 74% of Namakwa Sands, an integrated mine-mineral separation-smelting-export production chain on the Atlantic Coast of



Western Cape Province, South Africa. Our operations are divided administratively into Northern Operations and Southern Operations:

The Namakwa Sands operation is based on a world-class heavy mineral deposit at Brand-se-Baai located approximately 385 km north of Cape Town and 92 km northwest of Vrendendal. Ore is mined from two open pit dry mines by a combination of loaders, hydraulic shovels and conveyors. Concentrates from two dedicated Primary Concentration Plants (PCP West and PCP East) are blended to feed a common Secondary Concentration Plant (SCP) for production of magnetic and non-magnetic HMC. Both mag and n/m concentrates are truck-hauled 52 km to the Mineral Separation Plant at Koekenaap, from which commercial concentrates of zircon, rutile and ilmenite feed for the Namakwa smelter are transported by rail about 300 km south to Saldanha. The Saldanha smelter, 105 km north of Cape Town, converts ilmenite concentrates from the northern mining-processing operation to titanium slag and high-purity pig iron in two DC electric arc furnaces.

Saldanha Bay contains a deepwater port with excellent harbor facilities for export of our mineral and beneficiated co-products.

The Namakwa Sands mine was commissioned in Anglo American plc with pre-mining resources of 1.17 billion MT at 7.9% THM. Phase I of the project reached full operation in 1995 at a mining rate of approximately 3.6 million ore MT, and commissioning of a 25 megawatt DC arc furnace at the Saldanha smelter. A second 35 megawatt DC furnace was commissioned in 1999, by which time ore production had reached about 4.5 million. Namakwa Sands was acquired by Exxaro Resources Ltd in 2008, and the mineral sands division of Exxaro was combined with Tronox in 2012.

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Since mining started in 1994 to end of 2015, approximately 315 million MT of ore have been extracted from the two Namakwa mines, 63% from the West mine and the balance from the East mine. Annual ore production surpassed 16 million MT in 2001 and is now averaging about 22 million MT per year. According to our LOMP, over 20 million MT per year ore will continue to be mined and processed through at least 2044. As our LOM Plan includes some non-reserve mineralized material, we disclose our Namakwa “reserve life-of-mine” as of December 31, 2015 as 25 plus years, supportable by our proven and probable reserves at current production rates.

We hold two active MPRDA mining rights covering approximately 13,100 hectares (32,371 acres) covering part or all of the Graauwduinen, Hartbeeste, Rietfontein, and Houtkraal farms. All of these mining authorizations expire in August 2038 and will be extended as necessary for an additional 30 years. Applications have been submitted to the DMR for conversion of two prospecting rights to mining rights over an additional 3,192 hectares (7,888 acres). The mining right applications include two satellite deposits known as Rietfontein and Houtkraal, which we plan to mine as extensions of the East Mine. We also own surface rights over approximately 17,100 hectares (42,255 acres). All minerals in South African are owned by the State, and mine production is subject to a royalty based on final product values. We have no reason to believe that our current mining rights will be revoked or that our new mining right applications will be rejected.

We also hold water rights for ore processing at Brand-se-Baai, HMC processing at Koekenaap, and at the Saldanha smelter. The regional climate of the western South Africa coast ranges from a Mediterranean climate at Cape Town to Saldanha Bay, and becomes arid or semi-arid northward from Saldanha. Annual precipitation at the mine averages less than 200 mm. Consequently, water conservation is a high-priority in our environmental management program.

The Namakwa mineralized body, including reserves and non-reserves material, covers an ellipsoidal area of 15 kilometers in a northeasterly direction with a maximum width of about 4 km, with no overburden. The NE-SW dimension is interpreted to reflect prevailing winds at the time of the deposit’s formation. A narrow sub-economic corridor divides the reserves into two proximal ore bodies, Graauwduinen West and Graauwduinen East, which for obvious reasons are more commonly called the “West” and “East” deposits. Nearly two-thirds of historic ore production has been extracted from the West mine pit, to a maximum depth of about 45 meters. In the medium term, 60-65% of extracted ore will be mined from the West pit, but the long-term LOM Plan calls for a nearly even split between West and East mines.

The very large Namakwa HM deposit is broadly the result of prolonged, repetitive weathering-erosion-deposition cycles that were initiated with the break-up of the Gondwana Supercontinent approximately 100 million years ago. The separation of the African and South American proto-continent triggered weathering and erosion of massive volumes of sediment from high-grade metamorphic crystalline “basement” rocks of the one billion-year-old Namaqua-Natal orogenic belt. The sandy sedimentary sequence then includes the heavy minerals of our Namakwa deposit are presumed to be derived mostly from various sub-terrains from the Namaqua-Natal belt which was welded onto the western and southern margins of the 2.6+ billion-year-old Kaapvaal Craton during multi-phased deformation and high-grade metamorphism which peaked between 1.20 and 1.06 billion years ago. Granulite-grade metamorphism enables partitioning of titanium sequestered as inclusions in other minerals into ilmenite and rutile crystals capable of surviving multiple cycles of transport and re-deposition. Zircon’s heat resistance enables its preservation and makes it useful for age-dating techniques. After the separation of the proto-continent of South America and Africa, large volumes of sediment were delivered by west-flowing river systems, particularly the ancient Karoo River to the Atlantic Coastal Plain of western South Africa. These unconsolidated sediments were available for repetitive recycling for millions of years in response to static sea levels and uplift. Heavy mineral concentrations in beach placers, marine terraces and in coastal dunes were reworked by water and wind into what is now our Namakwa heavy mineral deposit, the end-product of 100 million years of geologic evolution.

The same complex circumstances that created a deposit of over one billion MT also created challenges to the efficient extraction and recovery of its valuable minerals. The Namakwa HM assemblage is variable and diverse. Combined

VHM (ilmenite, rutile, leucoxene and zircon) average over 60% of THM, but the VHM: THM ratio varies considerably as a function of ten or more geologic domains with distinctive HM assemblages, mining and processing characteristics. The most prevalent non-commercial heavy minerals are almandine garnet and pyroxene, but other common HM constituents are: hematite, magnetite, monazite, kyanite, chromite, cassiterite and apatite. Three basic styles of HM concentration are recognized, in decreasing age: paleo-beach placers with arcuate shapes that open to the northwest; a thick, enigmatic quartzo-feldspathic sequence known as the Orange Feldspathic Sand (OFS), interpreted as a complex of multiple dune and reworked dune sands; and a surficial, sheet-like layer of iron oxide-stained wind-blown sand known as the red aeolian sand (RAS).

The OFS reaches a maximum thickness of over 40 meters and is by far the volumetrically largest component of both ore mined during 1994 to present as well as of our current ore reserves. The OFS is overprinted by intensive arid weathering that solubilized silica, iron and other constituents into alkaline groundwater to be re-deposited as horizontal layers of hard duricrust, lenses and tabular layers of cemented sand of variable extent, with cement of varying compositions of calcium, magnesium, aluminum, iron, silica and other material.

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Duricrust, heterogeneous lithologies, clays and variable, diverse HM assemblages have historically impaired our ability to efficiently recover valuable minerals. Since 2008, we have pursued a comprehensive, systematic evaluation of our heavy mineral ore processing characteristics, leading to a completely revised metallurgical model. Both the West and East deposits are modeled separately, due to divergent characteristics, 50m x 50m x 1 meter 3D blocks. Multiple geological domains with distinctive mineralogies and processing characteristics have been extensively studied to determine the recovery drivers for zircon and ilmenite – the two heavy minerals of highest intrinsic value. We have inserted an autogenous milling circuit ahead of the West PCP to improve liberation of VHM from duricrust-impacted OFS ore, and instituted a blending procedure to provide a more consistent HMC feed to dry separation. Two “satellite” HM deposits have been integrated into the medium-term LOMP, based on their ability to provide blending HM and a positive feasibility completed in 2015. An additional 24 MT ore from the satellite deposits, plus an additional 56 Mt ore in the East mine more than offset the 22 MT ore mining depletion. Our ore reserves movement from December 31, 2014 to December 31, 2015 is a net increase of 57MT ore and 615 thousand MT in-place THM. Total Namakwa Sands reserves at December 31, 2015 include 21 million MT ilmenite, 4.9 million MT zircon, and 4.3 million MT of rutile and leucogene.

### KZN Sands, KwaZulu-Natal Province, South Africa

We own a 74% interest in KZN Sands (Pty) Ltd through our subsidiary, Tronox KZN Sands (Pty) Ltd and Tronox Mineral Sands (Pty) Ltd. The integrated mining-processing operation now known as KZN Sands was conceived by Exxaro predecessor, Iscor Heavy Minerals (IHM) who acquired the heavy mineral properties of Shell South Africa and Rhoex Ltd in 1994. IHM initiated a detailed feasibility study of the Hillendale minsands mine and Central Processing Complex in 1995. An unbundling of Iscor resulted in the new resource firm, Kumba, which gained control of KZN Sands and acquired a majority position in Australian mining firm Ticor, the then 50% partner with Kerr-McGee Chemical Corp in the Tiwest Joint Venture in Western Australia. Through its 60% ownership in Ticor South Africa (TSA), Kumba brought the Hillendale mine and CPC on-stream during 2001-2003. Kumba completed its full acquisition of Ticor and in November 2006 was folded into Exxaro, South Africa’s flagship empowerment mining company, with Ticor South Africa KZN (Pty) Ltd renamed as Exxaro Sands (Pty) Ltd. The combination of Exxaro’s mineral sands business and Tronox in 2012 gives us a 74% controlling interest of KZN Sands, one of our three integrated TiO<sub>2</sub> enterprises.

Mineral tenure for KZN Sands’ Fairbreeze mining project is held under two Mining Rights, with combined coverage of 4,041 hectares (9,985 acres), including 100% of our declared heavy mineral reserves. Fairbreeze replaces the Hillendale mine as a source of heavy mineral concentrate feed to our Central Processing Complex at Empangeni. The components of KZN Sands are:

Fairbreeze heavy mineral sands mine (45 kilometers south-southwest of Richards Bay): a new mine now in commissioning, scheduled to start production in early 2016. Mining and primary concentration at Fairbreeze will be patterned after our Hillendale mine which ceased mining in December 2013. HMC will be transported by road about 50 km to Empangeni CPC.

Central Processing Complex (at Empangeni, about 18 km west of Richards Bay) contains a mineral separation plant (MSP) for separation of HMC from Fairbreeze to produce commercial-grade rutile and zircon for export and ilmenite feed for our contiguous, dual electric-arc furnace smelter to produce high-grade titanium slag and high-quality pig iron.

Richards Bay Harbor is a storage and export facility for all products.

Hillendale site, an active mine from 2001-2013, now in advanced rehabilitation. Surface re-contouring is essentially complete and mostly revegetated.

The South African Department of Water Affairs approved our Fairbreeze Water Use License application in September 2013. Construction of the primary concentration plant (PCP) and mine infrastructure is complete, and we are now in an advanced hot commissioning phase ramping up production. During the transition to our Fairbreeze mine, the Empangeni smelter continued to produce titanium slag during 2014 and 2015 from ilmenite stockpiles accumulated from Hillendale, Namakwa and external sources. The Empangeni smelter produced 194 thousand MT slag in 2015 (132 thousand MT in 2014) and 82 thousand MT pig iron. KZN Sands will employ hydraulic mining at Fairbreeze, the same technique used to mine the Hillendale deposit to disaggregate the ore with high-pressure water jets and pump an ore slurry to the nearby primary concentration plant. Hydraulic mining has been used extensively in the South African gold fields, and KZN Sands successfully pioneered its application to heavy mineral sand mining at Hillendale from 2001 to its depletion at the end of 2013.

The Fairbreeze heavy mineral sand deposit is a 12-kilometer segment of a “dune corridor” developed along the southeastern coast of Africa from Durban to Mombasa that includes several very large heavy mineral deposits hosted by coastal dunes. Local modifications from tectonic uplift, repetitive sediment deposition and erosion cycles, and eustatic sea levels have shaped the modern coastline. The Fairbreeze paleo dune complex is an elongated body extending south-southwestward from the town of Mtunzini for about 12 kilometers, reaching a maximum width of about two kilometers and a maximum elevation of 109 meters. The deposit is hosted by fine-grained sand and silt in a north-northeast trending complex of strandline/paleo dune couplets two kilometers inland from the modern coastline. Fairbreeze is part of a regional near-shore, coast-parallel trend of terraces and dunes composed of reddish-colored sands, the “Berea Red Sands,” along the southeastern coast of Africa from Durban to Mombasa. As with most heavy mineral sand deposits, iron-titanium oxides, rutile, zircon and other heavy minerals in the HM assemblage at Fairbreeze are inherited from their source rock provenance and modified by selective sorting during deposition. The Natal Metamorphic Province and younger rift-related basalts are suspected to be the primary source for the Fairbreeze heavy minerals. The Natal crystalline basement is part of the regionally-extensive Namaqua-Natal orogenic belt that also contributed HM to the very large Namakwa deposit. Terrestrial weathering of terrace deposits to oxidize iron minerals, followed by a period of extensive reworking of coastal sediment by static sea levels complete a highly-generalized scenario for the formation of the Fairbreeze deposit.

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Heavy minerals grades tend to be higher at the surface due to winnowing of lighter mineral grains by wind. Ore grade mineralization appears to have once been continuous over the 12-km length, of the dune complex, but dissection by modern drainages perpendicular to the dune trend. The resulting ore reserve is segregated into five discrete ore bodies, Fairbreeze A, B, C, C-Extension and D. The estimated Fairbreeze heavy mineral reserve of nearly 12 million MT in-place HM contains over 7 million MT ilmenite, over 600 thousand MT rutile and nearly 1 million MT zircon.

Our mining right, Environmental Management Program, and water use license have all received approval at the provincial level. The approved mining and environmental plans have been challenged by two conservation groups opposed to our mining in proximity to the town of Mtunzini at the northern end of the Fairbreeze deposit. The appeals have been ruled as unlawful by the Constitutional Court of South Africa, but some risk remains that a judicial reversal or compromise ruling may establish a wider buffer.

Fairbreeze HMC will be hauled by truck about 50 km to the Empangeni Central Processing Complex (CPC). The Fairbreeze Life-of-Mine Plan is divided into two phases: Phase I at a mining rate of 10 million MT of ore per year, followed by a Phase II expansion to 17 million MT per year. The timing of the expansion is subject to market conditions. Under the current LOMP, which is subject to change, ore mining will begin with the Fairbreeze “C” ore body, the highest grade of the five Fairbreeze ore zones at 11.6% THM. Fairbreeze ore is mined at a rate of 10 million MT per year from 2016 through 2020, then ore mining ramps up to 18 million MT per year by 2022. According to the LOMP and with no reserve replacement, the Fairbreeze mine reaches depletion during 2028. Over twelve full years of operation (2016-2027), a total 6.3 MT of ilmenite is recovered, at an average production rate of 520 thousand MT per year. Annual zircon production averages about 70 thousand MT. The Fairbreeze 12.5 year reserve life-of-mine is based on currently-estimated reserves. All LOMP are strategic business guidance tools and intentionally flexible.

## Tronox Western Australia Northern Operations

Our Cooljarloo mine, Chandala metallurgical complex and Kwinana pigment plant in Western Australia are the key components of our integrated TiO<sub>2</sub> supply chain. Our 2012 acquisition of the sands business of Exxaro Resources Ltd unified the equal interests of Tronox and Exxaro in the Tiwest Joint Venture under Tronox Management Pty Ltd, a subsidiary of Tronox Ltd. Key components of Tronox Western Australia are:

### Tronox W.A. Northern Operations

Cooljarloo mine, approximately 170 kilometers north of Perth, a large dredge mine with floating concentrator to produce heavy mineral concentrates (HMC). HMC is transported by double “road-train” trucks approximately 110 km south to our Chandala Mineral Separation Plant (“dry mill”) near Muchea.

Chandala Processing Plant, approximately 60 kilometers north of Perth, where ilmenite, rutile, leucoxene and zircon are separated and recovered from the HMC in a Mineral Separation Plant. Ilmenite is upgraded to SR in an Improved Becher Process synthetic rutile plant. SR can be consumed by the Kwinana TiO<sub>2</sub> plant, exported for sale, or stockpiled.

### Tronox W.A. Southern Operations

Henderson Storage Facility, approximately 25 km south of Perth where most commercial concentrates of valuable heavy minerals and SR in excess of our internal needs are stored and prepared for export from the port of Bunbury, 180 kilometers south of Perth.

Kwinana Pigment Plant, approximately 30 km southwest of the city center of Perth, where Chandala synthetic rutile is reacted with chlorine gas and petroleum coke to manufacture titanium dioxide (TiO<sub>2</sub>) pigment plant.



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The Tiwest Joint Venture began in 1988 as a partnership between Kerr-McGee Chemical Corporation and Minproc Engineering, whose respective 50% interests would eventually pass to Tronox and Exxaro. The Cooljarloo mine started production in December 1989 with a 1800 tph electric dual-wheel suction dredge and floating spiral concentration plant and excavation of high-grade ore that averaged over 6% HM. Ore reserves and were primarily manually-calculated at a 2% HM cut-off grade, and the Cooljarloo mine-life was estimated at about 25 years. At December 31, 2015, we are in our 27th consecutive year of operation, mining an average ROM grade of 1.8% HM and a Life-of-Mine plan to at least 2035. Resource development, mining, processing, marketing and finance are guided by a sophisticated LOM Plan built from three-dimensional geological-resource block modeling, pit optimization and mine scheduling. Our techno-economic model is maintained by an in-house team of diverse skills, some of whom have worked in our Western Australia operations since its early beginnings over 25 years ago. A second smaller dredge, "Pelican," mines the ore body in tandem with "Cooljarloo 1," the Chandala SR plant has been significantly expanded, and our Kwinana Pigment Plant was commissioned in 1991 and now has a 150,000 MT per year TiO<sub>2</sub> pigment capacity.

The economic disadvantage of mining very low-grade ore is offset by a large deposit with a high-quality heavy mineral assemblage of nearly 80% VHM of THM, including ilmenite with superb processing characteristics, and low-cost dredge mining. However, much of our success in Western Australia is the result of continuous improvement in all areas, willingness to embrace technology, and a cadre of dedicated, experienced professionals who have arguably established one of the most efficient operation in the TiO<sub>2</sub> industry.

All of our heavy mineral ore reserves are under mining leases granted or pending approval by the Western Australia Department of Mines and Energy, or in the case of our active Cooljarloo mine, Mineral Sands Agreement 268 (MSA 268), authorized by the Western Australia Parliament as the Mineral Sands (Cooljarloo) Mining and Processing Agreement Act 1988. State Agreements have been used by the government of Western Australia since the 1950s to provide mineral tenure and define responsibilities for major resource projects, particularly those that require the development of major infrastructure. MSA 268 covers 9,745 hectares (20,080 acres). Two ML applications are pending at Cooljarloo West – M70/1314 and M70/1333 totaling 4,414 hectares (10,907 acres), and 20 ML's totaling 15,162 hectares (37,466 acres) have been granted at our Dongara project. Three older ML's at our Jurien property, the site of a former heavy mineral open pit mine operated by WMC in the 1970's. Our total mineral position in Western Australia consists of 16,215 hectares of Mining Leases and 68,194 hectares held by Exploration and Retention Licenses.

Since the start of mining at Cooljarloo in 1989, we have produced over 17 million MT of HM concentrate. Since the start of mining at Eneabba, now owned by Iluka, in the early 1970's, mineral sand mining in the northern Perth Basin has produced 15-20% of the global titanium raw material supply and a significant amount of the world's zircon. Over one billion years of tectonic stability of the Western Australia craton enabled long-term erosion and sustained sediment supply to the coastline, where a static sea level during the relatively recent geologic time was conducive for the accumulation of heavy minerals in shoreline and shallow marine sands.

The Cooljarloo "deposit" is an accumulation of multiple, parallel "bootlace" HM ore strands and lower-grade, tabular HM deposits in a swath of ancient shoreline placers over a width of five km or more over a NNW trend of at least 40 km. The deposits are interpreted as shoreline and shallow off-shore HM placers, derived from erosion, stream transport and deposition of heavy minerals according to their densities, grain size and shape that governed their settling characteristics. The low escarpment known as the "Gingin scarp" east of the Cooljarloo mine is a major control for the Cooljarloo and other HM deposits in the northern Perth Basin, as it represents a wave-cut escarpment that prevented incursion of the ocean further eastward during the formation of HM placers from about the Early Pleistocene and younger. The Cooljarloo HM-bearing sands overlie Mesozoic sedimentary rocks which are a local source of detrital HM that were ultimately sources from the granitic and gneissic basement of the Yilgarn craton to the east. Younger shoreline placers at Jurien and Dongara are often buried by overburden which generally thins toward the Gingin scarp.



The Cooljarloo heavy minerals are generally characterized by a mature assemblage of ilmenite, leucoxene, rutile and zircon with subordinate staurolite, monazite, kyanite and other HM. Besides the titanium minerals and zircon, only staurolite in minor amounts has been recovered and sold. Cooljarloo ilmenite tends to be weathered to 60% or more TiO<sub>2</sub> and is very porous on a microscopic scale, giving it superb processing qualities for its conversion to synthetic rutile.

During 2013-2015, we completed a comprehensive review of our LOMP intended to refine our techno-economic model of ore reserves and mineral resources to optimize our short- and medium-term LOMP. The effort has led to revisions to mining sequencing, better definition of ore boundaries, and the incorporation of ore reserves from Cooljarloo West and Dongara into a new LOMP. As a result of the remodeling, the combined Cooljarloo-Cooljarloo West ore reserves have increased by over 20% relative to 2014, and overall mine-life was extended by seven years. The Dongara reserves were already well-defined by a dry-mining DFS, and a dredge-mining DFS is planned but not scheduled. According to the LOMP, new mine production from Dongara will commence in 2018, but development of the Dongara deposits is also subject to internal funding and the strength of the TiO<sub>2</sub> market.

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Tronox Alkali - Green River, Wyoming

In April 2015 Tronox acquired the Alkali Division of FMC, making Tronox Alkali the world's leading producer of natural soda ash. Natural soda ash is refined from trona, a sodium carbonate mineral composed of soda ash ( $\text{Na}_2\text{CO}_3$ ), sodium bicarbonate ( $\text{NaHCO}_3$ ) and water with the chemical formula  $\text{Na}_2\text{CO}_3 \cdot \text{NaHCO}_3 \cdot 2\text{H}_2\text{O}$ . Approximately 75% of the world's natural soda ash is produced from trona extracted from underground mines and solution mining in the Green River Basin of southwestern Wyoming.

The Green River trona beds are collectively the largest deposit of trona and the undisputed largest source of raw material feed for the production of natural soda ash in the world. The origin of the trona deposits is the result of very unusual, geological circumstances. Sodium-rich springs are believed to have fed ancient Lake Gosiute, a large, shallow inland lake that reached a maximum extent of over 15,000 square miles (about 40,000 sq km) around 50 million years ago. In response to repetitive cycles of lake expansion, contraction and evaporation, and changes in temperature and salinity, trona was precipitated in beds of remarkable purity and extent. In addition to trona, the evaporite sodium mineral assemblage includes variable levels of other sodium carbonate minerals as well as halite. At least 25 beds of natural trona in the Wilkins Peak Member of the Eocene Green River Formation exceed at least locally three feet (1 m) in thickness and are estimated by the USGS to contain a cumulative resource of over 100 billion tons of trona. Individual trona beds are numbered in ascending order and trona beds of significance lie at modern depths between about 400 to 2,000 feet (120-600 m). Our current dry mining and solution mining operations exploit three trona beds, and our reserves are contained in four beds.

Our trona resources and mining operations are held under leases covering 88,342 acres (equivalent to 138 sq miles or 357 sq kilometers) over portions of 23 townships, primarily in two contiguous units informally known as the "Westvaco" and "Granger" blocks. Mineral and mining rights are secured by leases from the Federal government, the State of Wyoming, and Anadarko Petroleum. We lease approximately 25, 215 acres from the U.S. Government under the Mineral Leasing Act of 1920 (Title 30 §181) which includes trona under its definition of a "solid leasable mineral." Federal minerals are administered by the U.S. Bureau of Land Management (BLM). We lease 40,883 acres from Anadarko Land Corporation, a subsidiary of Anadarko Petroleum. Anadarko's acquisition of the Union Pacific Railroad Group in 2000 included alternate sections of land for 20 miles on either side of the trans-continental railroad, originally granted to Union Pacific under the Pacific Railroad Act of 1862 and subsequent railroad land grants. We also lease 22,243 acres from the State of Wyoming. Royalty payments range from 6% to 8% of the sales value of soda ash products.

Tronox Alkali's Westvaco site is located approximately 25 miles (40-65 km) north-northwest of Green River. We extract trona ore from our Westvaco underground mine by mechanized, continuous mining methods. Our current underground dry mine production is from a single, near-horizontal bed approximately 10 feet (3.05 meters) thick at a depth from surface of 1500-1600 feet (450-490 meters). Ore is extracted from an extensive network of parallel drifts and connecting cross-cuts, known as room-and-pillar mining, and from longwall mining. Longwall miners shear off successive panels of ore which drops onto a conveyor belt for delivery to vertical shafts to be hoisted to the surface. The Westvaco mine has been in uninterrupted, continuous operation since its start in 1947 by Westvaco Chemical Company. The Westvaco interests were acquired by FMC in 1948.

We also extract trona by secondary recovery solution mining operations in previously dry mined portions of the Westvaco mine and in trona beds impacted by former dry mining of the Granger mine. The Granger mine and processing facility, about 10 miles (15 km) northeast of the eponymous town, operated as an underground mine from 1976 to 2002. FMC acquired the properties in 1999 by acquiring Tg Soda Ash, originally developed as a unit of Texasgulf and then owned by Elf Atochem. FMC converted the mine and mill to solution mining in 2005. In our secondary recovery solution mining operations, we pump process waters from our surface facilities, along with insoluble remnant from the processing of dry mined ore, into former underground mine workings where the insoluble constituents settle out and sodium carbonate and bicarbonate are leached from trona left behind from previous dry

mining. The return mine water is pumped back to the Westvaco and Granger surface processing facilities for recovery of sodium solids.

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A diagram of our soda ash mining and processing value chain is as follows:

The following table presents Alakli in-place trona ore reserves:

Mine Deposit	Reserve Category	Ore Reserves (million MT)	Trona (%)	Total (MT)	Reserve Life-of-Mine
Dry-Mining Reserves	Proven	278.5	87.9	278.5	
	Probable	144.1	87.4	144.1	
Dry-Mining Total Reserves		422.6	87.7	422.6	
Solution-Mining Reserves	Proven				
	Probable	413.1	86.8	413.1	
Solution-Mining Total Reserves		413.1	86.8	413.1	
Alkali Total Reserves		835.7		835.7	100+ years

Dry mined and solution mined trona are refined into soda ash at our Westvaco and Granger surface operations, located within the surface footprint of their respective contiguous lease blocks. Both sites consist of multiple processing lines, steam generation facilities, evaporation ponds, spare parts warehouses, maintenance shops, and offices for engineering, production, and support staff. Our Green River trona mining and processing facilities typically operate at an effective capacity of about four million short tons (3.6 million MT) of marketable soda ash per year.

Notations for the above Tronox Alkali in-place ore reserves table:

MT — metric tonnes, 1 MT = 1.102 short tons or 1 short ton = 0.9072 MT

In-Place Trona Ore — Legally-extractable trona-mineralized material determined as economic by resource and mine modeling using realistic economic assumptions and mining parameters developed over 60 years of Green River trona mining.

Dry Mining Trona Reserves are determined as economically extractable by mechanical mining methods and include diluting materials within and marginal to the ore bed. The reserves exclude portions of the ore beds that will remain as support pillars or barriers for secondary solution mining and are generally based on mining parameter assumptions that include minimum ore thickness, maximum % insolubles and minimum % trona. Dry-mining parameters are customized to individual beds based on their characteristics, capabilities of mining equipment and economic criteria. A bulk density factor of 133 lb/cu ft (2.16 g/cc) is used for conversion of volumes to mass.

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Solution Mining Trona Reserve estimates are determined from exposed surface areas of trona to liquid solutions injected into dry-mined voids, solubility and alkalinity data, dissolution rates for sodium carbonate over residency times, and other factors developed over our 20+ years of cumulative secondary recovery solution mining experience. Reserves include dilution from insoluble material and recovery factors based on solubility.

Reserve Life-of-Mine — sustainable mine-life supported by reserves at current ore production rates, realistic recoveries and economic modeling. A Life-of Mine Plan is a flexible strategic business plan used in decision-making and long-range planning. It is inherently a forward-looking document within the meaning of the U.S. Securities Act of 1933 and subsequent amendments and is subject to uncertainties and unanticipated events beyond our control. Actual results of our operations may materially differ from the results implied

As shown in the trona reserves table, as of December 31, 2015 our total proven + probable reserves amount to 921 million short tons (836 million MT) of ore averaging about 87% trona, equivalent to approximately 550 million short tons (500 million MT) of soda ash. Our reserves are sufficient to sustain production for over 100 years at our current production rate of approximately 4 million short tons (3.6 million MT) per year of refined soda ash. Our 2015 reserve disclosure is partially based on an external consultancy review in mid-2015 that generated an updated reserve estimate as of December 31, 2014. Our reported reserves reflect that estimate, reconciled with 2015 depletion.

Our reserves estimates are developed using industry-standard, best-practice procedures, and our disclosures have been reviewed internally and externally to ensure compliance with SEC Industry Guide 7. Dry mining reserves and solution mining reserves are fundamentally different in terms of extraction methods and costs, predicted recoveries and other characteristics. Consequently, the procedures used for their reserve calculations also differ. Our stated reserves of dry mining ore are based on minimum thickness and maximum insoluble constituents. Our solution-mining reserves are developed from an extensive database of solubility, alkalinity and extractability factors accumulated during our 20+ years of secondary recovery solution mining experience at the Westvaco and Granger mines.

Item 3. Legal Proceedings

Refer to Note 19 of Notes to Consolidated Financial Statements.

Item 4. Mine Safety Disclosures

Information regarding mine safety and other regulatory actions at our mine in Green River, Wyoming is included in Exhibit 95 of this Form 10-K.

PART II

Item 5. Market for Registrant's Common Equity, Related Shareholder Matters and Issuer Purchases of Equity Securities

Market for our Class A ordinary shares

Our Class A Shares began trading on the New York Stock Exchange on June 18, 2012 under the symbol "TROX." There is no public trading market for our Class B Shares, which are held by Exxaro.

The following table sets forth, for the fiscal quarters indicated, the high and low sales prices per share of our Class A Shares, and the dividends declared during 2015 and 2014.

Sales Price		Dividends
High	Low	per Share

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2015

Fourth quarter	\$8.60	\$2.98	\$ 0.25
Third quarter	\$14.76	\$3.91	\$ 0.25
Second quarter	\$22.61	\$14.43	\$ 0.25
First quarter	\$24.20	\$19.41	\$ 0.25

2014

Fourth quarter	\$26.06	\$19.74	\$ 0.25
Third quarter	\$31.05	\$24.28	\$ 0.25
Second quarter	\$27.95	\$22.27	\$ 0.25
First quarter	\$25.25	\$21.45	\$ 0.25

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## Holders of Record

As of January 31, 2016, there were approximately 470 holders of record of Class A Shares. This does not include the shareholders that held shares of our Class A Shares in a nominee or “street-name” accounts through banks or broker-dealers.

## Item 6. Selected Financial Data

The following table sets forth selected historical financial data for the periods indicated. In connection with its emergence from bankruptcy, Tronox Incorporated applied fresh-start accounting under Accounting Standards Codification 852, Reorganizations as of January 31, 2011. Accordingly, the financial information of Tronox Incorporated set forth in this Form 10-K, unless otherwise expressly set forth or as the context otherwise indicates, reflects the consolidated results of operations and financial condition on a fresh-start basis for the period beginning February 1, 2011 (“Successor”), and on a historical basis for the period through January 31, 2011 (“Predecessor”).

The statement of operations data and supplemental information for the years ended December 31, 2015, 2014 and 2013 reflect the consolidated operating results of Tronox Limited. The statement of operations data and supplemental information for the year ended December 31, 2012 reflect the consolidated operating results of Tronox Incorporated prior to June 15, 2012, and, from June 15, 2012 through December 31, 2012, reflect the consolidated operating results of Tronox Limited. The statement of operations data and the supplemental information for the eleven months ended December 31, 2011 and one month ended January 31, 2011 reflect the consolidated operating results of Tronox Incorporated. The balance sheet data at December 31, 2015, 2014, 2013, and 2012 relate to Tronox Limited, and at December 31, 2011 and January 31, 2011 relate to Tronox Incorporated. This information should be read in conjunction with our Consolidated Financial Statements (including the notes thereto) and our “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

	Successor				Eleven Months Ended December 31, 2011	Predecessor One Month Ended January 31, 2011
	Year Ended December 31,					
	2015	2014	2013	2012		
	(Millions of U.S. Dollars, except share and per share data)					
Statement of Operations Data:						
Net sales	\$2,112	\$1,737	\$1,922	\$1,832	\$ 1,543	\$ 108
Gross profit	120	207	190	264	439	25
Selling, general and administrative expenses	(217 )	(192 )	(187 )	(239 )	(152 )	(5 )
Restructuring expense	(21 )	(15 )	—	—	—	—
Litigation/arbitration settlement	—	—	—	—	10	—
Provision for environmental remediation and restoration, net of reimbursements	—	—	—	—	5	—
Income (loss) from operations	(118 )	—	3	25	302	20
Interest and debt expense, net	(176 )	(133 )	(130 )	(65 )	(30 )	(3 )
Net gain (loss) on liquidation of non-operating subsidiaries	—	(35 )	24	—	—	—
Loss on extinguishment of debt	—	(8 )	(4 )	—	—	—
Gain on bargain purchase	—	—	—	1,055	—	—
Reorganization income (expense)	—	—	—	—	—	613

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Other income (expense), net	28	27	46	(7 )	(10 )	2
Income (loss) before income taxes	(266 )	(149 )	(61 )	1,008	262	632
Income tax benefit (provision)	(41 )	(268 )	(29 )	125	(20 )	(1 )
Net income (loss)	\$(307 )	\$(417 )	\$(90 )	\$1,133	\$ 242	\$ 631
Income (loss) attributable to noncontrolling interest	11	10	36	(1 )		
Net income (loss) attributable to Tronox Limited	\$(318 )	\$(427 )	\$(126 )	\$1,134		
Income (loss) per share from continuing operations <sup>(1)</sup> :						
Basic	\$(2.75 )	\$(3.74 )	\$(1.11 )	\$11.37	\$ 3.22	\$ 15.28
Diluted	\$(2.75 )	\$(3.74 )	\$(1.11 )	\$11.10	\$ 3.10	\$ 15.25
Balance Sheet Data:						
Working capital <sup>(2)</sup>	\$753	\$2,015	\$2,290	\$1,706	\$ 488	\$ 458
Total assets <sup>(3)</sup>	\$5,072	\$5,065	\$5,699	\$5,511	\$ 1,657	\$ 1,091
Total debt <sup>(3)</sup>	\$3,121	\$2,393	\$2,413	\$1,645	\$ 427	\$ 425
Total equity <sup>(3)</sup>	\$1,110	\$1,788	\$2,437	\$2,882	\$ 752	\$ (654 )
Supplemental Information:						
Depreciation, depletion and amortization expense <sup>(3)</sup>	\$297	\$295	\$333	\$211	\$ 79	\$ 4
Capital expenditures	\$191	\$187	\$165	\$166	\$ 133	\$ 6
Dividends per share	\$1.00	\$1.00	\$1.00	\$0.50	\$ —	\$ —

On June 26, 2012, the Board of Directors of Tronox Limited approved a 5-to-1 share split for holders of our Class <sup>(1)</sup> A Shares and Class B Shares. All references to number of shares and per share data in the Successor's consolidated financial statements have been adjusted to reflect the share split, unless otherwise noted. See Note 20.

<sup>(2)</sup> Working capital is defined as the excess (deficit) of current assets over current liabilities.

Reflects the effect of the Alkali Transaction on April 1, 2015 for an aggregate purchase price of \$1.65 billion in <sup>(3)</sup> cash. See Note 4 of the Consolidated Financial Statements for additional information regarding the Alkali Transaction.



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Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion should be read in conjunction with Tronox Limited's consolidated financial statements and the related notes included elsewhere in this Annual Report on Form 10-K. This discussion and other sections in this Annual Report on Form 10-K contain forward-looking statements, within the meaning of the Private Securities Litigation Reform Act of 1995, that involve risks and uncertainties, and actual results could differ materially from those discussed in the forward-looking statements as a result of numerous factors. Forward-looking statements provide current expectations of future events based on certain assumptions and include any statement that does not directly relate to any historical or current fact. Forward-looking statements also can be identified by words such as "future," "anticipates," "believes," "estimates," "expects," "intends," "plans," "predicts," "will," "would," "could," "can," "may," and similar words.

This Management's Discussion and Analysis of Financial Condition and Results of Operations contains certain financial measures, in particular the presentation of EBITDA and Adjusted EBITDA, which are not presented in accordance with accounting principles generally accepted in the United States ("U.S. GAAP"). We are presenting these non-U.S. GAAP financial measures because we believe they provide us and readers of this Form 10-K with additional insight into our operational performance relative to earlier periods and relative to our competitors. We do not intend for these non-U.S. GAAP financial measures to be a substitute for any U.S. GAAP financial information. Readers of these statements should use these non-U.S. GAAP financial measures only in conjunction with the comparable U.S. GAAP financial measures. A reconciliation of net income (loss) to EBITDA and Adjusted EBITDA is also provided herein.

Executive Overview

We are a global leader in the production and marketing of TiO<sub>2</sub> pigment and the world's largest producer of natural soda ash. We have two reportable operating segments, TiO<sub>2</sub> and Alkali.

TiO<sub>2</sub> Segment

Within our TiO<sub>2</sub> segment, we are a large global producer of titanium feedstock and a leader in global zircon production. We have operations in North America, Europe, South Africa, and the Asia-Pacific region. We operate three TiO<sub>2</sub> pigment facilities at the following locations: Hamilton, Mississippi; Botlek, the Netherlands; and Kwinana, Western Australia, representing an aggregate capacity of approximately 465,000 MT of annual TiO<sub>2</sub> production capacity. TiO<sub>2</sub> is used in a wide range of products due to its ability to impart whiteness, brightness, and opacity. TiO<sub>2</sub> pigment is used extensively in the manufacture of paint and other coatings, plastics and paper, and in a wide range of other applications, including inks, fibers, rubber, food, cosmetics, and pharmaceuticals. Moreover, it is a critical component of everyday consumer applications due to its superior ability to cover or mask other materials effectively and efficiently relative to alternative white pigments and extenders. We believe that, at present, TiO<sub>2</sub> has no effective substitute because no other white pigment has the physical properties for achieving comparable opacity and brightness or can be incorporated in a cost-effective manner. We also operate three separate mining operations: KZN Sands located in South Africa, Namakwa Sands located in South Africa and Cooljarloo Sands located in Western Australia. Titanium feedstock is used primarily to manufacture TiO<sub>2</sub> pigment, and we currently supply all of our pigment facilities' titanium feedstock needs through our own mining operations. Zircon is a mineral which is primarily used as an opacifier in ceramic glazes for tiles, plates, dishes, and industrial products. Pig iron is a metal material used in the steel and metal casting industries to create wrought iron, cast iron, and steel.

Alkali Segment

On April 1, 2015, we completed the acquisition of 100% of Alkali from FMC for an aggregate purchase price of \$1.65 billion in cash. Alkali is the world's largest producer of natural soda ash, which is used by customers in the glass, detergent, and chemicals manufacturing industries. Natural soda ash maintains a sustained structural cost advantage

globally compared to producers of synthetic soda ash. Alkali diversifies our end markets, revenue base and increases our participation in faster growing emerging market economies. Alkali operates as a separate business unit and reportable segment. We funded the Alkali Transaction through existing cash and new debt. See Note 16 of Notes to Consolidated Financial Statements for further details of the Alkali Transaction financing.

Our Alkali segment is the world's largest natural soda ash producer. We produce natural soda ash from a mineral called trona, which we mine at two facilities we own near Green River, Wyoming. Our Wyoming facilities process the trona ore into chemically pure soda ash and specialty sodium products such as sodium bicarbonate (baking soda) and sodium sesquicarbonate (S-carb® and Sesqui™). Our soda ash products are used primarily by customers in the glass, detergent, and chemicals manufacturing industries. Soda ash is essential for manufacturing flat glass, container glass, and tableware because of its property of lowering the melting point of other ingredients in a glass furnace. In recent years, demand for soda ash has been relatively flat in developed economies such as the United States, but is rising faster in markets such as East Asia and Latin America as per capita consumption rises with economic development. We sell soda ash directly to customers in the United States, Canada and Europe and to the American Natural Soda Ash Corporation ("ANSAC"), a nonprofit foreign sales association in which Alkali and two other U.S. soda ash producers are members, for resale to customers elsewhere around the world. The cost advantages of natural soda ash produced in the United States permits ANSAC to sell soda ash profitably in most parts of the world despite significant logistics costs. In addition, we use a portion of our soda ash at Green River to produce specialty sodium products such as sodium bicarbonate and sodium sesquicarbonate that have uses in food, animal feed, pharmaceutical, and medical applications.

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Segments

The reportable segments presented below represent our operating segments for which separate financial information is available and which is utilized on a regular basis by our CODM to assess performance and to allocate resources.

Prior to the Alkali Transaction, we had two operating and reportable segments, Mineral Sands and Pigment, based on the way the management team was organized and our CODM monitored performance, aligned strategies, and allocated resources. As a result of the increased interdependency between the Mineral Sands and Pigment businesses, and related organizational changes, our CODM determined that it was better to review the Mineral Sands and Pigment businesses, along with our electrolytic business, as a combined segment, TiO<sub>2</sub>, and to assess performance and allocate resources at that level. Following the Alkali Transaction, we restructured our organization to reflect two integrated businesses, TiO<sub>2</sub> and the acquired business, Alkali, as our two operating and reportable segments. The change in reportable segments for financial reporting purposes that occurred in the second quarter of 2015 has been retrospectively applied.

Segment performance is evaluated based on segment operating income (loss), which represents the results of segment operations before unallocated costs, such as general corporate expenses not identified to a specific segment, interest expense, other income (expense), and income tax provision (benefit).

Recent Developments

During 2014, we initiated a cost improvement initiative. The initiative resulted in a reduction in our workforce by approximately 135 employees and outside contractor positions. At December 31, 2014, the remaining liability was \$4 million. During 2015, we paid \$4 million of cash related to such restructuring and realized annual cost savings of approximately \$23 million.

In November 2015 we ceased production at our sodium chlorate plant in Hamilton, Mississippi resulting in a reduction in our workforce of approximately 50 employees. This action resulted in a charge, consisting primarily of employee severance costs, of \$4 million, which was recorded in "Restructuring expense" in the Consolidated Statements of Operations of which \$1 million was paid during 2015. We expect to pay the remaining \$3 million in 2016.

In line with our goal of aligning production output to market requirements, during the third quarter of 2015, we decided that the operation of our Cooljarloo North Mine in Western Australia would be suspended on December 31, 2015, resulting in a reduction in our workforce of approximately 30 employees. This action resulted in a charge, consisting primarily of employee severance costs, of \$3 million, which was recorded in "Restructuring expense" in the Consolidated Statements of Operations and paid during 2015.

In 2015, as part of our commitment to reduce operating costs and working capital, we have commenced a global restructuring of our TiO<sub>2</sub> segment which we expect to complete during the first half of 2016. A portion of this initiative involves a reduction in our global TiO<sub>2</sub> workforce by approximately 500 employees and outside contractor positions. The restructuring seeks to streamline the operations of our TiO<sub>2</sub> segment in order to create a more commercially and operationally efficient business segment. This action resulted in a charge of \$14 million, which was recorded in "Restructuring expense" in the Consolidated Statements of Operations of which \$2 million was paid during 2015. The charge consisted of employee severance costs and other associated costs in 2016. We expect to pay the remaining \$12 million in 2016.

As previously announced, we have been identifying opportunities in our TiO<sub>2</sub> segment for cost improvements, greater efficiencies, and ways to make our workplace safer. To date, our operational excellence program has focused on sustainable and continuous cost improvement achieved through a broad based engagement of our employees to identify and implement cost improvement initiatives. This program currently has over 400 active initiatives. The

operational excellence program will also achieve improved production capability through better production and maintenance systems and disciplines – this is something we expect will enable our business to grow in future years with reduced capital demand. The TiO<sub>2</sub> segment has also continued to leverage the integrated business establishing centers of excellence around several key technology areas common to our operating sites. The centers of excellence have enabled rapid identification and transfer of internal best practices through collaboration between sites with common technology platforms.

In response to market conditions we have also suspended production at one of six processing lines at our Hamilton pigment plant and one of four processing lines at our Kwinana pigment plant. Together, these processing line curtailments represent approximately 15% of our total pigment production. We have also suspended operation of two of our four furnaces in South Africa producing slag and pig iron which has reduced our slag and pig iron production capacity by approximately 50%. Additionally, we reduced the feed to our kiln in Chandala, which has reduced our synthetic rutile production by approximately 30%.

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As a result of all these TiO<sub>2</sub> initiatives, 2015 delivered an annual cash cost reduction of \$90 million after cost to achieve versus our target of \$60 million. We expect these reductions to be sustained in 2016 and to achieve further improvements in order to generate more than \$600 million of aggregate cash in 2015 through 2017.

## Business Environment

The following discussion includes trends and factors that may affect future operating results:

We continued to leverage on our vertical integration during 2015 to secure our share with our customers during 2015. Our 2015 pigment sales volume increased approximately 1% year over year although global demand was not strong. Sales were higher in Europe, partially offset by lower growth in the Americas and Asia. Fourth quarter sales were seasonally robust and played a significant role in our plan to reduce working capital in 2015. Inventory in our finished pigment products was below normal seasonal levels at year end. The prolonged downturn in the market has resulted in announced plant closures and reduced productions levels across the industry, which also had a positive impact on reducing finished pigment inventories in 2015.

Demand for zircon was fairly steady during 2015 although there was some slowdown in China following the currency devaluation. During 2015, the industry was carrying more inventory than the market required and pricing remained competitive. Pricing on premium grade material held up reasonably well but did come under increasing pressure as producers were competing to secure market share. The trend towards increased usage and demand for lower grade products continued as end users look to reduce costs.

Demand for high grade feedstock was lower for 2015 largely due to reduced production levels across the pigment industry. Pricing for chloride process slag and natural rutile was down year over year and remained under pressure at year end. Inventories were modestly above seasonal norms at year end.

Our KZN Sands operations consist of the Fairbreeze mine (which we expect will enter into commercial production in early 2016), a concentration plant, a mineral separation plant, and a smelter complex with two furnaces. Construction on the Fairbreeze mine continued during 2015. The Fairbreeze mine will serve as a replacement source of feedstock production for our Hillendale mine, which ceased mining operations in December 2013. The Fairbreeze mine is estimated to have a life expectancy of approximately 15 years.

Soda ash industry fundamentals remain strong with global demand expected to grow at about 3% compound annual growth rate ("CAGR") through 2024. Emerging markets continue to drive much of this growth with per capita consumption of soda ash in emerging markets less than 50% of U.S. levels of 16 kg per person per year. As a result, we expect to see continued growth in demand for soda ash consumption in these regions going forward, with demand growth expected to continue to outpace capacity additions. The U.S. market for soda ash is supplied by five domestic competitors with balanced supply and demand fundamentals. These market conditions have historically resulted in prices rising on average over the past ten years, a trend projected to persist over the medium-long term despite slow demand growth. Alkali sales volumes declined sequentially during 2015 primarily due to planned and unplanned outages. Domestic and international sales prices were sequentially higher due to customer and country mix. We anticipate that the pricing environment will remain stable through the rest of the year, subject to the risk that China will further increase exports and put pressure on prices of soda ash sold by ANSAC in key Asian markets. We believe the soda ash market, excluding China, continues to be balanced to tight from a supply-demand perspective. We expect that the competitive cost position of natural soda ash relative to the higher cost synthetic process will cause demand for natural soda ash to continue to exceed available supply.

We continue to be uniquely tax-advantaged by favorable tax loss carry forwards and other favorable tax positions. We believe these tax-advantaged factors create opportunities for our operations to benefit for years to come.



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## Consolidated Results of Operations

Year Ended December 31, 2015 Compared to the Year Ended December 31, 2014

	Year Ended December 31,		
	2015	2014	Variance
	(Millions of U.S. dollars)		
Net sales	\$2,112	\$1,737	\$ 375
Cost of goods sold	1,992	1,530	462
Gross profit	120	207	(87 )
Selling, general and administrative expenses	(217 )	(192 )	(25 )
Restructuring expenses	(21 )	(15 )	(6 )
Income (loss) from operations	(118 )	—	(118 )
Interest and debt expense, net	(176 )	(133 )	(43 )
Net loss on liquidation of non-operating subsidiaries	—	(35 )	35
Loss on extinguishment of debt	—	(8 )	8
Other income, net	28	27	1
Loss before income taxes	(266 )	(149 )	(117 )
Income tax provision	(41 )	(268 )	227
Net loss	\$(307 )	\$(417 )	\$ 110

Net sales for 2015 increased 22% compared to 2014 due to the Alkali Transaction (accounting for \$602 million), higher volumes of \$26 million in our TiO<sub>2</sub> segment, offset by the impact of lower selling prices and product mix of \$205 million, and unfavorable changes in foreign currency translation of \$48 million. Selling prices for our TiO<sub>2</sub> business were lower across most product lines, with the exception of the Electrolytic business.

During 2015, cost of goods sold increased 30% compared to 2014, which reflects the Alkali Transaction (accounting for \$505 million), a net increase in lower of cost or market reserves of \$51 million, higher production costs of \$40 million, and higher volumes of \$36 million, offset by the impact of favorable foreign currency translation of \$170 million.

Our gross profit during 2015 was 6% of net sales compared to 12% of net sales during 2014. The decrease principally reflects the impact of lower selling prices in our TiO<sub>2</sub> segment, higher production costs, and an increase in the lower of cost or market reserves, partially offset by the impact of favorable currency translation.

Selling, general and administrative expenses increased 13% during 2015 compared to 2014. The net increase in 2015 was mainly due to spending for the Alkali Transaction and higher professional fees, partially offset by a partial reversal of a stamp tax accrual in Australia (related to the 2012 acquisition of the Exxaro Sands business).

In November 2015, we ceased production at our sodium chlorate plant in Hamilton, Mississippi which resulted in a charge consisting primarily of employee severance costs, of \$4 million which was recorded in "Restructuring expense" in the Consolidated Statements of Operations. In line with our goal of aligning production output to market requirements, we suspended the operation of our Cooljarloo North Mine in Western Australia on December 31, 2015, which resulted in a charge, consisting primarily of employee severance costs, of \$3 million which was recorded in "Restructuring expense" in the Consolidated Statements of Operations during 2015. As part of our commitment to

reduce operating costs and working capital, we commenced a global restructuring of our TiO<sub>2</sub> segment which we expect to complete during the first half of 2016. A charge, consisting primarily of employee severance costs of \$14 million, was recorded in “Restructuring expense” in Consolidated Statements of Operations during 2015.

During 2014, we initiated a cost improvement initiative, for which we recorded a \$15 million charge related to employee severance costs, as well as outplacement services and other associated costs and expenses which was recorded in “Restructuring Expense” in the Consolidated Statements of Operations during 2014. See Note 3 of Notes to Consolidated Financial Statements for additional information.

Interest and debt expense during 2015 is primarily comprised of interest expense on our \$1.5 billion senior secured term loan (the “Term Loan”) of \$63 million, interest expense on our \$900 million aggregate principal amounts of senior notes at par value (the “Senior Notes due 2020”) of \$57 million, interest expense on our \$600 million aggregate principal amount of 7.5% Senior Notes due 2022 (the “Senior Notes due 2022”) of \$35 million and fees on the Bridge Facility of \$8 million. Interest on the Term Loan and the Senior Notes due 2020 was consistent with that of 2014.



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During 2014, we completed the liquidation of a non-operating subsidiary, Tronox Pigments International GmbH, for which we recognized a noncash loss from the realization of cumulative translation adjustments of \$35 million.

During 2014, we recognized an \$8 million loss on the early extinguishment of debt resulting from the write-off of deferred debt issuance costs and discount on debt associated with an amendment to the Term Loan. See Note 16 of Notes to Consolidated Financial Statements.

Other income, net during 2015 primarily consisted of a net realized and unrealized foreign currency gain of \$21 million and interest income of \$7 million compared to net realized and unrealized foreign currency gains of \$5 million, interest income of \$13 million and a curtailment gain of \$9 million related to our U.S. postretirement healthcare plan and our Netherlands pension plan during 2014.

The effective tax rate for 2014 differs from the Australian statutory rate of 30%. Historically, the differences were primarily due to valuation allowances, income in foreign jurisdictions taxed at rates lower than 30%, and withholding tax accruals on interest income. Additionally, the effective tax rate for 2014 is impacted by \$58 million and \$255 million, respectively, due to increases to full valuation allowances in The Netherlands and Australia. The Anadarko Litigation settlement of \$5.2 billion, including approximately \$65 million of accrued interest, provided us with additional deferred tax assets of approximately \$2.0 billion, which were offset by full valuation allowances in the United States. As a result of an ownership change on June 15, 2012, our ability to use federal losses was not impacted; however, due to state apportionment impacts and carryforward periods, our state losses were limited. This limitation resulted in the loss of \$23 million of deferred tax assets but was fully offset by a reduction to the valuation allowance.

The statutory tax rates on income earned in South Africa (28% for limited liability companies), The Netherlands (25% for corporations), and the United Kingdom (20.25% for corporations and limited liability companies and not applicable for certain limited liability partners) are lower than the Australian statutory rate of 30%. The statutory tax rate, applied against losses in the United States (35% for corporations), is higher than the Australian statutory rate of 30%. Also, we continue to maintain full valuation allowances Australia, The Netherlands, and in the United States. Our current year tax expense is primarily related to withholding tax accruals.

#### Operations Review of Segment Revenue and Profit

U.S. GAAP has standards for reporting information about operating segments. Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated by the CODM in determining how to allocate resources and in assessing performance.

We currently operate our business in two operating and reportable segments, TiO<sub>2</sub> and Alkali. We evaluate reportable segment performance based on segment operating profit (loss), which represents the results of segment operations before unallocated costs, such as general corporate expenses not identified to a specific segment, interest expense, other income (expense), and income tax expense (benefit). See Note 25 of Notes to Consolidated Financial Statements for additional information.

#### Net Sales

Net sales by segment were as follows:

	Year Ended December 31,		
	2015	2014	Variance
	(Millions of U.S. dollars)		
TiO <sub>2</sub> segment	\$ 1,510	\$ 1,737	\$ (227 )

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Alkali segment	602	—	602
Net Sales	\$2,112	\$1,737	\$ 375

TiO<sub>2</sub> segment

TiO<sub>2</sub> segment net sales during 2015 decreased 13% compared to 2014 primarily due to the impact of lower selling prices and product mix of \$205 million and unfavorable changes in foreign currency translation of \$48 million, partially offset by higher volumes of \$26 million. Looking at 2015 compared to 2014, selling prices were lower for both the mineral sands and pigment products (in all regions). Volumes were higher predominantly for the external CP Slag and pigment products in Europe. Currency impacts are primarily related to the weakening of the Euro versus the U.S. Dollar.

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## Alkali segment

The Alkali business (acquired on April 1, 2015) contributed \$602 million of net sales during 2015.

## Income (loss) from Operations

Income (loss) from operations by segments was as follows:

	Year Ended December		
	31,		
	2015	2014	Variance
	(Millions of U.S. dollars)		
TiO <sub>2</sub> segment	\$(123)	\$78	\$ (201 )
Alkali segment	69	—	69
Corporate	(64 )	(78 )	14
Income (loss) from operations	(118)	—	\$ (118 )
Interest and debt expense	(176)	(133)	
Net loss on liquidation of non-operating subsidiaries	—	(35 )	
Loss on extinguishment of debt	—	(8 )	
Other income, net	28	27	
Loss before income taxes	(266)	(149)	

TiO<sub>2</sub> segment

During 2015, income from operations decreased \$201 million compared to 2014 primarily due to lower selling prices of \$205 million, higher production and other costs of \$49 million, (cash production cost reductions of \$99 million were offset by cost movements principally related to higher sales volume, product mix, and unabsorbed fixed costs) a net increase in lower of cost or market reserves of \$51 million, restructuring costs of \$8 million, and a net decrease of \$10 million due to the impact of higher volume on cost of goods sold compared to sales, partially offset by favorable foreign currency translation of \$122 million.

The net increase in lower of cost or market reserves for 2015 was primarily due to a \$41 million charge associated with the sale of ilmenite to a non-TiO<sub>2</sub> producer that we expect will generate approximately \$31 million in cash over the course of the next 13 months (subject to specified extensions) at a contractual price that is below the carrying cost assigned to such material as part of our acquisition of Exxaro's mineral sands business in June 2012. Lower of cost or market charges in 2015 were also related to pigment and pig iron principally resulting from lower selling prices for those products.

The favorable currency impacts are primarily related to the weakening of the South African Rand versus the U.S. Dollar.

## Alkali segment

During 2015, income from operations included a charge of \$9 million for the amortization of the inventory fair value step-up.

## Corporate

Corporate Selling, general and administrative expenses during 2015 increased compared to 2014 primarily due to spending for the Alkali Transaction of \$29 million and increased professional fees, partially offset by a partial reversal of a stamp tax accrual in Australia (related to the 2012 acquisition of Exxaro mineral sands business).

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## Consolidated Results of Operations

Year Ended December 31, 2014 Compared to the Year Ended December 31, 2013

	Year Ended December 31,		
	2014	2013	Variance
	(Millions of U.S. dollars)		
Net sales	\$1,737	\$1,922	\$ (185 )
Cost of goods sold	1,530	1,732	(202 )
Gross profit	207	190	17
Selling, general and administrative expenses	(192 )	(187 )	(5 )
Restructuring expenses	(15 )	—	(15 )
Income (loss) from operations	—	3	(3 )
Interest and debt expense, net	(133 )	(130 )	(3 )
Net loss on liquidation of non-operating subsidiaries	(35 )	24	(59 )
Loss on extinguishment of debt	(8 )	(4 )	(4 )
Other income, net	27	46	(19 )
Loss before income taxes	(149 )	(61 )	(88 )
Income tax provision	(268 )	(29 )	(239 )
Net loss	\$(417 )	\$(90 )	\$ (327 )

Net sales for 2014 decreased 10% compared to 2013 due to the impact of lower selling prices and product mix of \$124 million, as well as lower volumes of \$64 million, offset by favorable changes in foreign currency translation of \$3 million. Selling prices were lower for both our pigment and mineral sands products, while lower volumes of our mineral sands products were partially offset by higher volumes of our pigment products.

During 2014, cost of goods sold decreased 12% compared to 2013. The decrease principally reflects the impact of lower volumes of \$77 million, lower production costs of \$69 million and favorable foreign currency translation of \$79 million, offset by a net increase in lower of cost or market reserves of \$23 million.

Our gross profit during 2014 was 12% of net sales compared to 10% of net sales in 2013. The increase principally reflects the impact of favorable currency translation and lower production costs, offset by lower selling prices.

Selling, general and administrative expenses increased 3% during 2014 compared 2013. The net increase in 2014 was mainly due to increased spending for professional services and employee related costs.

During 2014, we commenced a cost reduction initiative, for which we recorded a \$15 million charge related to employee severance costs, as well as outplacement services and other associated costs and expenses. See Note 3 of Notes to Consolidated Financial Statements.

Interest and debt expense in 2014 is primarily comprised of interest expense on the Term Loan of \$63 million and \$57 million on the Senior Notes due 2020 compared to \$60 million on the Term Loan and a term facility and \$57 million on the Senior Notes due 2020. The slight decrease in interest expense on the Term loan from 2013 is due to a lower rate from refinancing in April 2014.

During 2014, we completed the liquidation of a non-operating subsidiary, Tronox Pigments International GmbH, for which we recognized a noncash loss from the realization of cumulative translation adjustments of \$35 million. During 2013, we completed the liquidation of two non-operating subsidiaries, Tronox (Luxembourg) Holdings S.a.r.l. and Tronox Luxembourg S.a.r.l., for which we recognized a net noncash gain from the realization of cumulative translation adjustments of \$24 million. See Note 5 of Notes to Consolidated Financial Statements.

During 2014, we recognized an \$8 million loss on the early extinguishment of debt resulting from the write-off of deferred debt issuance costs and discount on debt associated with an amendment to the Term Loan. During 2013, we recognized a \$4 million loss on the early extinguishment of debt related to the allocated portion of the unamortized original issue discount and debt issuance costs associated with a term facility. See Note 16 of Notes to Consolidated Financial Statements.

Other income (expense), net during 2014 primarily consisted of net realized and unrealized foreign currency gains of \$5 million, interest income of \$13 million and a curtailment gain of \$9 million related to our U.S. postretirement healthcare plan and our Netherlands pension plan compared to a net realized and unrealized foreign currency gain of \$39 million, interest income of \$8 million and other expenses of \$1 million during 2013.

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We continue to be uniquely tax-advantaged by favorable tax loss carry forwards, the settlement reached with Anadarko for \$5.2 billion, including approximately \$65 million of accrued interest, and approved by the Bankruptcy Court, and other favorable tax positions.

The effective tax rate for 2014 and 2013 differs from the Australian statutory rate of 30%. Historically, the differences were primarily due to valuation allowances, income in foreign jurisdictions taxed at rates lower than 30%, and withholding tax accruals on interest income. Additionally, the effective tax rate for 2014 is impacted by \$58 million and \$255 million, respectively, due to increases to full valuation allowances in The Netherlands and Australia. The Anadarko Litigation settlement of \$5.2 billion, including approximately \$65 million of accrued interest, provided us with additional deferred tax assets of \$2.0 billion, which were offset by full valuation allowances in the United States. As a result of an ownership change on June 15, 2012, our ability to use federal losses was not impacted; however, due to state apportionment impacts and carryforward periods, our state losses were limited. This limitation resulted in the loss of \$23 million of deferred tax assets but was fully offset by a reduction to the valuation allowance.

The statutory tax rates on income earned in South Africa (28% for limited liability companies), The Netherlands (25% for corporations), and the United Kingdom (20.25% for corporations and limited liability companies and not applicable for certain limited liability partners) are lower than the Australian statutory rate of 30%. The statutory tax rate, applied against losses in the United States (35% for corporations), is higher than the Australian statutory rate of 30%. Also, we continue to maintain full valuation allowances in Australia, The Netherlands, and the United States. Our current year tax expense is primarily related to withholding tax accruals.

Operations Review of Segment Revenue and Profit

U.S. GAAP has standards for reporting information about operating segments. Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated by the CODM in determining how to allocate resources and in assessing performance.

We currently operate our business in two operating and reportable segments, TiO<sub>2</sub> and Alkali. We evaluate reportable segment performance based on segment operating profit (loss), which represents the results of segment operations before unallocated costs, such as general corporate expenses not identified to a specific segment, interest expense, other income (expense), and income tax expense (benefit). See Note 25 of Notes to Consolidated Financial Statements for additional information.

Prior to the Alkali Transaction, we had two operating and reportable segments, Mineral Sands and Pigment, based on the way the management team was organized and our CODM monitored performance, aligned strategies, and allocated resources. As a result of the increased interdependency between the Mineral Sands and Pigment businesses, and related organizational changes, our CODM determined that it was better to review the Mineral Sands and Pigment businesses, along with our electrolytic business, as a combined one, TiO<sub>2</sub>, and to assess performance and allocate resources at that level. Following the Alkali Transaction, we restructured our organization to reflect two integrated businesses, TiO<sub>2</sub> and Alkali, as our two operating and reportable segments. The change in segments has been retrospectively applied to all prior periods presented.

Net Sales

Net sales by segment were as follows:

Year Ended December 31,		
2014	2013	Variance

(Millions of U.S. dollars)

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TiO<sub>2</sub> segment \$1,737 \$1,922 \$ (185 )

Net Sales \$1,737 \$1,922 \$ (185 )

TiO<sub>2</sub> Segment

TiO<sub>2</sub> segment net sales during 2014 decreased 10% compared to 2013 primarily due to the impact of lower selling prices and product mix of \$124 million, lower volumes of \$64 million, partially offset by favorable changes in foreign currency translation of \$3 million. The overall sales decrease was driven by the Mineral Sands business. Mineral Sands selling prices declined for our titanium feedstock. Mineral Sands sales volumes were lower during 2014 compared to 2013, principally due to decreased shipments of titanium feedstock and zircon to third parties, offset by increased shipments of pig iron. Both sales volumes and selling prices for titanium feedstock declined due to excess supply in the market. Primarily in the second half of 2014, as selling prices for high grade chloride feedstock produced inadequate returns, we sold chloride processed titanium slag and natural rutile as feedstock solely to our own Pigment business.



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## Income (loss) from Operations

Income (loss) from operations by segments was as follows:

	Year Ended December		
	2014	2013	Variance
	(Millions of U.S. dollars)		
TiO <sub>2</sub> segment	\$78	\$70	\$ 8
Corporate	(78 )	(67 )	(11 )
Income (loss) from operations	—	3	\$ (3 )
Interest and debt expense	(133)	(130)	
Net loss on liquidation of non-operating subsidiaries	(35 )	24	
Loss on extinguishment of debt	(8 )	(4 )	
Other income, net	27	46	
Loss before income taxes	(149)	(61 )	

TiO<sub>2</sub> Segment

During 2014, we had income from operations of \$78 million compared to \$70 million during 2013. The change was primarily attributable to a favorable foreign currency translation of \$82 million, lower costs (mostly production) of \$72 million, and the net increase of \$13 million due to the impact of lower volume on cost of goods sold compared to sales, partially offset by a \$124 million decrease in selling prices, restructuring costs in 2014 of \$12 million, and a net increase in lower of cost or market reserves of \$23 million.

## Corporate

During 2014, Corporate results decreased by \$11 million compared to 2013 principally related to higher corporate expenses. Corporate selling, general and administrative expenses increased by \$8 million principally due to higher spending for employee costs and professional services. Additionally, Corporate incurred \$3 million of restructuring costs in 2014.

## Liquidity and Capital Resources

Our total liquidity at December 31, 2015 was \$530 million, which was comprised of \$217 million available under the \$500 million UBS Revolver (as defined below), \$84 million available under the ABSA Revolver (as defined below), and \$229 million in cash and cash equivalents.

Historically, we have funded our operations and met our commitments through cash generated by operations. During 2012, we issued the Senior Notes due 2020 at par value. Additionally, during 2013, we obtained a \$1.5 billion Term Loan, which matures on March 19, 2020.

In addition to these cash resources, we have a \$500 million global senior secured asset-based syndicated revolving credit facility with UBS AG (the "UBS Revolver") with an available amount to borrow of \$217 million at December 31, 2015, and a R1.3 billion (approximately \$84 million at December 31, 2015) revolving credit facility with ABSA Bank Limited ("ABSA") acting through its ABSA Capital Division (the "ABSA Revolver").

On April 1, 2015, in connection with the Alkali Transaction, we entered into an amended and restated asset-based revolving syndicated facility agreement with UBS, which provides for up to \$500 million of revolving credit lines, with an \$85 million sublimit for letters of credit. Availability of revolving credit loans and letters of credit are subject to a borrowing base. Borrowings bear interest at our option, at either a base rate or an adjusted London Interbank Offered Rate (“LIBOR”) and borrowings in Euros bear interest at an adjusted LIBOR, in each case plus an applicable margin. The base rate is defined as the greatest of (a) the Administrative Agent’s prime rate, (b) the Federal funds effective rate plus 0.50% and (c) the adjusted LIBOR for a one-month period plus 1.00%. The applicable margin ranges from 0.50% to 1.00% for borrowings at the base rate and from 1.50% to 2.00% for borrowings at the adjusted LIBOR, in each case, based on the average daily borrowing availability. On April 1, 2015, we borrowed \$150 million against the UBS Revolver.

On March 6, 2015, Evolution Escrow Issuer LLC (“Evolution”), a special purpose limited liability company organized under the laws of Delaware, was formed. Evolution was wholly owned by Stichting Evolution Escrow, a Dutch foundation not affiliated with the Company. On March 19, 2015, Evolution closed an offering of \$600 million aggregate principal amount of its 7.50% Senior Notes due 2022. Evolution was initially a wholly owned subsidiary of Stichting Evolution Escrow, a Dutch foundation that is not an affiliate of Tronox Limited. The Senior Notes due 2022 were offered and sold by Evolution in reliance on an exemption pursuant to Rule 144A and Regulation S under the Securities Act. The Senior Notes due 2022 have not been registered under the Securities Act, and may not be offered or sold in the United States absent registration or an applicable exemption from registration requirements. The Senior Notes due 2022 were issued under an Indenture, dated as of March 19, 2015 (the “Indenture”), between Evolution and Wilmington Trust, National Association (the “Trustee”). The Indenture and the Senior Notes due 2022 provide, among other things, that the Senior Notes due 2022 are senior unsecured obligations of Tronox Finance LLC (“Tronox Finance”). Interest is payable on the Senior Notes due 2022 on March 15 and September 15 of each year beginning on September 15, 2015 until their maturity date of March 15, 2022. On April 1, 2015, in connection with the Alkali Transaction, Evolution merged with and into Tronox Finance, and Tronox Finance assumed the obligations of Evolution under the Indenture and the Senior Notes due 2022, and the proceeds from the offering of the Senior Notes due 2022 were released to us. We and certain of our subsidiaries entered into a supplemental indenture, by and among us, Tronox Finance, the guarantors party thereto, and the Trustee, pursuant to which we and such subsidiaries became guarantors of the Senior Notes due 2022 under the Indenture.

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At December 31, 2015, we had outstanding letters of credit, bank guarantees, and performance bonds of \$65 million, of which \$41 million were letters of credit issued under the UBS Revolver, \$16 million were bank guarantees issued by ABSA, and \$4 million each were bank guarantees issued by Standard Bank and performance bonds issued by Westpac Banking Corporation.

In the next twelve months, we expect that our operations and available borrowings under our revolving credit agreements will provide sufficient cash to fund our operating expenses, capital expenditures, interest payments, debt repayments, and dividends. Working capital (calculated as current assets less current liabilities) was \$753 million at December 31, 2015 compared to \$2.0 billion at December 31, 2014, a decrease of \$1.3 billion, which is primarily due to cash paid for the Alkali Transaction of \$1.65 billion, dividends paid of \$117 million and capital expenditures of \$191 million, partially offset by cash received upon the issuance of the Senior Notes due 2022 of \$600 million, cash received from the drawdown of the UBS Revolver of \$150 million and cash provided by operations of \$216 million.

Principal factors that could affect the availability of our internally-generated funds include (i) the deterioration of our revenues in either of our business segments; (ii) an increase in our expenses; or (iii) changes in our working capital requirements.

Principal factors that could affect our ability to obtain cash from external sources include (i) debt covenants that limit our total borrowing capacity; (ii) increasing interest rates applicable to our floating rate debt; (iii) increasing demands from third parties for financial assurance or credit enhancement; (iv) credit rating downgrades, which could limit our access to additional debt; (v) a decrease in the market price of our common stock and debt obligations; or (vi) volatility in public debt and equity markets.

As of December 31, 2015, our credit rating with Standard & Poor's is BB- negative outlook, and our credit rating with Moody's is B2 – negative outlook. At December 31, 2015, we are in compliance with all our financial covenants, have sufficient borrowings available, and have no significant principal payments on debt due until 2020.

## Cash and Cash Equivalents

We consider all investments with original maturities of three months or less to be cash equivalents. As of December 31, 2015, our cash and cash equivalents were primarily invested in money market funds. We maintain cash and cash equivalents in bank deposit and money market accounts that may exceed federally insured limits. The financial institutions where our cash and cash equivalents are held are generally highly rated and geographically dispersed, and we have a policy to limit the amount of credit exposure with any one institution. We have not experienced any losses in such accounts and believe we are not exposed to significant credit risk.

The use of our cash includes servicing our interest and debt repayment obligations, making pension contributions and making quarterly dividend payments.

## Repatriation of Cash

At December 31, 2015, we held \$234 million in cash and cash equivalents and restricted cash in these respective jurisdictions: \$23 million in Europe, \$98 million in Australia, \$40 million in South Africa, and \$73 million in the United States. Our credit facilities limit transfers of funds from subsidiaries in the United States to certain foreign subsidiaries.

Tronox Limited has foreign subsidiaries with positive undistributed earnings at December 31, 2015. We have made no provision for deferred taxes related to these undistributed earnings because they are considered to be indefinitely reinvested in the foreign jurisdictions.

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Cash Dividends on Class A and Class B Shares

During 2015, we declared and paid quarterly dividends to holders of our Class A ordinary shares (“Class A Shares”) and Class B ordinary shares (“Class B Shares”) as follows:

	Q1 2015	Q2 2015	Q3 2015	Q4 2015
Dividend per share	\$0.25	\$0.25	\$0.25	\$0.25
Total dividend	\$29	\$30	\$30	\$29
Record date (close of business)	March 9	May 18	August 19	November 16

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On February 23, 2016, the Board of Directors declared a quarterly dividend of \$0.25 per share to holders of our Class A Shares and Class B Shares at the close of business on March 4, 2016, totaling \$29 million, which will be paid on or before March 17, 2016.

## Debt Obligations

At December 31, 2015 and 2014, our net debt (the excess of our debt over cash and cash equivalents) was \$2.89 billion and \$1.1 billion, respectively.

Short-term debt consisted of the following:

	December 31, 2015	December 31, 2014
	(Millions of U.S. dollars)	
UBS Revolver	\$ 150	\$ —
Short-term debt <sup>(1)</sup>	\$ 150	\$ —

(1) Average effective interest rate of 3.5% during 2015.

Long-term debt, net of an unamortized discount, consisted of the following:

	Original Principal	Annual Interest Rate	Maturity Date	December 31, 2015	December 31, 2014
	(Millions of U.S. dollars)				
Term Loan, net of unamortized discount (1)	\$ 1,500	Variable	3/19/2020	\$ 1,454	\$ 1,468
Senior Notes due 2020	\$ 900	6.375	% 8/15/2020	900	900
Senior Notes due 2022	\$ 600	7.50	% 3/15/2022	600	—
Co-generation Unit Financing Arrangement	\$ 16	6.50	% 2/1/2016	1	3
Lease financing				16	22
Total borrowings				2,971	2,393
Less: Long-term debt due within one year				(16 )	(18 )
Long-term debt				\$ 2,955	\$ 2,375

(1) Average effective interest rate of 4.7% and 4.6% during 2015 and 2014, respectively.

At December 31, 2015, we had financial covenants in the UBS Revolver, the ABSA Revolver and the Term Loan; however, only the ABSA Revolver had a financial maintenance covenant that applies to local operations and only when the ABSA Revolver is drawn upon. The Term Loan and the UBS Revolver are subject to an intercreditor agreement pursuant to which the lenders' respective rights and interests in the security are set forth. We were in compliance with all our financial covenants as of and for the year ended December 31, 2015.

Cash Flows

Years Ended December 31, 2015 and 2014

The following table presents cash flow for the periods indicated:

	Year Ended December 31,	
	2015	2014
	(Millions of U.S. dollars)	
Net cash provided by operating activities	\$216	\$141
Net cash used in investing activities	(1,840)	(187 )
Net cash provided by (used in) financing activities	603	(132 )
Effect of exchange rate changes on cash	(26 )	(21 )
Net decrease in cash and cash equivalents	\$(1,047)	\$(199 )
Cash and cash equivalents — end of year	\$229	\$1,276

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Cash Flows provided by Operating Activities — During 2015, we had cash provided by operating activities of \$216 million compared to cash provided by operating activities of \$141 million during 2014. The increase in cash provided was primarily attributable to the reduction in inventory, partially offset by lower cash earnings and a decrease in accounts payable and accrued liabilities.

Cash Flows used in Investing Activities — The use of cash in 2015 is primarily attributable to cash used in the acquisition of Alkali of \$1,650 million and capital expenditure purchases. Capital expenditures during 2015 and 2014 were \$191 million and \$187 million, respectively, including Fairbreeze.

Cash Flows provided by Financing Activities — Net cash provided by financing activities during 2015 was primarily attributable to cash received from the issuance of the Senior Notes due 2022 of \$600 million and cash received on the drawdown of the UBS Revolver of \$150 million, partially offset by dividends paid of \$117 million, debt issuance costs paid of \$15 million and principal repayments on long-term debt of \$18 million. This compares to net cash used in financing activities during 2014 of \$132 million, which was primarily attributable to dividends paid of \$116 million and \$20 million of principal repayments on long-term debt.

Years Ended December 31, 2014 and 2013

The following table presents cash flow for the periods indicated:

	Year Ended December 31, 2014 2013 (Millions of U.S. dollars)	
Net cash provided by operating activities	\$141	\$330
Net cash used in investing activities	(187 )	(164 )
Net cash provided by (used in) financing activities	(132 )	614
Effect of exchange rate changes on cash	(21 )	(18 )
Net decrease in cash and cash equivalents	\$(199 )	\$762
Cash and cash equivalents — end of year	\$1,276	\$1,475

Cash Flows from Operating Activities — Cash provided by operating activities decreased \$189 million in 2014 compared to 2013. The decrease was primarily attributable to a net increase in inventory of \$101 million and a contribution to employee pension and postretirement plans of \$18 million.

Cash Flows from Investing Activities — The use of funds in both years is primarily attributable to capital expenditure purchases. Capital expenditures during 2014 and 2013 were \$187 million and \$164 million, respectively.

Cash Flows from Financing Activities — Net cash used in financing activities during 2014 was primarily attributable to dividends paid of \$116 million and \$20 million of principal repayments on long-term debt. Net cash provided by financing activities during 2013 was primarily attributable to cash proceeds from borrowings, slightly offset by cash used in the repayment of debt, dividends paid, and payment of debt issuance costs. During 2013, we paid dividends of \$115 million. Additionally, we refinanced our Senior Secure Term Facility with the Term Loan resulting in cash inflows of \$945 million, which was offset by \$189 million of principal repayments of debt and debt issuance costs of \$29 million.





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## Contractual Obligations

The following table sets forth information relating to our contractual obligations as of December 31, 2015:

	Contractual Obligation				
	Payments Due by Period (3)(4)				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
	(Millions of U.S. dollars)				
Long-term debt and lease financing (including interest) <sup>(1)</sup>	\$3,969	\$337	\$371	\$2,582	\$ 679
Purchase obligations <sup>(2)</sup>	717	201	159	183	174
Operating leases	180	56	31	59	34
Asset retirement obligations	81	4	5	6	66
<b>Total</b>	<b>\$4,947</b>	<b>\$598</b>	<b>\$566</b>	<b>\$2,830</b>	<b>\$ 953</b>

<sup>(1)</sup> We calculated the Term Loan interest at a base rate of 1% plus a margin of 3.5%. See Note 16 of Notes to our Consolidated Financial Statements.

Includes obligations to purchase requirements of process chemicals, supplies, utilities and services. We have various purchase commitments for materials, supplies, and services entered into in the ordinary course of business.

<sup>(2)</sup> Included in the purchase commitments table above are contracts which require minimum volume purchases that extend beyond one year or are renewable annually and have been renewed for 2016. Certain contracts allow for changes in minimum required purchase volumes in the event of a temporary or permanent shutdown of a facility. We believe that all of our purchase obligations will be utilized in our normal operations.

<sup>(3)</sup> The table above excludes contingent obligations, as well as any possible payments for uncertain tax positions given the inability to estimate the possible amounts and timing of any such payments.

<sup>(4)</sup> The table above excludes commitments pertaining to our pension and other postretirement obligations.

## Non-U.S. GAAP Financial Measures

EBITDA and Adjusted EBITDA, which are used by management to measure performance, are not presented in accordance with U.S. GAAP. Management believes that EBITDA is useful to investors, as it is commonly used in the industry as a means of evaluating operating performance. We do not intend for these non-U.S GAAP financial measures to be a substitute for any U.S. GAAP financial information. Readers of these statements should use these non-U.S. GAAP financial measures only in conjunction with the comparable U.S. GAAP financial measures. Since other companies may calculate EBITDA and Adjusted EBITDA differently than we do, EBITDA and Adjusted EBITDA, as presented herein, may not be comparable to similarly titled measures reported by other companies.

Management believes these non-U.S. GAAP financial measures:

- Reflect our ongoing business in a manner that allows for meaningful period-to-period comparison and analysis of trends in our business, as they exclude income and expense that are not reflective of ongoing operating results;

- Provide useful information in understanding and evaluating our operating results and comparing financial results across periods;

-

Provide a normalized view of our operating performance by excluding items that are either noncash or infrequently occurring in nature;

• Assist investors in assessing our compliance with financial covenants under our debt instruments; and

Adjusted EBITDA is one of the primary measures management uses for planning and budgeting processes, and to monitor and evaluate financial and operating results. In addition, Adjusted EBITDA is a factor in evaluating management's performance when determining incentive compensation.

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The following table reconciles net loss to EBITDA and Adjusted EBITDA for the periods presented:

	Year Ended December 31,		
	2015	2014	2013
Net loss	\$(307)	\$(417)	\$(90)
Interest and debt expense, net	176	133	130
Interest income	(7)	(13)	(8)
Income tax provision	41	268	29
Depreciation, depletion and amortization expense	294	295	333
<b>EBITDA</b>	<b>197</b>	<b>266</b>	<b>394</b>
Amortization of inventory step-up from purchase accounting	9	—	—
Adjustment of transfer tax due to 2012 acquisition	(11)	—	—
Alkali Transaction costs (a)	29	—	—
Share-based compensation (see Note 22)	22	22	17
Restructuring expense (see Note 3)	21	15	—
Net (gain) loss on liquidation of non-operating subsidiaries (see Note 5)	—	35	(24)
Loss on extinguishment of debt (see Note 16)	—	8	4
Pension and postretirement benefit curtailment gains (see Note 23)	—	(9)	—
Amortization of inventory step-up and unfavorable ore sales contracts liability (b)	—	—	(32)
Foreign currency remeasurement	(21)	(4)	(20)
Other items (c)	26	20	23
<b>Adjusted EBITDA</b>	<b>\$272</b>	<b>\$353</b>	<b>\$362</b>

(a) During 2015, transaction costs consist of costs associated with the acquisition of the Alkali business, including banking, legal and professional fees.

(b) In connection with the Exxaro Transaction, we acquired sales contracts at unfavorable market terms, which were valued at \$85 million on the June 15, 2012, the date of the transaction, and were amortized over the remaining life of the contract. Additionally, in connection with the Transaction, we stepped up certain inventory acquired, which was amortized over the life of such inventory.

(c) Includes noncash pension and postretirement costs, severance expense, gain (loss) on the sale of assets, and other items.

Adjusted EBITDA by segments was as follows:

	Year Ended December 31,		
	2015	2014	2013
TiO <sub>2</sub> segment	\$215	\$437	\$442
Alkali segment	129	—	—
Corporate	(72)	(84)	(80)
<b>Adjusted EBITDA</b>	<b>\$272</b>	<b>\$353</b>	<b>\$362</b>

Critical Accounting Policies and Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make certain estimates and assumptions regarding matters that are inherently uncertain and that ultimately affect the reported amounts of assets, liabilities, revenues and expenses, and the disclosure of contingent assets and liabilities. The estimates and assumptions are based on management's experience and understanding of current facts and circumstances. These estimates may differ from actual results. Certain of our accounting policies are considered critical as they are both important to reflect our financial position and results of operations and require significant or complex judgment on the part of management. The following is a summary of certain accounting policies considered critical by management.

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### Inventory

Pigment inventories are stated at the lower of actual cost or market, net of allowances for obsolete and slow-moving inventory. The cost of finished goods inventories is determined using the first-in, first-out method. Carrying values include material costs, labor, and associated indirect manufacturing expenses. Costs for materials and supplies, excluding ore, are determined by average cost to acquire. Raw materials are carried at actual cost. Mineral Sands inventories are stated at the lower of the weighted-average cost of production or market. We periodically review the cost of our inventory in comparison to its net realizable value. We also periodically review our inventory for obsolescence (inventory that is no longer marketable for its intended use). In either case, we record any write-down equal to the difference between the cost of inventory and its estimated net realizable value based on assumptions about alternative uses, market conditions and other factors. Inventories expected to be sold or consumed within twelve months after the balance sheet date are classified as current assets and all other inventories are classified as non-current assets.

### Business Combinations

Business acquisitions are accounted for using the acquisition method under Accounting Standards Codification (“ASC”) 805, Business Combinations (“ASC 805”), which requires recording assets acquired and liabilities assumed at fair value as of the acquisition date. Under the acquisition method of accounting, each tangible and separately identifiable intangible asset acquired and liability assumed is recorded based on their estimated fair values on the acquisition date. Acquisition related costs are expensed as incurred and are included in “Selling, general and administrative expenses” in the Consolidated Statements of Operations.

### Long-Lived Assets

Key estimates related to long-lived assets (property, plant and equipment, mineral leaseholds, and intangible assets) include useful lives, recoverability of carrying values, and the existence of any retirement obligations. As a result of future decisions, such estimates could be significantly modified. The estimated useful lives of property, plant and equipment range from three to forty years, and depreciation is recognized on a straight-line basis. Useful lives are estimated based upon our historical experience, engineering estimates, and industry information. These estimates include an assumption regarding periodic maintenance and an appropriate level of annual capital expenditures to maintain the assets. Mineral leaseholds are depreciated over their useful lives as determined under the units of production method. Intangible assets with finite useful lives are amortized on the straight-line basis over their estimated useful lives. The amortization methods and remaining useful lives are reviewed quarterly.

We evaluate the recoverability of the carrying value of long-lived assets whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Under such circumstances, we assess whether the projected undiscounted cash flows of our long-lived assets are sufficient to recover the carrying amount of the asset group being assessed. If the undiscounted projected cash flows are not sufficient, we calculate the impairment amount by discounting the projected cash flows using our weighted-average cost of capital. The amount of the impairment of long-lived assets is written off against earnings in the period in which the impairment is determined.

### Asset Retirement Obligations

To the extent a legal obligation exists, an asset retirement obligation (“ARO”) is recorded at its estimated fair value and accretion expense is recognized over time as the discounted liability is accreted to its expected settlement value. Fair value is measured using expected future cash outflows discounted at our credit-adjusted risk-free interest rate. No market-risk premium has been included in our calculation of ARO balances since we can make no reliable estimate. Our consolidated financial statements classify accretion expense related to asset retirement obligations as a production cost, which is included in “Cost of goods sold” in the Consolidated Statements of Operations.

We used the following assumptions in determining asset retirement obligations at December 31, 2015: inflation rates between 2.5% - 5.5% per year; credit adjusted risk-free interest rates between 3.2% - 16.7%; the life of mines between 21- 35 years and the useful life of assets of between 1- 24 years.

#### Income Taxes

We have operations in several countries around the world and are subject to income and similar taxes in these countries. The estimation of the amounts of income tax involves the interpretation of complex tax laws and regulations and how foreign taxes affect domestic taxes, as well as the analysis of the realizability of deferred tax assets, tax audit findings and uncertain tax positions. Although we believe our tax accruals are adequate, differences may occur in the future, depending on the resolution of pending and new tax matters.

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Deferred tax assets and liabilities are determined based on temporary differences between the financial reporting and tax bases of assets and liabilities using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. A valuation allowance is provided against a deferred tax asset when it is more likely than not that all or some portion of the deferred tax asset will not be realized. We periodically assess the likelihood that we will be able to recover our deferred tax assets, and reflect any changes in our estimates in the valuation allowance, with a corresponding adjustment to earnings or other comprehensive income (loss) as appropriate. ASC 740, Income Taxes, requires that all available positive and negative evidence be weighted to determine whether a valuation allowance should be recorded.

The amount of income taxes we pay are subject to ongoing audits by federal, state and foreign tax authorities, which may result in proposed assessments. Our estimate for the potential outcome for any uncertain tax issue is highly judgmental. We assess our income tax positions, and record tax benefits for all years subject to examination based upon our evaluation of the facts, circumstances and information available at the reporting date. For those tax positions for which it is more likely than not that a tax benefit will be sustained, we record the amount that has a greater than 50% likelihood of being realized upon settlement with a taxing authority that has full knowledge of all relevant information. Interest and penalties are accrued as part of tax expense, where applicable. If we do not believe that it is more likely than not that a tax benefit will be sustained, no tax benefit is recognized.

## Pension and Postretirement Benefits

We provide pension and postretirement healthcare benefits for qualifying employees worldwide. These plans are accounted for and disclosed in accordance with ASC 715, Compensation — Retirement Benefits.

During 2014, our benefits committee, in response to tax and pension legislation changes, approved changes to The Netherlands pension plan which includes moving the plan from a defined benefit plan to a multi-employer plan to be administered by the industrywide Pension Fund for the Graphical Industry, effective January 1, 2015. This action eliminates the future benefit accrual for participants under the current plan effective January 1, 2015, and resulted in a curtailment gain of \$3 million which was recognized in “Other income (expense), net” in the Consolidated Statements of Operations during 2014. Additionally, during 2014, our benefits committee approved changes to the unfunded U.S. postretirement healthcare plan which eliminated the pre-65 retiree medical coverage effective January 1, 2015. Retired participants will receive a one-time subsidy aggregating less than \$1 million towards medical cost through a health reimbursement arrangement (“HRA”) that we will be establishing for them. As a result of this action, we recorded a curtailment gain of \$6 million during 2014, which was included in “Other income (expense), net” in the Consolidated Statements of Operations. See Note 23 of Notes to Consolidated Financial Statements.

## U.S. Plans

**Discount Rate** — The discount rates selected for estimation of the actuarial present value of the benefit obligations for the qualified plan were 4.75% and 3.75% as of December 31, 2015 and 2014, respectively. The 2015 and 2014 rates were selected based on the results of a cash flow matching analysis, which projected the expected cash flows of the plans using a yield curves model developed from a universe of Aa-graded U.S. currency corporate bonds (obtained from Bloomberg) with at least \$50 million outstanding. Bonds with features that imply unreliable pricing, a less than certain cash flow, or other indicators of optionality are filtered out of the universe. The remaining universe is categorized into maturity groups, and within each of the maturity groups yields are ranked into percentiles.

The discount rates selected for estimating the actuarial present value of the benefit obligation of Alkali plan was 5.0% as of December 31, 2015 which was selected based on the results of a cash flow matching analysis, which projected the expected cash flows of the plans using Aon Hewitt AA Above Median yield curve developed from a U.S. currency corporate bonds with at least \$250 million outstanding.

Expected Return on Plan Assets —In forming the assumption of the U.S. long-term rate of return on plan assets, we took into account the expected earnings on funds already invested, earnings on contributions expected to be received in the current year, and earnings on reinvested returns. The long-term rate of return estimation methodology for U.S. plans is based on a capital asset pricing model using historical data and a forecasted earnings model. An expected return on plan assets analysis is performed which incorporates the current portfolio allocation, historical asset-class returns and an assessment of expected future performance using asset-class risk factors.

#### Foreign Benefit Plans

We currently provide a defined benefit retirement plan (funded) for qualifying employees in The Netherlands. The various assumptions used and the attribution of the costs to periods of employee service are fundamental to the measurement of net periodic cost and pension obligations associated with the retirement plans. The following are considered significant assumptions related to our Netherlands retirement plan:



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**Discount Rate** — The discount rates selected for The Netherlands plan to determine 2015 and 2014 net periodic cost was 2.25% and 3.5%, respectively. The discount rates selected for estimating the actuarial present value of the benefit obligation of The Netherlands plan was 2.25% at both December 31, 2015 and 2014, which is based on long-term Euro corporate bond index rates that correlate with anticipated cash flows associated with future benefit payments.

**Expected Long-term Rate of Return** — The expected long-term rate of return assumptions for The Netherlands plan of 4.75% and 4.75% at December 31, 2015 and 2014, respectively, was developed considering the portfolio mix and country-specific economic data that includes the expected long-term rates of return on local government and corporate bonds.

## Recent Accounting Pronouncements

See Note 2 of Notes to Consolidated Financial Statements for recently issued accounting pronouncements.

## Environmental Matters

We are subject to a broad array of international, federal, state, and local laws and regulations relating to safety, pollution, protection of the environment, and the generation, storage, handling, transportation, treatment, disposal, and remediation of hazardous substances and waste materials. In the ordinary course of business, we are subject to frequent environmental inspections and monitoring, and occasional investigations by governmental enforcement authorities. Under these laws, we are or may be required to obtain or maintain permits or licenses in connection with our operations. In addition, under these laws, we are or may be required to remove or mitigate the effects on the environment of the disposal or release of chemical, petroleum, low-level radioactive and other substances at our facilities. We may incur future costs for capital improvements and general compliance under environmental, health, and safety laws, including costs to acquire, maintain, and repair pollution control equipment. Environmental laws and regulations are becoming increasingly stringent, and compliance costs are significant and will continue to be significant in the foreseeable future. There can be no assurance that such laws and regulations or any environmental law or regulation enacted in the future is not likely to have a material effect on our business. We believe we are in compliance with applicable environmental rules and regulations in all material respects.

## Item 7A. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to various market, credit, operational, and liquidity risks in the normal course of business, which are discussed below. We manage these risks through normal operating and financing activities and, when appropriate, through the use of derivative instruments. We do not invest in derivative instruments for speculative purposes, but historically have entered into, and may enter into, derivative instruments for hedging purposes in order to reduce the exposure to fluctuations in interest rates, natural gas prices and exchange rates.

### Market Risk

A substantial portion of our products and raw materials are commodities that reprice as market supply and demand fundamentals change. Accordingly, product margins and the level of our profitability tend to vary with changes in the business cycle. Our TiO<sub>2</sub> prices may do so in the near term as ore prices and pigment prices are expected to fluctuate over the next few years. Margins in our Alkali business could be affected if product prices change because our competitors add or reduce capacity or demand changes due to economic reasons. Alkali margins could be impacted as well by fluctuations in input costs (such as energy, labor and transportation) that are subject to similar supply and demand dynamics. We try to protect against such instability through various business strategies. These include provisions in sales contracts allowing us to pass on higher raw material costs through timely price increases and formula price contracts to transfer or share commodity price risk, as well as using varying contract term lengths and selling to a diverse mix of customers by geography and industry to reap the benefits of a diverse portfolio.

## Credit Risk

Credit risk is the risk that a borrower or a counterparty will fail to meet their obligations. A significant portion of our liquidity is concentrated in trade accounts receivable that arise from sales of our products to customers. In the case of TiO<sub>2</sub>, the high level of industry concentration has the potential to impact our overall exposure to credit risk, either positively or negatively, in that our customers may be similarly affected by changes in economic, industry or other conditions. While our customer base is more diverse in the case of the Alkali segment, we have significant exposure to credit risk in industries that are affected by cyclical economic fluctuations, such as flat glass manufacturing and mining. We perform ongoing credit evaluations of our customers and use credit risk insurance policies from time to time, as deemed appropriate, to mitigate credit risk but generally do not require collateral. In the Alkali segment, our contracts typically enable us to tighten credit terms if we perceive additional credit risk and historic losses due to write offs of bad debt have been relatively low. In addition, due to our international operations in our TiO<sub>2</sub> segment, we are subject to potential trade restrictions and sovereign risk in certain countries we operate in. Because the Alkali segment sells to ANSAC for resale to foreign buyers, we avoid the risks of credit exposure to individual international buyers and regions. We maintain allowances for potential credit losses based on specific customer review and current financial conditions. During 2015, our ten largest third-party TiO<sub>2</sub> customers and our ten largest Alkali customers represented approximately 29% and 18%, respectively, of our consolidated net sales; however, no single customer accounted for more than 10% of our consolidated net sales.

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Interest Rate Risk

Interest rate risk arises from the probability that changes in interest rates will impact our financial results. Our exposure to interest rate risk is minimized by the fact that our \$1.5 billion of floating rate debt includes a LIBOR floor of 1%. As such, LIBOR would need to increase from the rate in effect at December 31, 2015 to greater than 1% before our borrowing rate would increase. Using a sensitivity analysis as of December 31, 2015, a hypothetical 1% increase in interest rates would result in an increase to pre-tax loss of approximately \$8 million on an annualized basis. This is due to the fact that earnings on our floating rate financial assets of \$229 million at December 31, 2015 would increase by the full 1% while the interest expense on our floating rate debt would increase by the full 1% on the \$150 million UBS Revolver balance and less than the full 1% on our \$1.5 billion term loan balance.

Currency Risk

Currency risk arises from the possibility that fluctuations in foreign exchange rates will impact the value of our assets and liabilities denominated in foreign currencies, as well as our earnings due to the translation of our balance sheets and remeasurement of our statements of operations from local currencies to U.S. dollars. We manufacture and market our products in a number of countries throughout the world and, as a result, are exposed to changes in foreign currency exchange rates, particularly in Australia, South Africa, and The Netherlands. The exposure is more prevalent in South Africa and Australia as the majority of revenues are earned in U.S. dollars while expenses are primarily incurred in local currencies. The foreign exchange risk in Europe however, is partially mitigated as the majority of revenues and expenses are in the same local currency creating a partially natural hedge. Since we are exposed to movements in the South African Rand and the Australian Dollar versus the U.S. dollar, we have, from time to time, entered into forward contracts to buy and sell foreign currencies as “economic hedges” for these foreign currency transactions.

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Item 8. Financial Statements and Supplementary Data

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Report of Independent Registered Public Accounting Firm

In our opinion, the accompanying consolidated balance sheets as of December 31, 2015 and December 31, 2014 and the related consolidated statements of operations, of comprehensive income (loss), of changes in shareholders' equity, and of cash flows for the years ended December 31, 2015 and December 31, 2014 present fairly, in all material respects, the financial position of Tronox Limited and its subsidiaries at December 31, 2015 and 2014, and the results of their operations and their cash flows for the years ended December 31, 2015 and 2014 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting 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 (COSO). The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in Management's Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on these financial statements and on the Company's internal control over financial reporting based on our integrated 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 audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

As described in Management's Report on Internal Control Over Financial Reporting appearing under Item 9A, management has excluded Alkali Chemicals from its assessment of internal control over financial reporting as of December 31, 2015 because it was acquired by the Company in a purchase business combination during 2015. We have also excluded Alkali Chemicals from our audit of internal control over financial reporting. Alkali Chemicals is a wholly-owned subsidiary whose total assets and total net sales represent 33% and 29%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2015.

/s/ PricewaterhouseCoopers LLP  
Stamford, Connecticut  
February 24, 2016

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Shareholders  
Tronox Limited

We have audited the accompanying consolidated statements of operations, comprehensive income (loss), cash flows, and changes in shareholders' equity of Tronox Limited and subsidiaries (the "Company") for the year ended December 31, 2013. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit.

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

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the results of operations and cash flows of Tronox Limited and subsidiaries for the year ended December 31, 2013, in conformity with accounting principles generally accepted in the United States of America.

/s/ GRANT THORNTON LLP

Oklahoma City, Oklahoma

February 27, 2014 (except for the adjustments to the statements of cash flows described in Note 1 under the caption of Basis of Presentation, which is as of February 25, 2015 and for the revisions to the guarantor condensed consolidating financial statements described in Note 26, which is as of March 8, 2015).

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## TRONOX LIMITED

## CONSOLIDATED STATEMENTS OF OPERATIONS

(Millions of U.S. dollars, except share and per share data)

	Year Ended December 31,		
	2015	2014	2013
Net sales	\$2,112	\$1,737	\$1,922
Cost of goods sold	1,992	1,530	1,732
Gross profit	120	207	190
Selling, general and administrative expenses	(217 )	(192 )	(187 )
Restructuring expense	(21 )	(15 )	—
Income (loss) from operations	(118 )	—	3
Interest and debt expense, net	(176 )	(133 )	(130 )
Net gain (loss) on liquidation of non-operating subsidiaries	—	(35 )	24
Loss on extinguishment of debt	—	(8 )	(4 )
Other income, net	28	27	46
Loss before income taxes	(266 )	(149 )	(61 )
Income tax provision	(41 )	(268 )	(29 )
Net loss	\$(307 )	\$(417 )	\$(90 )
Income attributable to noncontrolling interest	11	10	36
Net loss attributable to Tronox Limited	\$(318 )	\$(427 )	\$(126 )
Loss per share, basic and diluted	\$(2.75 )	\$(3.74 )	\$(1.11 )
Weighted average shares outstanding, basic and diluted (in thousands)	115,566	114,281	113,416

See notes to consolidated financial statements.



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## TRONOX LIMITED

## CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

(Millions of U.S. dollars)

	Year Ended December 31,		
	2015	2014	2013
Net loss	\$(307)	\$(417)	\$(90 )
Other comprehensive income (loss):			
Foreign currency translation adjustments	(292)	(95 )	(289)
Pension and postretirement plans:			
Actuarial gains (losses), net of taxes of less than \$1 million in 2015, and 2014, and \$1 million in 2013	12	(83 )	25
Amortization of unrecognized actuarial losses, net of taxes of less than \$1 million in 2015, 2014 and 2013	3	1	2
Prior service credit, net of taxes of, less than \$1 million in 2014 and \$1 million in 2013	—	(3 )	3
Pension and postretirement benefit curtailments, net of taxes of \$4 million in 2014	—	37	—
Other comprehensive loss	(277)	(143)	(259)
Total comprehensive loss	\$(584)	\$(560)	\$(349)
Comprehensive income (loss) attributable to noncontrolling interest:			
Net income	11	10	36
Foreign currency translation adjustments	(77 )	(31 )	(70 )
Comprehensive loss attributable to noncontrolling interest	(66 )	(21 )	(34 )
Comprehensive loss attributable to Tronox Limited	\$(518)	\$(539)	\$(315)

See notes to consolidated financial statements.

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## TRONOX LIMITED

## CONSOLIDATED BALANCE SHEETS

(Millions of U.S. dollars, except share and per share data)

	December 31,	
	2015	2014
<b>ASSETS</b>		
Current Assets		
Cash and cash equivalents	\$229	\$1,276
Restricted cash	5	3
Accounts receivable, net of allowance for doubtful accounts	391	277
Inventories, net	630	770
Prepaid and other assets	46	42
Deferred tax assets	—	13
Total current assets	1,301	2,381
Noncurrent Assets		
Property, plant and equipment, net	1,843	1,227
Mineral leaseholds, net	1,604	1,058
Intangible assets, net	244	272
Inventories, net	12	57
Long-term deferred tax assets	—	9
Other long-term assets	68	61
Total assets	\$5,072	\$5,065
<b>LIABILITIES AND EQUITY</b>		
Current Liabilities		
Accounts payable	\$159	\$160
Accrued liabilities	180	147
Short-term debt	150	—
Long-term debt due within one year	16	18
Income taxes payable	43	32
Deferred tax liabilities	—	9
Total current liabilities	548	366
Noncurrent Liabilities		
Long-term debt	2,955	2,375
Pension and postretirement healthcare benefits	141	172
Asset retirement obligations	77	85
Long-term deferred tax liabilities	143	204
Other long-term liabilities	98	75
Total liabilities	3,962	3,277
Commitments and Contingencies Shareholders' Equity		
Tronox Limited Class A ordinary shares, par value \$0.01 65,443,363 shares issued and 64,521,851 shares outstanding at December 31, 2015 and 65,152,145 shares issued and 63,968,616 shares outstanding at December 31, 2014	1	1
	—	—

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Tronox Limited Class B ordinary shares, par value \$0.01 — 51,154,280 shares issued and outstanding  
at December 31, 2015 and 2014

Capital in excess of par value	1,500	1,476
Retained earnings	93	529
Accumulated other comprehensive loss	(596 )	(396 )
Total Tronox Limited shareholders' equity	998	1,610
Noncontrolling interest	112	178
Total equity	1,110	1,788
Total liabilities and equity	\$5,072	\$5,065

See notes to consolidated financial statements.

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TRONOX LIMITED  
 CONSOLIDATED STATEMENTS OF CASH FLOWS  
 (Millions of U.S. dollars)

	Year Ended December 31, 2015	2014	2013
Cash Flows from Operating Activities:			
Net loss	\$ (307 )	\$ (417 )	\$ (90 )
Adjustments to reconcile net loss to net cash provided by operating activities:			
Depreciation, depletion and amortization	294	295	333
Deferred income taxes	—	237	33
Share-based compensation expense	22	20	18
Amortization of deferred debt issuance costs and discount on debt	11	10	9
Pension and postretirement healthcare benefit (income) expense	5	(3 )	9
Net (gain) loss on liquidation of non-operating subsidiaries	—	35	(24 )
Loss on extinguishment of debt	—	8	4
Amortization of fair value inventory step-up and unfavorable ore contracts liability	9	—	(32 )
Other noncash items affecting net loss	—	3	(15 )
Contributions to employee pension and postretirement plans	(17 )	(18 )	(6 )
Changes in assets and liabilities:	20	23	58

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(Increase) decrease in accounts receivable			
(Increase) decrease in inventories	157	(101 )	75
(Increase) decrease in prepaid and other assets	18	9	(15 )
Increase (decrease) in accounts payable and accrued liabilities	(12 )	22	(16 )
Increase (decrease) in taxes payable	20	20	(25 )
Other, net	(4 )	(2 )	14
Cash provided by operating activities	216	141	330
Cash Flows from Investing Activities:			
Capital expenditures	(191 )	(187 )	(165 )
Proceeds from the sale of assets	1	—	1
Acquisition of business	(1,650 )	—	—
Cash used in investing activities	(1,840 )	(187 )	(164 )
Cash Flows from Financing Activities:			
Repayments of debt	(18 )	(20 )	(189 )
Proceeds from debt	750	—	945
Debt issuance costs	(15 )	(2 )	(29 )
Dividends paid	(117 )	(116 )	(115 )
Proceeds from the exercise of warrants and options	3	6	2
Cash provided by (used in) financing activities	603	(132 )	614
Effects of exchange rate changes on cash and cash equivalents	(26 )	(21 )	(18 )
Net increase (decrease) in cash and cash equivalents	(1,047 )	(199 )	762

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Cash and cash equivalents at beginning of period	1,276	1,475	713
Cash and cash equivalents at end of period	\$ 229	\$ 1,276	\$ 1,475
Supplemental cash flow information:			
Interest paid	\$ 152	\$ 126	\$ 123
Income taxes paid	\$ 23	\$ 3	\$ 25

See notes to consolidated financial statements.

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## TRONOX LIMITED

## CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

(Millions of U.S. dollars)

	Tronox Limited Class A Ordinary Shares	Tronox Limited Class B Ordinary Shares	Capital Excess of par Value	Retained Earnings	Accumulated Other Comprehensive Loss	Total Tronox Limited Shareholders' Equity	Non-controlling Interest	Total Equity
Balance at January 1, 2013	\$ 1	\$ —	\$1,429	\$ 1,314	\$ (95 )	\$ 2,649	\$ 233	\$2,882
Net income (loss)	—	—	—	(126 )	—	(126 )	36	(90 )
Other comprehensive loss	—	—	—	—	(189 )	(189 )	(70 )	(259 )
Shares-based compensation	—	—	17	—	—	17	—	17
Class A and Class B share dividends	—	—	—	(115 )	—	(115 )	—	(115 )
Warrants and options exercised	—	—	2	—	—	2	—	2
Balance at December 31, 2013	\$ 1	\$ —	\$1,448	\$ 1,073	\$ (284 )	\$ 2,238	\$ 199	\$2,437
Net income (loss)	—	—	—	(427 )	—	(427 )	10	(417 )
Other comprehensive loss	—	—	—	—	(112 )	(112 )	(31 )	(143 )
Shares-based compensation	—	—	22	—	—	22	—	22
Class A and Class B share dividends	—	—	—	(117 )	—	(117 )	—	(117 )
Warrants and options exercised	—	—	6	—	—	6	—	6
Balance at December 31, 2014	\$ 1	\$ —	\$1,476	\$ 529	\$ (396 )	\$ 1,610	\$ 178	\$1,788
Net income (loss)	—	—	—	(318 )	—	(318 )	11	(307 )
Other comprehensive loss	—	—	—	—	(200 )	(200 )	(77 )	(277 )
Shares-based compensation	—	—	21	—	—	21	—	21
Class A and Class B share dividends	—	—	—	(118 )	—	(118 )	—	(118 )
Warrants and options exercised	—	—	3	—	—	3	—	3
Balance at December 31, 2015	\$ 1	\$ —	\$1,500	\$ 93	\$ (596 )	\$ 998	\$ 112	\$1,110

See notes to consolidated financial statements.

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TRONOX LIMITED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(Millions of U.S. dollars, except share, per share and metric tons data or unless otherwise noted)

1. The Company

Tronox Limited and its subsidiaries (collectively referred to as “Tronox,” “we,” “us,” or “our”) is a public limited company registered under the laws of the State of Western Australia. We are a global leader in the production and marketing of titanium bearing mineral sands and titanium dioxide (“TiO<sub>2</sub>”) pigment, and the world’s largest producer of natural soda ash. Titanium feedstock is primarily used to manufacture TiO<sub>2</sub>. Zircon, a hard, glossy mineral, is used for the manufacture of ceramics, refractories, TV screen glass, and a range of other industrial and chemical products. Pig iron is a metal material used in the steel and metal casting industries to create wrought iron, cast iron, and steel. Our TiO<sub>2</sub> products are critical components of everyday applications such as paint and other coatings, plastics, paper, and other uses and our related mineral sands product streams include titanium feedstock, zircon, and pig iron. Our soda ash products are used by customers in the glass, detergent, and chemicals manufacturing industries.

We have global operations in North America, Europe, South Africa, and the Asia-Pacific region. Within our TiO<sub>2</sub> segment, we operate three pigment production facilities at the following locations: Hamilton, Mississippi; Botlek, The Netherlands; and Kwinana, Western Australia, and we operate three separate mining operations: KwaZulu-Natal (“KZN”) Sands and Namakwa Sands both located in South Africa, and Cooljarloo located in Western Australia.

On April 1, 2015 (the “Alkali Transaction Date”), we completed the acquisition of 100% of the Alkali Chemicals business (“Alkali”) from FMC Corporation (“FMC”) for an aggregate purchase price of \$1.65 billion in cash (the “Alkali Transaction”). See Note 4 for additional information regarding the Alkali Transaction.

As a result of the Alkali Transaction, we produce natural soda ash from a mineral called trona, which we mine at two facilities we own near Green River, Wyoming. Our Wyoming facilities process the trona ore into chemically pure soda ash and specialty sodium products such as sodium bicarbonate (baking soda). We sell soda ash directly to customers in the United States, Canada and Europe and to the American Natural Soda Ash Corporation (“ANSAC”), a non-profit foreign sales association in which we and two other U.S. soda ash producers are members, for resale to customers elsewhere around the world. We use a portion of our soda ash at Green River to produce specialty sodium products such as sodium bicarbonate and sodium sesquicarbonate that have uses in food, animal feed, pharmaceutical, and medical applications.

In June 2012, Tronox Limited issued Class B ordinary shares (“Class B Shares”) to Exxaro Resources Limited (“Exxaro”) and one of its subsidiaries in consideration for 74% of Exxaro’s South African mineral sands business, and the existing business of Tronox Incorporated was combined with the mineral sands business in an integrated series of transactions whereby Tronox Limited became the parent company (the “Exxaro Transaction”). Exxaro has agreed not to acquire any voting shares of Tronox Limited if, following such acquisition, Exxaro will have a voting interest in Tronox Limited of 50% or more unless Exxaro brings any proposal to make such an acquisition to the Board of Directors of Tronox Limited on a confidential basis. In the event an agreement regarding the proposal is not reached, Exxaro is permitted to make a takeover offer for all the shares of Tronox Limited not held by affiliates of Exxaro, subject to certain non-waivable conditions. At December 31, 2015, Exxaro held approximately 44% of the voting securities of Tronox Limited. See Note 24 for additional information regarding Exxaro transactions.

Basis of Presentation

We are considered a domestic company in Australia and, as such, are required to report in Australia under International Financial Reporting Standards (“IFRS”). Additionally, as we are not considered a “foreign private issuer” in the United States (“U.S.”), we are required to comply with the reporting and other requirements imposed by the U.S.



securities law on U.S. domestic issuers, which, among other things, requires reporting under accounting principles generally accepted in the United States of America (“U.S. GAAP”). The consolidated financial statements included in this Form 10-K are prepared in conformity with U.S. GAAP. We publish our consolidated financial statements, in both U.S. GAAP and IFRS, in U.S. dollars.

Exxaro has a 26% ownership interest in each of our Tronox KZN Sands (Pty) Ltd. and Tronox Mineral Sands (Pty) Ltd. subsidiaries in order to comply with the ownership requirements of the Black Economic Empowerment (“BEE”) legislation in South Africa. We account for such ownership interest as “Noncontrolling interest” in our consolidated financial statements. See Note 21.

Our consolidated financial statements include the accounts of all majority-owned subsidiary companies. All intercompany balances and transactions have been eliminated in consolidation. Certain prior period amounts have been reclassified to conform to the manner and presentation in the current period. For the year ended December 31, 2013, we decreased cash flows from investing activities by \$7 million with a corresponding decrease in cash flows from operating activities to adjust for accrued capital expenditures. These adjustments are not considered material for the year ended December 31, 2013.

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During the year ended December 31, 2014, we recorded out-of-period adjustments that should have been recorded during 2012 that decreased cost of goods sold by \$6 million, decreased loss before income taxes by \$6 million, decreased net loss by \$5 million and decreased loss per share by \$0.03. Also during the year ended December 31, 2014, we recorded out-of-period adjustments that should have been recorded during 2013 that increased cost of goods sold by \$6 million, increased selling, general and administrative expenses by \$1 million, increased loss before income taxes by \$7 million, increased net loss by \$5 million and increased loss per share by \$0.04. After evaluating the quantitative and qualitative aspects of the adjustments, we concluded the effect of these adjustments, individually and in the aggregate, was not material to our previously issued consolidated financial statements or to our 2014 consolidated financial statements.

During the year ended December 31, 2015, we recorded out-of-period adjustments that should have been recorded in 2012 through 2014 that decreased cost of goods sold by \$5 million, decreased loss before income taxes by \$5 million, decreased net loss by \$3 million, and decreased loss per share by \$0.02. After evaluating the quantitative and qualitative aspects of the adjustments, we concluded the effect of these adjustments, individually and in the aggregate, was not material to our previously issued consolidated financial statements and is not material to our 2015 consolidated financial statements.

## Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting periods. It is at least reasonably possible that the effect on the financial statements of a change in estimate due to one or more future confirming events could have a material effect on the financial statements.

## 2. Significant Accounting Policies

### Foreign Currency

The U.S. dollar is the functional currency for our operations, except for our South African operations, whose functional currency is the Rand, and our European operations, whose functional currency is the Euro. We determine the functional currency of each subsidiary based on a number of factors, including the predominant currency for revenues, expenditures and borrowings. Adjustments from the remeasurement of non-functional currency monetary assets and liabilities are recorded in "Other income (expense), net" in the Consolidated Statements of Operations. When the subsidiary's functional currency is not the U.S. dollar, translation adjustments resulting from translating the functional currency financial statements into U.S. dollar equivalents are recorded in "Accumulated other comprehensive loss" in the Consolidated Balance Sheets.

Gains and losses on intercompany foreign currency transactions that are not expected to be settled in the foreseeable future are reported in the same manner as translation adjustments.

### Revenue Recognition

Revenue is recognized when risk of loss and title to the product is transferred to the customer, pricing is fixed or determinable, and collection is reasonably assured. All amounts billed to a customer in a sales transaction related to shipping and handling represent revenues earned and are reported as net sales. Accruals are made for sales returns, rebates and other allowances, which are recorded in "Net sales" in the Consolidated Statements of Operations, and are based on our historical experience and current business conditions.

### Cost of Goods Sold

Cost of goods sold includes costs for purchasing, receiving, manufacturing, and distributing products, including raw materials, energy, labor, depreciation, depletion, shipping and handling, freight, warehousing, and other production costs.

#### Research and Development

Research and development costs, included in “Selling, general and administrative expenses” in the Consolidated Statements of Operation comprising of salaries, building costs, utilities, administrative expenses, and allocations of corporate costs, were \$13 million, \$11 million, and \$10 million during 2015, 2014, and 2013, respectively, and were expensed as incurred.

#### Selling, General and Administrative Expenses

Selling, general and administrative expenses include costs related to marketing, agent commissions, and legal and administrative functions such as corporate management, human resources, information technology, investor relations, accounting, treasury, and tax compliance.

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### Income Taxes

We use the asset and liability method of accounting for income taxes. The estimation of the amounts of income taxes involves the interpretation of complex tax laws and regulations and how foreign taxes affect domestic taxes, as well as the analysis of the realizability of deferred tax assets, tax audit findings, and uncertain tax positions.

Deferred tax assets and liabilities are determined based on temporary differences between the financial reporting and tax bases of assets and liabilities using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. A valuation allowance is provided against a deferred tax asset when it is more likely than not that all or some portion of the deferred tax asset will not be realized. We periodically assess the likelihood that we will be able to recover our deferred tax assets, and reflect any changes in our estimates in the valuation allowance, with a corresponding adjustment to earnings or other comprehensive income (loss), as appropriate. All available positive and negative evidence is weighted to determine whether a valuation allowance should be recorded.

The amount of income taxes we pay is subject to ongoing audits by federal, state, and foreign tax authorities, which may result in proposed assessments. Our estimate for the potential outcome for any uncertain tax issue is highly judgmental. We assess our income tax positions, and record tax benefits for all years subject to examination based upon our evaluation of the facts, circumstances, and information available at the reporting date. For those tax positions for which it is more likely than not that a tax benefit will be sustained, we record the amount that has a greater than 50% likelihood of being realized upon settlement with a taxing authority that has full knowledge of all relevant information. Interest and penalties are accrued as part of tax expense, where applicable. If we do not believe that it is more likely than not that a tax benefit will be sustained, no tax benefit is recognized. See Note 7.

### Earnings per Share

Basic and diluted earnings per share are calculated using the two-class method. Under the two-class method, earnings used to determine basic earnings per share are reduced by an amount allocated to participating securities. Participating securities include restricted shares issued under the Tronox Management Equity Incentive Plan (see Note 22) and the T-Bucks Employee Participation Plan (see Note 22), both of which contain non-forfeitable dividend rights. Our unexercised options, unexercised Series A and Series B Warrants (see Note 20), and unvested restricted share units do not contain non-forfeitable rights to dividends and, as such, are not considered in the calculation of basic earnings per share. Our unvested restricted shares do not have a contractual obligation to share in losses; therefore, when we record a net loss, none of the loss is allocated to participating securities. Consequently, in periods of net loss, the two class method does not have an effect on basic loss per share.

Diluted earnings per share is calculated by dividing net earnings allocable to ordinary shares by the weighted-average number of ordinary shares outstanding for the period, as adjusted for the potential dilutive effect of non-participating restricted share units, options, and Series A and Series B Warrants. The options and Series A and Series B Warrants are included in the calculation of diluted earnings per ordinary share utilizing the treasury stock method. See Note 8.

### Fair Value Measurement

We measure fair value on a recurring basis utilizing valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs, to the extent possible, and consider counterparty credit risk in our assessment of fair value. The fair value hierarchy is as follows:

·Level 1 – Quoted prices in active markets for identical assets and liabilities;

Level 2 – Quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar assets and liabilities in markets that are not active or other inputs that are observable or can be corroborated by observable market data; and,

Level 3 – Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets and liabilities

See Note 9.

#### Cash and Cash Equivalents

We consider all investments with original maturities of three months or less to be cash equivalents. We maintain cash and cash equivalents in bank deposit and money market accounts that may exceed federally insured limits. The financial institutions where our cash and cash equivalents are held are generally highly rated and geographically dispersed, and we have a policy to limit the amount of credit exposure with any one institution. We have not experienced any losses in such accounts and believe we are not exposed to significant credit risk.

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At December 31, 2015 and 2014, we had restricted cash in Australia related to outstanding performance bonds of \$5 million and \$3 million, respectively.

Accounts Receivable, net of allowance for doubtful accounts

We perform credit evaluations of our customers, and take actions deemed appropriate to mitigate credit risk. Only in certain specific occasions do we require collateral in the form of bank or parental guarantees or guarantee payments. We maintain allowances for potential credit losses based on specific customer review and current financial conditions. See Note 10.

Inventories, net

Pigment and Alkali inventories are stated at the lower of actual cost or market (“LOCM”), net of allowances for obsolete and slow-moving inventory. The cost of inventories is determined using the first-in, first-out method (“FIFO”). Carrying values include material costs, labor, and associated indirect manufacturing expenses. Costs for materials and supplies, excluding titanium ore, are determined by average cost to acquire. Mineral Sands inventories including titanium ore are stated at the lower of the weighted-average cost of production or market. Inventory costs include those costs directly attributable to products, including all manufacturing overhead but excluding distribution costs. Raw materials are carried at actual cost.

We review, annually and at the end of each quarter, the cost of our inventory in comparison to its net realizable value. We also periodically review our inventory for obsolescence (inventory that is no longer marketable for its intended use). In either case, we record any write-down equal to the difference between the cost of inventory and its estimated net realizable value based on assumptions about alternative uses, market conditions and other factors. Inventories expected to be sold or consumed within twelve months after the balance sheet date are classified as current assets and all other inventories are classified as non-current assets. See Note 11.

Long Lived Assets

Property, plant and equipment, net is stated at cost less accumulated depreciation, and is depreciated over its estimated useful life using the straight-line method as follows:

Land improvements	10 — 20 years
Buildings	10 — 40 years
Machinery and equipment	3 — 25 years
Furniture and fixtures	10 years

Maintenance and repairs are expensed as incurred, except for costs of replacements or renewals that improve or extend the lives of existing properties, which are capitalized. Upon retirement or sale, the cost and related accumulated depreciation are removed from the respective account, and any resulting gain or loss is included in “Cost of goods sold” or “Selling, general, and administrative expenses” in the Consolidated Statements of Operations. See Note 12.

We capitalize interest costs on major projects that require an extended period of time to complete. See Note 16.

Mineral property acquisition costs are capitalized as tangible assets when management determines that probable future benefits consisting of a contribution to future cash inflows have been identified and adequate financial resources are available or are expected to be available as required to meet the terms of property acquisition and anticipated exploration and development expenditures. Mineral leaseholds are depleted over their useful lives as determined under the units of production method. Mineral property exploration costs are expensed as incurred. When it has been determined that a mineral property can be economically developed as a result of establishing proven and probable

reserves, the costs incurred to develop such property through the commencement of production are capitalized. See Note 13.

Intangible assets are stated at cost less accumulated amortization, and are amortized on a straight-line basis over their estimated useful lives, which range from 3 to 20 years. See Note 14.

We evaluate the recoverability of the carrying value of long-lived assets whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Under such circumstances, we assess whether the projected undiscounted cash flows of our long-lived assets are sufficient to recover the carrying amount of the asset group being assessed. If the undiscounted projected cash flows are not sufficient, we calculate the impairment amount by discounting the projected cash flows using our weighted-average cost of capital. The amount of the impairment of long-lived assets is written off against earnings in the period in which the impairment is determined.

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### Business Acquisitions

Business acquisitions are accounted for using the acquisition method under Accounting Standards Codification (“ASC”) 805, Business Combinations (“ASC 805”), which requires recording assets acquired and liabilities assumed at fair value as of the acquisition date. Under the acquisition method of accounting, each tangible and separately identifiable intangible asset acquired and liabilities assumed is recorded based on their preliminary estimated fair values on the acquisition date. The initial valuations are derived from estimated fair value assessments and assumptions used by management. Acquisition related costs are expensed as incurred and are included in “Selling, general and administrative expenses in the Consolidated Statements of Operations. See Note 4.

### Long-term Debt

Long-term debt is stated net of unamortized original issue premium or discount. Premiums or discounts are amortized using the effective interest method with amortization expense recorded in “Interest and debt expense, net” in the Consolidated Statements of Operations. Deferred debt issuance costs are recorded in “Other long-term assets” in the Consolidated Balance Sheets, and are amortized using the effective interest method with amortization expense recorded in “Interest and debt expense, net” in the Consolidated Statements of Operations. See Note 16.

### Asset Retirement Obligations

Asset retirement obligations are recorded at their estimated fair value, and accretion expense is recognized over time as the discounted liability is accreted to its expected settlement value. Fair value is measured using expected future cash outflows discounted at our credit-adjusted risk-free interest rate, which are considered Level 3 inputs. We classify accretion expense related to asset retirement obligations as a production cost, which is included in “Cost of goods sold” in the Consolidated Statements of Operations. See Note 17.

### Derivative Instruments

Derivative instruments are recorded in the Consolidated Balance Sheets at their fair values. Changes in the fair value of derivative instruments not designated for hedge accounting treatment are recorded in “Other income (expense), net” in the Consolidated Statements of Operations. See Note 18.

### Environmental Remediation and Other Contingencies

We recognize a loss and record an undiscounted liability when litigation has commenced or a claim or assessment has been asserted, or, based on available information, commencement of litigation or assertion of a claim or assessment is probable, and the associated costs can be reasonably estimated. See Note 19.

### Self-Insurance

We are self-insured for certain levels of general and vehicle liability, property, workers’ compensation and health care coverage. The cost of these self-insurance programs is accrued based upon estimated fully developed settlements for known and anticipated claims. Any resulting adjustments to previously recorded reserves are reflected in current operating results. We do not accrue for general or unspecific business risks.

### Share-based Compensation

Equity Restricted Share and Restricted Share Unit Awards — The fair value of equity instruments is measured based on the share price on the grant date and is recognized over the vesting period. These awards contain service, market, and/or performance conditions. For awards containing only a service or a market condition, we have elected to



recognize compensation costs using the straight-line method over the requisite service period for the entire award. For awards containing a market condition, the fair value of the award is measured using the Monte Carlo simulation under a lattice model approach. For awards containing a performance condition, the fair value is the grant date close price and compensation expense is not recognized until we conclude that it is probable that the performance condition will be met. We reassess the probability at least quarterly. See Note 22.

Liability Restricted Share Awards — Restricted share awards classified as liability awards contain only a service condition, and have graded vesting provisions. Liability awards are re-measured to fair value at each reporting date. See Note 22.

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Option Awards — The Black-Scholes option pricing model is utilized to measure the fair value of options on the grant date. The options contain only service conditions, and have graded vesting provisions. We have elected to recognize compensation costs using the straight-line method over the requisite service period for the entire award. See Note 22.

## Recently Adopted Accounting Pronouncements

In November 2015, the Financial Accounting Standards Board (the “FASB”) issued Accounting Standards Update (“ASU”) 2015-17, Balance Sheet Classification of Deferred Taxes (“ASU 2015-17”). ASU 2015-17 simplifies the presentation of deferred income taxes. The new guidance requires that all deferred tax liabilities and assets, along with any related valuation allowance, be classified as noncurrent on our consolidated financial position. We are required to adopt this standard in the first quarter of 2017. The guidance may be applied either prospectively, for all deferred tax assets and liabilities, or retrospectively. We have elected to adopt ASU 2015-17 for 2015, on a prospective basis, and our disclosure in Note 7 is presented accordingly.

## Recently Issued Accounting Pronouncements

In September 2015, the FASB issued ASU 2015-16, Simplifying the Accounting for Measurement-Period Adjustments (“ASU 2015-16”). ASU 2015-16 simplifies the accounting for measurement-period adjustments by eliminating the requirement to restate prior period financial statements for measurement period adjustments. The new guidance requires that the cumulative impact of a measurement period adjustment (including the impact on prior periods) be recognized in the reporting period in which the adjustment is identified. We are required to adopt this standard in the first quarter of 2016. We cannot determine the impact, if any, that ASU 2015-16 will have on our consolidated financial statements.

In August 2015, the FASB issued ASU 2015-15, Interest – Imputation of Interest (“ASU 2015-15”) and in April 2015, the FASB issued ASU 2015-03, Interest— Imputation of Interest (“ASU 2015-03”). ASU 2015-15 and ASU 2015 - 03 change and simplify the presentation of debt issuance costs ASU 2015-03 requires that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with debt discounts. ASU 2015-15 stated that it would also be acceptable to present debt issuance costs related a line of credit arrangement as a direct deduction from the carrying amount of debt. The recognition and measurement guidance for debt issuance costs are not affected by the amendments in this ASU. We are required to adopt these standards retrospectively in the first quarter of 2016. As of December 31, 2015, we had \$49 million of deferred debt issuance costs, which were recorded in “Other long-term assets” in the Consolidated Balance Sheets.

In July 2015, as part of its simplification initiative, the FASB issued ASU 2015-11, Simplifying the Measurement of Inventory (“ASU 2015-11”). ASU 2015-11 simplifies the subsequent measurement of inventory by requiring entities to remeasure inventory at the lower of cost and net realizable value, which is defined as the estimated selling price in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. This ASU does not apply to inventory measured using the Last-in, First-Out or the retail inventory method. We are required to adopt this standard in the first quarter of 2017. This standard is required to be applied prospectively with earlier application permitted as of the beginning of an interim or annual period. The adoption of ASU 2015-11 is not expected to have a material impact on our consolidated financial statements.

In February 2015, the FASB issued ASU 2015-02, Consolidation: Amendments to the Consolidation Analysis (“ASU 2015-02”). ASU 2015-02 changes the consolidation evaluation for entities that are required to evaluate whether they should consolidate certain legal entities. We are required to adopt this standard in the first quarter of 2016. The standard permits the use of a modified retrospective approach by recording a cumulative-effect adjustment to equity as of the beginning of the fiscal year of adoption, or a reporting entity may also apply the amendments retrospectively. We have not yet determined the impact, if any, that ASU 2015-02 will have on our consolidated financial statements.

In May 2014, the FASB issued ASU 2014-9, Revenue from Contracts with Customers (“ASU 2014-9”), which states that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. This guidance is effective for periods beginning after December 31, 2017, and may be applied either retrospectively or on a modified retrospective basis. We have not yet determined the impact, if any, that ASU 2014-9 will have on our consolidated financial statements.

### 3. Restructuring Expense

During 2014, we initiated a cost improvement initiative. The initiative resulted in a reduction in our workforce by approximately 135 employees and outside contractor positions. At December 31, 2014, the remaining liability was \$4 million. During 2015, we paid \$4 million of cash related to such restructuring.

In November 2015 we ceased production at our sodium chlorate plant in Hamilton, Mississippi resulting in a reduction in our workforce of approximately 50 employees. This action resulted in a charge, consisting primarily of employee severance costs, of \$4 million, which was recorded in “Restructuring expense” in the Consolidated Statements of Operations of which \$1 million was paid during 2015. We expect to pay the remaining \$3 million liability in 2016.

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In line with our goal of aligning production output to market requirements, during the third quarter of 2015, we decided that the operation of our Cooljarloo North Mine in Western Australia would be suspended on December 31, 2015, resulting in a reduction in our workforce of approximately 30 employees. This action resulted in a charge, consisting primarily of employee severance costs, of \$3 million, which was recorded in “Restructuring expense” in the Consolidated Statements of Operations and paid during 2015.

In 2015, as part of our commitment to reduce operating costs and working capital, we have commenced a global restructuring of our TiO<sub>2</sub> segment which we expect to complete during the first half of 2016. A portion of this initiative involves a reduction in our global TiO<sub>2</sub> workforce by approximately 500 employees and outside contractor positions. The restructuring seeks to streamline the operations of our TiO<sub>2</sub> segment in order to create a more commercially and operationally efficient business segment. This action resulted in a charge of \$14 million, which was recorded in “Restructuring expense” in the Consolidated Statements of Operations of which \$2 million was paid during 2015. The charge consisted of employee severance costs and other associated costs. We expect to pay the remaining \$12 million in 2016.

A summary in the changes in the liability established for restructuring, which is included in “Accrued liabilities” in the Consolidated Balance Sheet, is as follows:

	Restructuring Liability
Balance, January 1, 2014	\$ —
Severance and other related costs	15
Cash payments	(10 )
Noncash expense	(1 )
Balance, December 31, 2014	\$ 4
Severance and other related costs	21
Cash payments	(10 )
Balance, December 31, 2015	\$ 15

Restructuring expense by segment during 2015 and 2014 was as follows:

	Year Ended December 31	
	2015	2014
TiO <sub>2</sub> segment	\$ 20	\$ 12
Corporate	1	3
Total	\$ 21	\$ 15

#### 4. Acquisition of Alkali Chemicals Group

On April 1, 2015, we acquired Alkali because it diversifies our end markets and revenue base, and increases our participation in faster growing emerging market economies. We believe it also provides us greater opportunity to utilize a portion of our U.S. tax attributes in future periods. See Note 7 for a discussion of the tax impact of the Alkali Transaction. We accounted for the Alkali Transaction using the acquisition method under ASC 805 which requires recording assets acquired and liabilities assumed at fair value. Under the acquisition method of accounting, the assets

acquired and liabilities assumed were recorded based on their preliminary estimated fair values on the Alkali Transaction Date. The results of the Alkali chemical business are included in the Alkali segment. The initial valuations were derived from estimated fair value assessments and assumptions used by management, and are preliminary. Further adjustments may result before the end of the measurement period, which ends no later than March 31, 2016.

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We funded the Alkali Transaction through existing cash and new debt. See Note 16 for further details of the Alkali Transaction financing.

## Purchase Price Allocation

	Valuation
Consideration:	
Purchase price	\$ 1,650
Fair Value of Assets Acquired and Liabilities Assumed:	
Current Assets:	
Accounts receivable	\$ 147
Inventories	48
Prepaid and other assets	32
Total Current Assets	227
Property, plant and equipment <sup>(1)</sup>	767
Mineral leaseholds <sup>(2)</sup>	739
Other long-term assets	3
Total Assets	\$ 1,736
Current Liabilities:	
Accounts payable	46
Accrued liabilities	28
Total Current Liabilities	74
Noncurrent Liabilities:	
Other	12
Total Liabilities	86
Net Assets	\$ 1,650

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The fair value of property, plant and equipment was determined using the cost approach, which estimates the <sup>(1)</sup>replacement cost of each asset using current prices and labor costs, less estimates for physical, functional and technological obsolescence, based on the estimated useful life ranging from 5 to 38 years.

The fair value of mineral rights was determined using the Discounted Cash Flow (“DCF”) method, which was based upon the present value of the estimated future cash flows for the expected life of the asset taking into account the <sup>(2)</sup>relative risk of achieving those cash flows and the time value of money. A discount rate of 10.4% was used taking into account the risks associated with such assets.

There are no contingent liabilities currently recorded in the fair value of net assets acquired as of the Alkali Transaction Date, and the fair value of net assets acquired includes accounts receivables with book value that approximates fair value.

## Condensed Combined Financial Information

The following condensed financial information presents the resulting operations of Alkali from the Alkali Transaction Date to December 31, 2015:

	For the period April 1, 2015 through December 31, 2015
Net sales	\$ 602
Income from operations	\$ 69
Net income	\$ 52

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## Supplemental Pro forma financial information

The following unaudited pro forma information gives effect to the Alkali Transaction as if it had occurred on January 1, 2014. The unaudited pro forma financial information reflects certain adjustments related to the acquisition, such as (1) conforming the accounting policies of Alkali to those applied by Tronox, (2) recording certain incremental expenses resulting from purchase accounting adjustments, such as incremental depreciation expense in connection with fair value adjustments to property, plant and equipment, and depletion expense in connection with fair value adjustments to mineral leaseholds, (3) to record the effect on interest expense related to borrowings in connection with the Alkali Transaction and (4) to record the related tax effects. The unaudited pro forma financial information was adjusted to include the effect of certain non-recurring items as of January 1, 2014 such as the impact of transaction costs related to the Alkali Transaction of approximately \$29 million, inventory step-up amortization of \$9 million and \$8 million of interest expense incurred on the Bridge Facility (see Note 16). All of these non-recurring costs were excluded from the 2015 supplemental pro forma information. The unaudited pro forma financial information is for illustrative purposes only and should not be relied upon as being indicative of the historical results that would have been obtained if the Alkali Transaction had actually occurred on that date, nor the results of operations in the future.

In accordance with ASC 805, the supplemental pro forma results of operations for 2015 and 2014, as if the Alkali Transaction had occurred on January 1, 2014, are as follows:

	Year Ended	
	December 31,	
	2015	2014
Net sales	\$2,307	\$2,520
Income (loss) from operations	\$(67 )	\$67
Net loss	\$(260 )	\$(405 )
Loss per share, basic and diluted	\$(2.25 )	\$(3.54 )

## 5. Liquidation of Non-Operating Subsidiaries

During 2014, we completed the liquidation of a non-operating subsidiary, Tronox Pigments International GmbH, for which we recognized a noncash loss from the realization of cumulative translation adjustments of \$35 million, which was recorded in "Net gain (loss) on liquidation of non-operating subsidiaries" in the Consolidated Statements of Operations. During 2013, we completed the liquidation of two non-operating subsidiaries, Tronox (Luxembourg) Holdings S.a.r.l. and Tronox Luxembourg S.a.r.l., for which we recognized a net noncash gain from the realization of cumulative translation adjustments of \$24 million, which was recorded in "Net gain (loss) on liquidation of non-operating subsidiaries" in the Consolidated Statements of Operations.

## 6. Other Income (Expense), Net

Other income (expense), net is comprised of the following:

	Year Ended		
	December 31,		
	2015	2014	2013
Net realized and unrealized foreign currency gains	\$21	\$ 5	\$ 39
Interest income	7	13	8
Pension and postretirement benefit curtailment gains <sup>(1)</sup>	—	9	—
Other	—	—	(1 )
Total	\$28	\$ 27	\$ 46



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(1) During 2014, we recognized curtailment gains related to our U.S. postretirement healthcare plan and our Netherlands pension plan. See Note 23.

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## 7. Income Taxes

Our operations are conducted through various subsidiaries in a number of countries throughout the world. We have provided for income taxes based upon the tax laws and rates in the countries in which operations are conducted and income is earned.

Income (loss) before income taxes is comprised of the following:

	Year Ended December 31,		
	2015	2014	2013
Australia	\$(353)	\$(242)	\$(185)
International	87	93	124
Loss before income taxes	\$(266)	\$(149)	\$(61)

The income tax benefit (provision) is summarized below:

	Year Ended December 31,		
	2015	2014	2013
Australian:			
Current	\$(17)	\$(15)	\$(11)
Deferred	—	(183)	35
International:			
Current	(24)	(15)	(23)
Deferred		(55)	(30)
Income tax benefit (provision)	\$(41)	\$(268)	\$(29)

The following table reconciles the applicable statutory income tax rates to our effective income tax rates for “Income tax benefit (provision)” as reflected in the Consolidated Statements of Operations.

	Year Ended December 31,					
	2015	2014	2013	2015	2014	2013
	30	30	30	%	%	%
Statutory tax rate	30	30	30	%	%	%
Increases (decreases) resulting from:						
Tax rate differences	39	78	191			
Disallowable expenditures	(4)	(17)	(10)			
Valuation allowances	(89)	(1,577)	(259)			
Anadarko litigation settlement	—	1,341	—			
State NOL limitations	—	(15)	—			
State rate changes	17	—	—			
Withholding taxes	(15)	(24)	(59)			
Prior year accruals	3	(2)	22			
Change in uncertain tax positions	—	—	6			
Foreign exchange	—	1	17			
Tax credits	1	2	8			
Branch taxation	1	4	6			

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Other, net	2	(1	)	—	
Effective tax rate	(15)%	(180	)%	(48	)%

Due to the changes in our state apportionment factors, statutory rate changes in certain states in which we operate, and the acquisition of the Alkali entities, our overall effective state tax rate changed during 2015. This change resulted in an increase to our state deferred tax assets and is reflected within the State rate changes line above. The increased tax benefit is offset by a valuation allowance and results in no impact to the consolidated provision for income taxes for the year ended December 31, 2015.

The effective tax rate for each of 2015, 2014, and 2013 differs from the Australian statutory rate of 30%. Historically, the differences were primarily due to valuation allowances, income in foreign jurisdictions taxed at rates lower than 30%, and withholding tax accruals on interest income. Additionally, the effective tax rate for 2014 is impacted by \$58 million and \$255 million, respectively, due to increases to full valuation allowances in The Netherlands and Australia. During 2014, the Anadarko Litigation settlement of \$5.2 billion provided us with additional deferred tax assets of \$2.0 billion, which were offset by full valuation allowances in the United States of \$2.0 billion. As a result of an ownership change on June 15, 2012, our ability to use federal losses was not impacted; however, due to state apportionment impacts and carryforward periods, our state losses were limited. This limitation which was recorded in 2014 resulted in the loss of \$23 million of deferred tax assets but was fully offset by a reduction of the related valuation allowances.

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The statutory tax rates on income earned in South Africa (28% for limited liability companies), The Netherlands (25% for corporations), and the United Kingdom (20.25% for corporations and limited liability companies and not applicable for certain limited liability partners) are lower than the Australian statutory rate of 30%. The statutory tax rate, applied against losses in the United States (35% for corporations), is higher than the Australian statutory rate of 30%. Also, we continue to maintain a full valuation allowance in Australia, The Netherlands, and the United States. Our current year tax expense is primarily related to withholding tax accruals.

As a result of the Alkali Transaction, we expect to offset a portion of our previously existing US tax attributes with income generated by the Alkali entities. This expectation, however, does not change our overall judgement regarding the utilization of existing deferred tax assets.

Net deferred tax assets (liabilities) at December 31, 2015 and 2014 were comprised of the following:

	December 31,	
	2015	2014
Deferred tax assets:		
Net operating loss and other carryforwards	\$1,614	\$626
Property, plant and equipment	343	324
Reserves for environmental remediation and restoration	23	26
Obligations for pension and other employee benefits	86	87
Investments	25	28
Grantor trusts	1,231	2,118
Inventory	6	15
Interest	445	314
Other accrued liabilities	11	11
Unrealized foreign exchange losses	3	2
Other	15	14
Total deferred tax assets	3,802	3,565
Valuation allowance associated with deferred tax assets	(3,576)	(3,345)
Net deferred tax assets	226	220
Deferred tax liabilities:		
Property, plant and equipment	(222 )	(266 )
Intangibles	(96 )	(103 )
Inventory	(8 )	(10 )
Unrealized foreign exchange gains	(40 )	(25 )
Other	(3 )	(7 )
Total deferred tax liabilities	(369 )	(411 )
Net deferred tax asset (liability)	\$(143 )	\$(191 )
Balance sheet classifications:		
Deferred tax assets — current	\$—	\$13
Deferred tax assets — long-term	—	9
Deferred tax liabilities — current	—	(9 )
Deferred tax liabilities — long-term	(143 )	(204 )

Net deferred tax asset (liability)	\$(143 ) \$(191 )
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The net deferred tax assets (liabilities) reflected in the above table include deferred tax assets related to grantor trusts, which were established as Tronox Incorporated emerged from bankruptcy during 2011. The balances relate to the assets contributed to such grantor trusts by Tronox Incorporated. Additionally, as a result of the resolution of the Anadarko Litigation of \$5.2 billion during 2014, we recorded additional deferred tax assets of \$2.0 billion. This increase was fully offset by valuation allowances. During 2015, the U.S. net operating loss increased as the grantor trusts spent a portion of the funds received from the litigation.

In November 2015, the FASB issued Accounting Standards Update No. 2015-17 (ASU 2015-17), "Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes." The standard requires that deferred tax assets and liabilities be classified as noncurrent on the balance sheet rather than being separated into current and noncurrent. ASU 2015-17 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2016. Early adoption is permitted and the standard may be applied either retrospectively or on a prospective basis to all deferred tax assets and liabilities. We early adopted ASU 2015-17 during the fourth quarter of 2015 on a prospective basis. Accordingly, we classified all deferred taxes as noncurrent at December 31, 2015, but did not adjust the balances presented at December 31, 2014. The adoption did not have a material effect on our consolidated financial statements.

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During 2015 and 2014, the total changes to the valuation allowance were an increase of \$231 million and \$2.4 billion, respectively. The increase during 2015 was primarily related to valuation allowance offsets to the deferred tax benefits from current year book losses. The table below sets forth the changes, by jurisdiction:

	December 31,	
	2015	2014
Australia	\$112	\$255
United States	114	2,058
The Netherlands	6	50
South Africa	(1 )	—
Total increase in valuation allowances	\$231	\$2,363

At December 31, 2015, we maintain full valuation allowances related to the total net deferred tax assets in Australia, the United States, and The Netherlands, as we cannot objectively assert that these deferred tax assets are more likely than not to be realized. Future provisions for income taxes will include no tax benefits with respect to losses incurred and tax expense only to the extent of current state tax payments until the valuation allowances are eliminated. Additionally, we have valuation allowances against specific tax assets in South Africa.

These conclusions were reached by the application of ASC 740, Income Taxes, and require that all available positive and negative evidence be weighted to determine whether a valuation allowance should be recorded. The more significant evidential matter in Australia, the United States, and The Netherlands relates to recent book losses and the lack of sufficient projected taxable income. The more significant evidential matter for South Africa relates to assets that cannot be depleted or depreciated for tax purposes.

An ownership change occurred during 2012, as a result of the Exxaro Transaction. These ownership changes resulted in a limitation under IRC Sections 382 and 383 related to U.S. net operating losses. We do not expect that the application of these net limitations will have any material effect on our U.S. federal income tax liabilities; however, for 2014, we reduced our state net operating loss carryforwards and the related deferred tax benefits. The loss of these benefits is offset by a corresponding reduction in the valuation allowances.

The deferred tax assets generated by tax loss carryforwards in Australia, the United States, and The Netherlands have been fully offset by valuation allowances. The expiration of these carryforwards at December 31, 2015 is shown below. The Australian and South African tax loss carryforwards do not expire.

	Australia	U.S. Federal	U.S. State	Other	Tax Loss Carryforwards Total
2016	\$ —	\$ —	\$8	\$—	\$ 8
2017	—	—	—	—	—
2018	—	—	21	—	21
2019	—	—	1	—	1
2020	—	—	20	—	20
Thereafter	—	3,534	3,527	189	7, 250
No Expiration	499	—	—	16	515
Total tax loss carryforwards	\$ 499	\$ 3,534	\$3,577	\$ 205	\$ 7,815

At December 31, 2015, Tronox Limited had foreign subsidiaries with undistributed earnings. Although we would not be subject to income tax on these earnings, amounts totaling \$147 million could be subject to withholding tax if

distributed. Tronox Incorporated had certain foreign subsidiaries with undistributed earnings totaling \$165 million. We have made no provision for deferred taxes for either Tronox Limited or Tronox Incorporated related to these undistributed earnings because they are considered to be indefinitely reinvested outside of the parents' taxing jurisdictions.

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A reconciliation of the beginning and ending amounts of unrecognized tax benefits for 2015 and 2014 is as follows:

	Year Ended December 31,	
	2015	2014
Balance at January 1	\$ 1	\$ 1
Reductions for tax positions related to prior years	—	—
Balance at December 31	\$ 1	\$ 1

Included in the balance at December 31, 2015 and 2014, were tax positions of \$1 million and \$1 million, respectively, for which the ultimate deductibility is highly certain, but for which there is uncertainty about the timing of such deductibility. None of these net benefits, if recognized, would impact the effective income tax rate.

As a result of potential settlements, it is reasonably possible that our gross unrecognized tax benefits from timing differences may decrease within the next twelve months by \$1 million.

During 2015, 2014, and 2013, we did not recognize any gross interest or penalties in “Income tax benefit (provision)” in the Consolidated Statements of Operations related to unrecognized tax benefits. At December 31, 2015 and 2014, we had no remaining accruals for the gross payment of interest and penalties related to unrecognized tax benefits, and the noncurrent liability section of the Consolidated Balance Sheets reflected \$1 million and \$1 million, respectively, as the reserve for uncertain tax positions.

Our Australian returns are closed through 2011. However, under Australian tax laws, transfer pricing issues have no limitation period. Our U.S. returns are closed for years through 2011, with the exception of an amendment filed for the 2007 tax year. Our Netherlands returns are closed through 2012. In accordance with the Transaction Agreement, we are not liable for income taxes of the acquired companies with respect to periods prior to the Transaction Date.

We believe that we have made adequate provision for income taxes that may be payable with respect to years open for examination; however, the ultimate outcome is not presently known and, accordingly, additional provisions may be necessary and/or reclassifications of noncurrent tax liabilities to current may occur in the future.

#### Anadarko Litigation

On January 23, 2015, Anadarko Petroleum Corp. (“Anadarko”) paid \$5.2 billion, including approximately \$65 million of accrued interest, pursuant to the terms of a settlement agreement with Tronox Incorporated. We did not receive any portion of the settlement amount. Instead, 88% of the \$5.2 billion went to trusts and other governmental entities for the remediation of polluted sites by Kerr-McGee Corporation (“Kerr-McGee”). The remaining 12% was distributed to a tort trust to compensate individuals injured as a result of Kerr-McGee’s environmental failures.

We received a private letter ruling from the U.S. Internal Revenue Service confirming that the trusts that held the claims against Anadarko are grantor trusts of Tronox Incorporated solely for federal income tax purposes. As a result, we believe we are entitled to tax deductions equal to the amount spent by the trusts to remediate environmental matters and to compensate the injured individuals. These deductions will accrue over the life of the trusts as the \$5.2 billion is spent. We believe that these expenditures and the accompanying tax deductions may continue for decades. At December 31, 2014, we had recorded deferred tax assets of \$2.0 billion related to the \$5.2 billion of expected future tax deductions from trust expenditures. These deferred tax assets were fully offset by valuation allowances. At December 31, 2015, approximately \$2.4 billion of the trust expenditures expected from the litigation proceeds have been incurred.



## 8. Loss Per Share

The computation of basic and diluted loss per share for the periods indicated is as follows:

	Year Ended December 31,		
	2015	2014	2013
Numerator – Basic and Diluted:			
Net loss	\$(307 )	\$(417 )	\$(90 )
Less: Net income attributable to noncontrolling interest	11	10	36
Undistributed net loss	(318 )	(427 )	(126 )
Percentage allocated to ordinary shares <sup>(1)</sup>	100 %	100 %	100 %
Net loss available to ordinary shares	\$(318 )	\$(427 )	\$(126 )
Denominator – Basic and Diluted:			
Weighted-average ordinary shares (in thousands)	115,566	114,281	113,416
Net loss per Ordinary Share <sup>(2)</sup> :			
Basic and diluted net loss per ordinary share	\$(2.75 )	\$(3.74 )	\$(1.11 )

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Our participating securities do not have a contractual obligation to share in losses; therefore, when we have a net <sup>(1)</sup>loss, none of the loss is allocated to participating securities. Consequently, for 2015, 2014, and 2013, the two-class method did not have an effect on our net loss per ordinary share calculation, and as such, dividends paid during the year did not impact this calculation.

<sup>(2)</sup>Net loss per ordinary share amounts were calculated from exact, not rounded net loss and share information.

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In computing diluted net loss per share under the two-class method, we considered potentially dilutive shares. Anti-dilutive shares not recognized in the diluted net loss per share calculation were as follows:

	December 31, 2015		December 31, 2014		December 31, 2013	
	Shares	Average Exercise Price	Shares	Average Exercise Price	Shares	Average Exercise Price
Options	2,189,967	\$ 21.15	2,560,875	\$ 21.14	2,094,771	\$ 20.63
Series A Warrants <sup>(1)</sup>	1,354,529	\$ 9.63	1,273,917	\$ 11.04	1,850,814	\$ 11.52
Series B Warrants <sup>(1)</sup>	1,833,834	\$ 10.63	1,715,986	\$ 12.19	2,409,404	\$ 12.71
Restricted share units	1,494,027	\$ 23.04	875,776	\$ 22.17	303,324	\$ 21.08

<sup>(1)</sup> Series A Warrants and Series B Warrants were converted into Class A Shares at December 31, 2015, 2014, and 2013 using a rate of 5.66, 5.29, and 5.18, respectively. See Note 20.

## 9. Fair Value Measurement

For financial instruments that are subsequently measured at fair value, the fair value measurement is grouped into levels. See Note 2.

At December 31, 2015 and 2014, the only financial instrument measured at fair value was the environmental rehabilitation trust, which amounted to \$12 million and \$17 million, respectively, and was categorized as Level 2. See Note 17.

The carrying amounts for cash and cash equivalents, accounts receivable, other current assets, accounts payable, short-term debt, and other current liabilities approximate their fair value because of the short-term nature of these instruments.

Our debt is recorded at historical amounts. At December 31, 2015 and 2014, the fair value of the Term Loan was \$1.3 billion and \$1.5 billion, respectively. At December 31, 2015 and 2014, the fair value of the Senior Notes due 2020 was \$520 million and \$903 million, respectively. At December 31, 2015, the fair value of the Senior Notes due 2022 was \$347 million. We determined the fair value of the Term Loan, the Senior Notes due 2020 and the Senior Notes due 2022 using quoted market prices. The fair value hierarchy for the Term Loan, the Senior Notes due 2020 and the Senior Notes due 2022 is a Level 1 input. Balances outstanding under our UBS Revolver are carried at contracted amounts, which approximate fair value based on the short term nature of the borrowing and the variable interest rate. The fair value hierarchy for our UBS Revolver is a Level 2 input.

## 10. Accounts Receivable, Net of Allowance for Doubtful Accounts

Accounts receivable, net of allowance for doubtful accounts, consisted of the following:

	December 31,	
	2015	2014
Trade receivables	\$367	\$272
Other	25	6
Subtotal	392	278
Allowance for doubtful accounts	(1 )	(1 )

Accounts receivable, net of allowance for doubtful accounts    \$391    \$277

Bad debt expense was less than \$1 million, for each of the years ended 2015 and 2014 and \$1 million for the year ended 2013. Bad debt expense was recorded in “Selling, general and administrative expenses” in the Consolidated Statements of Operations.

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## 11. Inventories, Net

Inventories, net consisted of the following:

	December 31,	
	2015	2014
Raw materials	\$248	\$329
Work-in-process	43	77
Finished goods, net	245	303
Materials and supplies, net <sup>(1)</sup>	106	118
Total	642	827
Less: Inventories, net – non-current	(12 )	(57 )
Inventories, net - current	\$630	\$770

<sup>(1)</sup> Consists of processing chemicals, maintenance supplies, and spare parts, which will be consumed directly and indirectly in the production of our products.

Finished goods includes inventory on consignment of \$30 million and \$42 million at December 31, 2015 and 2014, respectively. At December 31, 2015 and 2014, inventory obsolescence reserves were \$18 million and \$14 million, respectively. During 2015 and 2014, we recognized a net LOCM charge of \$54 million and \$3 million, respectively, which was included in “Cost of goods sold” in the Consolidated Statements of Operations. During 2013, we recognized a net LOCM benefit of \$20 million which was included in “Cost of goods sold” in the Consolidated Statements of Operations. The net LOCM charge for 2015 included a \$41 million charge associated with the sale of ilmenite to a non-TiO<sub>2</sub> producer that we expect will generate approximately \$31 million in cash over the course of the next 13 months (subject to specified extensions) at a contractual price that is below the carrying cost assigned to such material as part of the Exxaro Transaction.

## 12. Property, Plant and Equipment

Property, plant and equipment, net of accumulated depreciation and amortization, consisted of the following:

	December 31,	
	2015	2014
Land and land improvements	\$143	\$80
Buildings	189	187
Machinery and equipment	1,765	1,225
Construction-in-progress	261	149
Other	44	35
Total	2,402	1,676
Less accumulated depreciation and amortization	(559 )	(449 )
Property, plant and equipment, net <sup>(1)</sup>	\$1,843	\$1,227

<sup>(1)</sup>Substantially all of these assets are pledged as collateral for our debt. See Note 16.

Depreciation expense related to property, plant and equipment during 2015, 2014, and 2013 was \$187 million, \$158 million, and \$191 million, respectively, of which \$183 million, \$155 million, and \$187 million, respectively, was recorded in “Cost of goods sold” in the Consolidated Statements of Operations and \$4 million, \$3 million, and \$4 million, respectively, was recorded in “Selling, general and administrative expenses” in the Consolidated Statements of Operations.

13. Mineral Leaseholds

Mineral leaseholds, net of accumulated depletion, consisted of the following:

	December 31,	
	2015	2014
Mineral leaseholds	\$1,948	\$1,336
Less accumulated depletion	(344 )	(278 )
Mineral leaseholds, net	\$1,604	\$1,058

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Depletion expense related to mineral leaseholds during 2015, 2014, and 2013 was \$81 million, \$110 million, and \$115 million, respectively, and was recorded in “Cost of goods sold” in the Consolidated Statements of Operations.

14. Intangible Assets

Intangible assets, net of accumulated amortization, consisted of the following:

	December 31, 2015			December 31, 2014		
	Gross Cost	Accumulated Amortization	Net Carrying Amount	Gross Cost	Accumulated Amortization	Net Carrying Amount
Customer relationships	\$294	\$ (98 )	\$ 196	\$294	\$ (79 )	\$ 215
TiO <sub>2</sub> technology	32	(8 )	24	32	(6 )	26
Internal-use software	37	(13 )	24	39	(10 )	29
Other	9	(9 )	—	9	(7 )	2
Intangible assets, net	\$372	\$ (128 )	\$ 244	\$374	\$ (102 )	\$ 272

Amortization expense related to intangible assets was \$26 million during 2015 and \$27 million each during 2014 and 2013, of which \$25 million was recorded during 2015 and \$26 million each during 2014 and 2013 in “Selling general and administrative expenses” in the Consolidated Statements of Operations. During 2015, 2014 and 2013, \$1 million each of amortization expense was recorded in “Cost of goods sold” in the Consolidated Statement of Operations.

Estimated future amortization expense related to intangible assets is \$25 million for 2016, \$25 million for 2017, \$25 million for 2018, \$25 million for 2019, \$25 million for 2020, and \$119 million thereafter.

15. Accrued Liabilities

Accrued liabilities consisted of the following:

	December 31,	
	2015	2014
Employee-related costs and benefits	\$69	\$58
Restructuring costs	15	\$4
Interest	35	22
Sales rebates	28	19
Taxes other than income taxes	11	37
Other	22	7
Accrued liabilities	\$180	\$147

16. Debt

Short-term debt consisted of the following:

	December 31,	
	2015	2014
UBS Revolver	\$150	\$ —

Short-term debt <sup>(1)</sup> \$ 150 \$ —

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(1) Average effective interest rate of 3.5% during 2015.

#### UBS Revolver

We have a global senior secured asset-based syndicated revolving credit facility with UBS AG (“UBS”) with a maturity date of June 18, 2017 (the “UBS Revolver”). Through March 31, 2015, the UBS Revolver provided us with a committed source of capital with a principal borrowing amount of up to \$300 million, subject to a borrowing base. Balances due under the UBS Revolver are carried at contracted amounts, which approximate fair value based on the short term nature of the borrowing and the variable interest rate.

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On April 1, 2015, in connection with the Alkali Transaction, we entered into an amended and restated asset-based revolving syndicated facility agreement with UBS, which provides for up to \$500 million of revolving credit lines, with a \$85 million sublimit for letters of credit with a new maturity that is the earlier of the date which is five (5) years after the closing date and the date which is 3 months prior to the maturity of the Term Loan Agreement; provided that in no event shall the Revolving Maturity be earlier than June 18, 2017. Availability of revolving credit loans and letters of credit are subject to a borrowing base. Borrowings bear interest at our option, at either a base rate or an adjusted London Interbank Offered Rate (“LIBOR”) as the greatest of (a) the Administrative Agent’s prime rate, (b) the Federal funds effective rate plus 0.50% and (c) the adjusted LIBOR for a one-month period plus 1.00%. The applicable margin ranges from 0.50% to 1.00% for borrowings at the base rate and from 1.50% to 2.00% for borrowings at the adjusted LIBOR, in each case, based on the average daily borrowing availability.

On April 1, 2015, we borrowed \$150 million against the UBS Revolver, which was outstanding at December 31, 2015. At December 31, 2014, there were no outstanding borrowings on the UBS Revolver. We had no drawdowns or repayments on the UBS Revolver during 2014. During 2015, we incurred \$2 million of deferred debt issuance costs related to the UBS Revolver, which were capitalized and included in “Other long-term assets” in the Consolidated Balance Sheet at December 31, 2015. At December 31, 2015 and 2014, our amount available to borrow was \$217 million and \$276 million, respectively.

## ABSA Revolving Credit Facility

We have a R1.3 billion (approximately \$84 million at December 31, 2015) revolving credit facility with ABSA Bank Limited (“ABSA”) acting through its ABSA Capital Division with a maturity date of June 14, 2017 (the “ABSA Revolver”). The ABSA Revolver bears interest at (i) the base rate (defined as one month JIBAR, which is the mid-market rate for deposits in South African Rand for a period equal to the relevant period which appears on the Reuters Screen SAFEY Page alongside the caption YLD) as of 11h00 Johannesburg time on the first day of the applicable period, plus (ii) the Margin, which is 3.9%.

During 2015 and 2014, we had no drawdowns or repayments on the ABSA Revolver. During 2013, we had no drawdowns and a repayment of \$30 million. The weighted average interest rate was 8.5% during 2013. At December 31, 2015 and 2014, there were no outstanding borrowings on the ABSA Revolver.

Long-term debt, net of an unamortized discount, consisted of the following:

	Original Principal	Annual Interest Rate	Maturity Date	December 31, 2015	December 31, 2014
Term Loan, net of unamortized discount <sup>(1)</sup>	\$ 1,500	Variable	3/19/2020	\$ 1,454	\$ 1,468
Senior Notes due 2020	\$ 900	6.375	% 8/15/2020	900	900
Senior Notes due 2022	\$ 600	7.50	% 3/15/2022	600	—
Co-generation Unit Financing Arrangement	\$ 16	6.50	% 2/1/2016	1	3
Lease financing				16	22
Total borrowings				2,971	2,393
Less: Long-term debt due within one year				(16 )	(18 )
Long-term debt				\$ 2,955	\$ 2,375

(1) Average effective interest rate of 4.7% and 4.6% during 2015 and 2014, respectively.



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At December 31, 2015, the scheduled maturities of our long-term debt were as follows:

	Total Borrowings
2016	\$ 16
2017	16
2018	16
2019	16
2020	2,301
Thereafter	612
Total	2,977
Remaining accretion associated with the Term Loan	(6 )
Total borrowings	\$ 2,971

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Term Loan

On March 19, 2013, we, along with our wholly owned subsidiary, Tronox Pigments (Netherlands) B.V., and certain of our subsidiaries named as guarantors, entered into a Second Amended and Restated Credit and Guaranty Agreement (the “Second Agreement”) with Goldman Sachs Bank USA, as administrative agent and collateral agent, and Goldman Sachs Bank USA, UBS Securities LLC, Credit Suisse Securities (USA) LLC and RBC Capital Markets, as joint lead arrangers, joint bookrunners and co-syndication agents. Pursuant to the Second Agreement, we obtained a \$1.5 billion senior secured term loan (the “Term Loan”). The Term Loan was issued net of an original issue discount. At December 31, 2015 and 2014, the unamortized discount was \$6 million and \$7 million, respectively. We made principal repayments during 2015 and 2014 of \$15 million and \$17 million, respectively.

On April 23, 2014, we, along with our wholly owned subsidiary, Tronox Pigments (Netherlands) B.V., and certain of our subsidiaries named as guarantors, entered into a Third Amendment to the Credit and Guaranty Agreement (the “Third Agreement”) with the lender parties thereto and Goldman Sachs Bank USA, as administrative agent, which amends the Second Agreement. The Third Agreement provides for the re-pricing of the Term Loan by replacing the existing definition of “Applicable Margin” with a grid pricing matrix dependent upon our public corporate family rating as determined by Moody’s and Standard & Poor’s (with the interest rate under the Third Agreement remaining subject to Eurodollar Rate and Base Rate floors, as defined in the Third Agreement). Pursuant to the Third Agreement, based upon our current public corporate family rating by Moody’s and Standard & Poor’s, the current interest rate per annum is 350 basis points plus LIBOR (subject to a LIBOR floor of 1% per annum) compared to 350 basis points plus LIBOR (subject to a LIBOR floor of 1% per annum) in the Second Agreement. The Third Agreement also amended certain provisions of the Second Agreement to permit us and certain of our subsidiaries to obtain new cash flow revolving credit facilities in place of our existing asset based revolving credit facility. The maturity date under the Second Agreement and all other material terms of the Second Agreement remain the same under the Third Agreement.

The Third Agreement resulted in a modification for certain lenders and an extinguishment for other lenders. Accordingly, we recognized an \$8 million charge during 2014 for the early extinguishment of debt resulting from the write-off of deferred debt issuance costs and discount on debt associated with the Second Agreement. We also paid \$2 million of new debt issuance costs related to the Third Agreement during 2014, which were recorded in “Other long-term assets” in the Consolidated Balance Sheets.

Senior Notes due 2020

On August 20, 2012, our wholly owned subsidiary, Tronox Finance LLC (“Tronox Finance”), completed a private placement offering of \$900 million aggregate principal amount of senior notes at par value (the “Senior Notes due 2020”). The Senior Notes due 2020 bear interest semiannually at a rate equal to 6.375%, and are fully and unconditionally guaranteed on a senior, unsecured basis by us and certain of our subsidiaries. The Senior Notes due 2020 were initially offered to qualified institutional buyers pursuant to Rule 144A under the Securities Act of 1933, as amended (the “Securities Act”), and outside the United States to non-U.S. persons pursuant to Regulation S under the Securities Act.

On September 17, 2013, Tronox Finance issued \$900 million in aggregate principal amount of registered 6.375% Senior Notes due 2020 in exchange for its then existing \$900 million in aggregate principal amount of its 6.375% Senior Notes due 2020. The Senior Notes due 2020 are guaranteed by Tronox and certain of its subsidiaries. See Note 26.

Senior Notes due 2022

On March 6, 2015, Evolution Escrow Issuer LLC (“Evolution”), a special purpose limited liability company organized under the laws of Delaware, was formed. Evolution was wholly owned by Stichting Evolution Escrow, a Dutch

foundation not affiliated with the Company.

On March 19, 2015, Evolution closed an offering of \$600 million aggregate principal amount of its 7.50% Senior Notes due 2022 (the “Senior Notes due 2022”). The Senior Notes due 2022 were offered and sold by Evolution in reliance on an exemption pursuant to Rule 144A and Regulation S under the Securities Act. The Senior Notes due 2022 were issued under an Indenture, dated as of March 19, 2015 (the “Indenture”), between Evolution and Wilmington Trust, National Association (the “Trustee”).

On April 1, 2015, in connection with the Alkali Transaction, Evolution merged with and into Tronox Finance, Tronox Finance assumed the obligations of Evolution under the Indenture and the Senior Notes due 2022, and the proceeds from the offering were released to us to partially pay the purchase price for the Alkali Transaction. We and certain of our subsidiaries entered into a supplemental indenture (the “First Supplemental Indenture”), by and among us, Tronox Finance, the guarantors party thereto, and the Trustee, pursuant to which we and such subsidiaries became guarantors of the Senior Notes due 2022 under the Indenture. The Senior Notes due 2022 have not been registered under the Securities Act, and may not be offered or sold in the United States absent registration or an applicable exemption from registration requirements. Debt issuance costs related to the Senior Notes due 2022 of \$13 million were capitalized and included in “Other long-term assets” in the Consolidated Balance Sheets at December 31, 2015.

The Indenture and the Senior Notes due 2022 provide, among other things, that the Senior Notes due 2022 are senior unsecured obligations of Tronox Finance. Interest is payable on March 15 and September 15 of each year beginning on September 15, 2015 until their maturity date of March 15, 2022. The terms of the Indenture, among other things, limit, in certain circumstances, the ability of us to: incur certain additional indebtedness and issue preferred stock; make certain dividends, distributions, investments and other restricted payments; sell certain assets; incur liens; agree to any restrictions on the ability of certain subsidiaries to make payments to the Company; consolidate or merge with or into, or sell substantially all of our assets to, another person; enter into transactions with affiliates; and enter into new lines of business.

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As of December 31, 2015 we had \$217 million available under the \$500 million UBS Revolver, \$84 million available under the ABSA Revolver and \$229 million in cash and cash equivalents. In the next twelve months, we expect that our operations and available borrowings under our revolving credit agreements will provide sufficient cash to fund our operating expenses, capital expenditures, interest payments, debt repayments, and dividends.

## Lease Financing

We have capital lease obligations in South Africa, which are payable through 2031 at a weighted average interest rate of approximately 14%. At December 31, 2015 and 2014, such obligations had a net book value of assets recorded under capital leases aggregating \$14 million and \$20 million, respectively. During 2015, 2014, and 2013 we made principal payments of less than \$1 million for all periods.

At December 31, 2015, future minimum lease payments, including interest, were as follows:

	Principal Repayments	Interest	Total Payments
2016	\$ 1	\$ 2	\$ 3
2017	1	2	3
2018	1	2	3
2019	1	2	3
2020	1	2	3
Thereafter	11	12	23
Total	16	22	38

## Bridge Facility

In connection with the Alkali Transaction, we entered into a \$600 million senior unsecured bridge facility (the "Bridge Facility"). The Bridge Facility was not utilized and terminated with the completion of the Alkali Transaction. During 2015, we incurred \$8 million of financing fees related to the Bridge Facility, which were included in "Interest and debt expense, net" in the Consolidated Statements of Operations.

## Debt Covenants

At December 31, 2015, we had financial covenants in the UBS Revolver, the ABSA Revolver and the Term Loan; however, only the ABSA Revolver had a financial maintenance covenant that applies to local operations and only when the ABSA Revolver is drawn upon. The Term Loan and the UBS Revolver are subject to an intercreditor agreement pursuant to which the lenders' respective rights and interests in the security are set forth. We were in compliance with all our financial covenants as of and for the year ended December 31, 2015.

## Interest and Debt Expense, Net

Interest and debt expense, net consisted of the following:

	Year Ended December 31,		
	2015	2014	2013
Interest on debt	\$160	\$124	\$122
Amortization of deferred debt issuance costs and discounts on debt	11	10	9
Bridge Facility	8	—	—

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Other	3	2	4
Capitalized interest	(6 )	(3 )	(5 )
Total interest and debt expense, net	\$176	\$133	\$130

In connection with obtaining debt, we incurred debt issuance costs, which are being amortized through the respective maturity dates using the effective interest method. At December 31, 2015 and 2014, we had \$49 million and \$44 million, respectively, of deferred debt issuance costs, which were recorded in “Other long-term assets” in the Consolidated Balance Sheets.

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## 17. Asset Retirement Obligations

Asset retirement obligations consist primarily of rehabilitation and restoration costs, landfill capping costs, decommissioning costs, and closure and post-closure costs. Activity related to asset retirement obligations was as follows:

	Year Ended December 31,	
	2015	2014
Beginning balance	\$90	\$ 96
Additions	3	5
Accretion expense	5	4
Remeasurement/translation	(12)	(9 )
Changes in estimates, including cost and timing of cash flows	(3 )	—
Settlements/payments	(2 )	(6 )
Ending balance	\$81	\$ 90
Current portion included in “Accrued liabilities”	\$4	\$ 5
Noncurrent portion included in “Asset retirement obligations”	\$77	\$ 85

We used the following assumptions in determining asset retirement obligations at December 31, 2015: inflation rates between 2.5% - 5.5% per year; credit adjusted risk-free interest rates between 3.2% -16.7%; the life of mines between 21- 35 years and the useful life of assets of between 1-24 years.

## Environmental Rehabilitation Trust

In accordance with applicable regulations, we have established an environmental rehabilitation trust for the prospecting and mining operations in South Africa, which receives, holds, and invests funds for the rehabilitation or management of asset retirement obligations. The trustees of the fund are appointed by us, and consist of sufficiently qualified employees capable of fulfilling their fiduciary duties. At December 31, 2015 and 2014, the environmental rehabilitation trust assets were \$12 million and \$17 million, respectively, which were recorded in “Other long-term assets” in the Consolidated Balance Sheets.

## 18. Derivative Instruments

We manufacture and market our products in a number of countries throughout the world and, as a result, are exposed to changes in foreign currency exchange rates, particularly in South Africa, Australia, and The Netherlands. Costs in South Africa and Australia are primarily incurred in local currencies, while the majority of revenues are in U.S. dollars. In Europe, the majority of revenues and costs are in the local currency. This leaves us exposed to movements in the South African Rand and the Australian dollar versus the U.S. dollar.

In order to manage this risk, we enter into currency forward contracts to buy and sell foreign currencies as “economic hedges” for these foreign currency transactions. Our currency forward contracts were not designated for hedge accounting treatment under ASC 815, Derivatives and Hedging. As such, changes in the fair value were recorded in “Other income (expense), net” in the Consolidated Statements of Operations. During 2015, 2014, and 2013, we recorded a net gain of less than \$1 million, a net loss of \$1 million and a net gain of \$2 million, respectively. At December 31, 2015 and 2014, we did not have any forward contracts in place.

19. Commitments and Contingencies

Leases—We lease office space, storage, and equipment under non-cancelable lease agreements, which expire on various dates through 2023. Total rental expense related to operating leases recorded in “Cost of goods sold” in the Consolidated Statements of Operations was \$38 million, \$24 million and \$40 million during 2015, 2014 and 2013, respectively. Total rental expense related to operating leases recorded in “Selling, general and administrative expense” in the Consolidated Statements of Operations, was \$3 million during 2015 and \$2 million each during 2014 and 2013.

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At December 31, 2015, minimum rental commitments under non-cancelable operating leases were as follows:

	Operating
2016	\$ 39
2017	23
2018	14
2019	14
2020	13
Thereafter	77
 Total	 \$ 180

Purchase Commitments—At December 31, 2015, purchase commitments were \$128 million for 2016, \$98 million for 2017, \$89 million for 2018, \$61 million for 2019, \$50 million for 2020, and \$291 million thereafter.

Letters of Credit—At December 31, 2015, we had outstanding letters of credit, bank guarantees, and performance bonds of \$65 million, of which \$41 million were letters of credit issued under the UBS Revolver, \$16 million were bank guarantees issued by ABSA, \$4 million each were bank guarantees issued by Standard Bank and performance bonds issued by Westpac Banking Corporation.

Other Matters—From time to time, we may be party to a number of legal and administrative proceedings involving legal, environmental, and/or other matters in various courts or agencies. These proceedings, individually and in the aggregate, may have a material adverse effect on us. These proceedings may be associated with facilities currently or previously owned, operated or used by us and/or our predecessors, some of which may include claims for personal injuries, property damages, cleanup costs, and other environmental matters. Current and former operations may also involve management of regulated materials that are subject to various environmental laws and regulations including the Comprehensive Environmental Response Compensation and Liability Act, the Resource Conservation and Recovery Act or state equivalents. Similar environmental laws and regulations and other requirements exist in foreign countries in which we operate. Currently, we are not party to any pending legal or administrative proceedings that may have a material adverse effect, either individually or in the aggregate, on our business, financial condition or results of operations.

## 20. Shareholders' Equity

The changes in outstanding Class A ordinary shares ("Class A Shares") and Class B Shares for 2015 were as follows:

Class A Shares:	
Balance at January 1, 2014	62,349,618
Shares issued for share-based compensation	467,823
Shares issued upon warrants exercised	836,518
Shares issued upon options exercised	314,657
 Balance at December 31, 2014	 63,968,616
Shares issued for share-based compensation	403,213
Shares issued upon warrants exercised	8,549
Shares issued upon options exercised	141,473
 Balance at December 31, 2015	 64,521,851
 Class B Shares:	



Balance at December 31, 2015 and 2014      51,154,280

#### Warrants

We have outstanding Series A Warrants (the “Series A Warrants”) and Series B Warrants (the “Series B Warrants,” and together with the Series A Warrants, the “Warrants”). At December 31, 2015, holders of the Warrants were entitled to purchase 5.66 Class A Shares and receive \$12.50 in cash at an exercise price of \$54.50 for each Series A Warrant and \$60.15 for each Series B Warrant. The Warrants have a seven-year term from the date initially issued and will expire on February 14, 2018. A holder may exercise the Warrants by paying the applicable exercise price in cash or exercising on a cashless basis. The Warrants are freely transferable by the holder. At December 31, 2015 and 2014, there were 239,316 and 240,816 Series A Warrants outstanding, respectively, and 323,999 and 324,383 Series B Warrants outstanding, respectively.

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## Dividends

During 2015 and 2014, we declared and paid quarterly dividends to holders of our Class A Shares and Class B Shares as follows:

	Q1 2015	Q2 2015	Q3 2015	Q4 2015
Dividend per share	\$0.25	\$0.25	\$0.25	\$0.25
Total dividend	\$29	\$30	\$30	\$29
Record date (close of business)	March 9	May 18	August 19	November 16

	Q1 2014	Q2 2014	Q3 2014	Q4 2014
Dividend per share	\$0.25	\$0.25	\$0.25	\$0.25
Total dividend	\$29	\$29	\$29	\$30
Record date (close of business)	March 10	May 19	August 18	November 17

## Accumulated Other Comprehensive Loss Attributable to Tronox Limited

The tables below present changes in accumulated other comprehensive loss by component for 2015, 2014 and 2013.

	Cumulative Translation Adjustment	Pension Liability Adjustment	Total
Balance, January 1, 2013	\$ 4	\$ (99 )	\$(95 )
Other comprehensive income (loss)	(195 )	28	(167 )
Amounts reclassified from accumulated other comprehensive loss	(24 )	2	(22 )
Balance, December 31, 2013	\$ (215 )	\$ (69 )	\$(284 )
Other comprehensive loss	(99 )	(46 )	(145 )
Amounts reclassified from accumulated other comprehensive loss	35	(2 )	33
Balance, December 31, 2014	\$ (279 )	\$ (117 )	\$(396 )
Other comprehensive income (loss)	(215 )	12	(203 )
Amounts reclassified from accumulated other comprehensive loss	—	3	3
Balance, December 31, 2015	\$ (494 )	\$ (102 )	\$(596 )

## 21. Noncontrolling Interest

Exxaro has a 26% ownership interest in each of our Tronox KZN Sands (Pty) Ltd. and Tronox Mineral Sands (Pty) Ltd. subsidiaries in order to comply with the ownership requirements of the Black Economic Empowerment (“BEE”) legislation in South Africa. Exxaro is entitled to exchange this interest for approximately 3.2% in additional Class B Shares under certain circumstances. Exxaro also has a 26% ownership interest in certain of our other non-operating subsidiaries. We account for such ownership interest as “Noncontrolling interest” in the consolidated financial statements.

Noncontrolling interest activity was as follows:

Balance at January 1, 2013	\$233
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Net income attributable to noncontrolling interest	36
Effect of exchange rate changes	(70 )
Balance at December 31, 2013	199
Net income attributable to noncontrolling interest	10
Effect of exchange rate changes	(31 )
Balance at December 31, 2014	\$178
Net income attributable to noncontrolling interest	11
Effect of exchange rate changes	(77 )
Balance at December 31, 2015	\$112

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## 22. Share-based Compensation

Compensation expense consisted of the following:

	Year Ended December 31,		
	2015	2014	2013
Restricted shares and restricted share units	\$15	\$13	\$10
Options	5	7	5
T-Bucks Employee Participation Plan	2	2	2
Long-term incentive plan	-	(2)	1
Total share-based compensation expense	\$22	\$20	\$18

## Tronox Limited Management Equity Incentive Plan

On June 15, 2012, we adopted the Tronox Limited Management Equity Incentive Plan (the “MEIP”), which permits the grant of awards that are comprised of incentive options, nonqualified options, share appreciation rights, restricted shares, restricted share units, performance awards, and other share-based awards, cash payments, and other forms as the compensation committee of the Board of Directors (the “Board”) in its discretion deems appropriate, including any combination of the above. Subject to further adjustment, the maximum number of shares which may be the subject of awards (inclusive of incentive options) is 12,781,225 Class A Shares.

## Restricted Shares

During 2015, we granted restricted shares which vest ratably over a three-year period. These awards are classified as equity awards, and are accounted for using the fair value established at the grant date.

The following table presents a summary of activity for 2015:

	Number of Shares	Weighted Average Grant Date Fair Value
Outstanding, January 1, 2015	635,295	\$ 22.82
Granted	66,108	22.60
Vested	(197,545)	22.07
Forfeited	(130,580)	26.14
Outstanding, December 31, 2015	373,278	\$ 22.02
Expected to vest, December 31, 2015	372,713	\$ 22.02

At December 31, 2015, there was \$1 million of unrecognized compensation expense related to nonvested restricted shares, adjusted for estimated forfeitures, which is expected to be recognized over a weighted-average period of 1.3 years. The weighted-average grant-date fair value of restricted shares granted during 2015, 2014 and 2013 was \$22.60 per share, \$22.17 per share, and \$21.18 per share, respectively. The total fair value of restricted shares that vested during 2015, 2014 and 2013 was \$4 million, \$8 million, and \$2 million, respectively.

Restricted Share Units (“RSUs”)

During 2015, we granted RSUs which have time and/or performance conditions. Both the time-based awards and the performance-based awards are classified as equity awards. The time-based awards vest ratably over a three-year period, and are valued at the weighted average grant date fair value. The performance-based awards cliff vest at the end of the three years. Included in the performance-based awards are RSUs for which vesting is determined by a Total Stockholder Return (“TSR”) calculation over the applicable measurement period. The TSR metric is considered a market condition for which we use a Monte Carlo simulation to determine the grant date fair value.

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The following table presents a summary of activity for 2015:

	Number of Shares	Weighted Average Grant Date Fair Value
Outstanding, January 1, 2015	875,776	\$ 22.17
Granted	948,487	23.47
Vested	(265,172 )	21.69
Forfeited	(65,064 )	22.96
Outstanding, December 31, 2015	1,494,027	\$ 23.04
Expected to vest, December 31, 2015	1,460,857	\$ 23.03

At December 31, 2015, there was \$17 million of unrecognized compensation expense related to nonvested RSUs, adjusted for estimated forfeitures, which is expected to be recognized over a weighted-average period of 1.7 years. The weighted-average grant-date fair value of restricted share units granted during 2015, 2014 and 2013 was \$23.47 per share, \$22.37 per share, and \$21.06 per share, respectively. The total fair value of RSUs that vested during 2015, 2014 and 2013 was \$6 million, \$3 million and less than \$1 million, respectively.

## Options

During the 2015, we granted options to purchase Class A Shares, which vest ratably over a three-year period and have a ten-year term. The following table presents a summary of activity for 2015:

	Number of Options	Weighted Average Exercise Price	Weighted Average Contractual Life (years)	Intrinsic Value
Outstanding, January 1, 2015	2,560,875	\$ 21.14	7.88	\$ 8
Granted	2,380	22.69		
Exercised	(141,473 )	19.37		
Forfeited	(231,815 )	22.13		
Expired	—	—		
Outstanding, December 31, 2015	2,189,967	\$ 21.15	7.39	\$ —
Expected to vest, December 31, 2015	906,337	\$ 20.78	7.71	\$ —
Exercisable, December 31, 2015	1,275,676	\$ 21.41	7.16	\$ —

The aggregate intrinsic values in the table represent the total pre-tax intrinsic value (the difference between our share price at the indicated dates and the options' exercise price, multiplied by the number of in-the-money options) that would have been received by the option holders had all option holders exercised their in-the-money options at the end of the year. The amount will change based on the fair market value of our stock. Total intrinsic value of options exercised during 2015, 2014 and 2013 was less than \$1 million, \$2 million, and less than \$1 million, respectively. We issue new shares upon the exercise of options. During 2015 and 2014, we received \$3 million and \$6 million,

respectively, in cash for the exercise of stock options.

At December 31, 2015, unrecognized compensation expense related to options, adjusted for estimated forfeitures, was \$3 million, which is expected to be recognized over a weighted-average period of 1 year.

During the 2015 and 2014, we granted 2,380 and 915,988 options, respectively, with a weighted average grant date fair value of \$7.04 and \$8.19, respectively.

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Fair value is determined on the grant date using the Black-Scholes option-pricing model and is recognized in earnings on a straight-line basis over the employee service period of three years, which is the vesting period. The assumptions used in the Black-Scholes option-pricing model on the grant date were as follows:

	January 5, 2015
Number of options granted	2,380
Fair market value and exercise price	\$ 22.69
Risk-free interest rate	1.83 %
Expected dividend yield	4.41 %
Expected volatility	48 %
Maturity (years)	10
Expected term (years)	6
Per-unit fair value of options granted	\$ 7.04

The fair value is based on the closing price of our Class A Shares on the grant date. The risk-free interest rate is based on U.S. Treasury Strips available with a maturity period consistent with the expected life assumption. The expected volatility assumption is based on historical price movements of our peer group.

## T-Bucks Employee Participation Plan (“T-Bucks EPP”)

During 2012, we established the T-Bucks EPP for the benefit of certain qualifying employees of our South African subsidiaries. We funded the T-Bucks Trust (the “Trust”) with R124 million (approximately \$15 million), which was used to acquire Class A Shares. Additional contributions may be made in the future at the discretion of the Board. The T-Bucks EPP is classified as an equity-settled shared-based payment plan, whereby participants were awarded share units in the Trust, which entitles them to receive Class A Shares upon completion of the vesting period on May 31, 2017. Participants are entitled to receive dividends on the shares during the vesting period. Forfeited shares are retained by the Trust, and are allocated to future participants. Compensation costs are recognized over the vesting period using the straight-line method. During 2012, the Trust purchased 548,234 Class A Shares at \$25.79 per share, which was the fair value on the date of purchase. The balance at both December 31, 2015 and 2014 was 548,234 shares.

## Long-Term Incentive Plan

We have a long-term incentive plan (the “LTIP”) for the benefit of certain qualifying employees of Tronox subsidiaries in South Africa and Australia. The LTIP is classified as a cash settled compensation plan, and is re-measured to fair value at each reporting date. At December 31, 2015 and 2014, the LTIP plan liability was less than \$1 million and \$1 million, respectively.

## 23. Pension and Other Postretirement Healthcare Benefits

We sponsor two noncontributory defined benefit retirement plans, the qualified retirement plan and Alkali qualified retirement plan in the United States, a defined benefit retirement plan in The Netherlands, a collective defined contribution plan in The Netherlands, and a South Africa postretirement healthcare plan.

## U.S. Plans

**Qualified Retirement Plan** — We sponsor a noncontributory qualified defined benefit plan (funded) (the “U.S. Qualified Plan”) in accordance with the Employee Retirement Income Security Act of 1974 (“ERISA”) and the Internal Revenue



Code. We made contributions into funds managed by a third-party, and those funds are held exclusively for the benefit of the plan participants. Benefits under the U.S. Qualified Plan were generally calculated based on years of service and final average pay. The U.S. Qualified Plan was frozen and closed to new participants on June 1, 2009.

Postretirement Healthcare Plan — We sponsored an unfunded U.S. postretirement healthcare plan. Effective January 1, 2015, we eliminated the pre-65 retiree medical programs. Participants who retired prior to January 1, 2015 received a one-time subsidy aggregating to less than \$1 million towards medical cost through a health reimbursement arrangement (“HRA”) that we established for them. Benefits under this plan for participants who have not retired by January 1, 2015 were eliminated. As a result of this action, we recorded a curtailment gain of \$6 million, which was included in “Other income (expense), net” in the Consolidated Statements of Operations during 2014, and reduced the projected benefit obligation by \$16 million. Additionally, this action resulted in a settlement gain of \$3 million, which was recorded in “Accumulated other comprehensive income” in the Consolidated Balance Sheets during 2014.

Tronox Alkali Qualified Retirement Plan — As part of the Alkali Transaction, we established the Tronox Alkali Corporation Union Retirement Plan (the “Alkali Qualified Plan”) to cover eligible employees of Tronox Alkali Corporation effective April 1, 2015. The plan is open to union employees of Alkali. The Alkali Qualified Plan is the same as the FMC Corporation Employees’ Retirement Program Part II Union Hourly Employees’ Retirement Plan provided to eligible participants for services prior to the Alkali Transaction Date. These two plans are aggregated to form the full pension for eligible participants. Under the Tronox Alkali Qualified Plan, each eligible employee will automatically become a participant upon completion of one year of credited services. Retirement benefits under this plan are calculated based on the total years of service of an eligible participant, multiplied by a specified benefit rate in effect at the termination of the plan participant’s years of service. FMC will be responsible for the portion of this total benefit accrued to eligible participants for all the years of service up to March 31, 2015, and we will be responsible for the portion of the total benefit accrued to participants from April 1, 2015 up to the date of termination of a participant’s years of service.

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## Foreign Plans

Netherlands Plan — On January 1, 2007, we established the TDF-Botlek Pension Fund Foundation (the “Netherlands Plan”) to provide defined pension benefits to qualifying employees of Tronox Pigments (Holland) B.V. and its related companies. During the fourth quarter of 2014, in response to the tax and pension legislation changes in The Netherlands, our benefit committee approved to end future benefit accruals under The Netherlands Plan and replaced it with a multiemployer plan effective January 1, 2015. As a result of this decision, effective from January 1, 2015, benefit contributions commenced under the multiemployer plan while The Netherlands Plan became effectively “frozen”. This action ended future benefit accrual for participants under the current plan, resulting in a curtailment gain of \$3 million, which was recognized in “Other income (expense), net” in the Consolidated Statements of Operations during 2014. Such amounts had previously been recognized as unamortized prior service costs in “Accumulated other comprehensive loss” in the Consolidated Balance Sheets. The changes also resulted in a reduction of the projected benefit obligation by \$27 million, which was recognized in “Accumulated other comprehensive income” in the Consolidated Balance Sheets at December 31, 2014.

Netherlands Collective Contribution Plan — Effective January 1, 2015, we ceased offering benefits under the Netherlands Plan to qualifying employees and established a multiemployer plan, the collective contribution plan (“CDC plan”). Under the CDC plan, employees earn benefits based on their pensionable salaries each year determined using a career average benefit formula. The collective bargaining agreement between us and the participants require us to contribute 20.6% of the participants’ pensionable salaries into a pooled fund administered by the industrywide Pension Fund for Graphical Industry (“PGB”). The pensionable salary is the annual income of employees subject to a cap, which is adjusted each year to reflect the current requirements of The Netherlands’ Wages and Salaries Tax Act of 1964. Our obligation under this new plan is limited to the fixed percentage contribution we make each year. That is, investment risks, mortality risks and other actuarial risks typically associated with a defined benefit plan are borne by the employees. Additionally, the employees are entitled to any returns generated from the investment activities of the fund.

The following table outlines the details of our participation in the CDC plan for the year ended December 31, 2015. The CDC disclosures provided herein are based on the fund’s 2014 annual report, which is the most recently available public information. On the basis of the total plan assets and accumulated benefit obligation information in the plan’s annual report, the zone status was green as of December 31, 2014. A green zone status indicates that the plan was at least 80 percent funded. The “FIP/RP Status Pending/Implemented” column indicates whether a financial improvement plan (FIP) or a rehabilitation plan (RP) is either pending or has been implemented. As of December 31, 2015, we are not aware of any financial improvement or rehabilitation plan being implemented or pending. The last column lists the expiration date of the collective-bargaining agreement to which the plan is subject

Pension Fund	EIN/Pension Plan Number	Pension Protection Act Zone Status			Tronox Contributions			Surcharge Imposed	Expiration date of Collective-Bargaining Agreement
		2015	2014	FIP/RP Pending/Implemented	2015	2014	2013		
PGB	NA	NA	Green	No	\$4	NA	NA	No	12/31/2019

On the basis of the information available in the plan’s 2014 annual report, our contribution does not constitute more than 5 percent of the total contribution to the plan by all participants. During 2015, the fund did not impose any

surcharge on us.

South Africa Postretirement Healthcare Plan — As part of the Transaction, we established a post-employment healthcare plan, which provides medical and dental benefits to certain Namakwa Sands employees, retired employees and their registered dependents (the “South African Plan”). The South African Plan provides benefits as follows: (i) members employed before March 1, 1994 receive 100% post-retirement and death-in-service benefits; (ii) members employed on or after March 1, 1994 but before January 1, 2002 receive 2% per year of completed service subject to a maximum of 50% post-retirement and death-in-service benefits; and, (iii) members employed on or after January 1, 2002 receive no post-retirement and death-in-service benefits.

Benefit Obligations and Funded Status — The following provides a reconciliation of beginning and ending benefit obligations, beginning and ending plan assets, funded status, and balance sheet classification of our pension and postretirement healthcare plans as of and for the years ended December 31, 2015 and 2014. The benefit obligations and plan assets associated with our principal benefit plans are measured on December 31.

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	Retirement Plans Year Ended December		Postretirement Healthcare Plans Year Ended December	
	2015	2014	2015	2014
Change in benefit obligations:				
Benefit obligation, beginning of year	\$581	\$524	\$ 8	\$ 23
Service cost	4	4	—	1
Interest cost	19	21	1	1
Net actuarial (gains) losses	(42 )	113	—	1
Foreign currency rate changes	(16 )	(19 )	(2 )	(1 )
Contributions by plan participants	—	1	—	—
Curtailment	—	(27 )	—	(13 )
Settlement	—	—	—	(3 )
Plan amendments	—	—	—	—
Benefits paid	(31 )	(33 )	—	(1 )
Administrative expenses	(4 )	(3 )	—	—
Benefit obligation, end of year	511	581	7	8
Change in plan assets:				
Fair value of plan assets, beginning of year	417	398	—	—
Actual return on plan assets	(8 )	53	—	—
Employer contributions <sup>(1)</sup>	17	17	—	1
Participant contributions	—	1	—	—
Foreign currency rate changes	(14 )	(16 )	—	—
Benefits paid <sup>(1)</sup>	(31 )	(33 )	—	(1 )
Administrative expenses	(4 )	(3 )	—	—
Fair value of plan assets, end of year	377	417	—	—
Net over (under) funded status of plans	\$(134)	\$(164)	\$ (7 )	\$ (8 )
Classification of amounts recognized in the Consolidated Balance Sheets:				
Accrued liabilities	\$—	\$—	\$—	\$—
Pension and postretirement healthcare benefits	(134)	(164)	(7)	(8)
Total liabilities	(134)	(164)	(7)	(8)
Accumulated other comprehensive (income) loss	104	117	(2)	(2)
Total	\$(30)	\$(47)	\$ (9)	\$ (10)

<sup>(1)</sup> We expect 2016 contributions to be \$15 million and \$5 million for the qualified retirement plan and Alkali qualified retirement plan, respectively.

At December 31, 2015, our qualified retirement plan was in an underfunded status of \$116 million. As a result, we have a projected minimum funding requirement of \$18 million for 2015, which will be payable in 2016.

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	December 31, 2015			December 31, 2014		
	Alkali Qualified Plan	The Qualified Plan	The Netherlands Plan	Alkali Qualified Plan	The Qualified Plan	The Netherlands Plan
Accumulated benefit obligation	\$370	\$ 5	\$ 135	\$429	\$ —	\$ 152
Projected benefit obligation	(370)	(5 )	(135 )	(429)	—	(152 )
Fair value of plan assets	254	2	121	280	—	137
Funded status - underfunded	\$(116)	\$ (3 )	\$ (14 )	\$(149)	\$ —	\$ (15 )

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Expected Benefit Payments — The following table shows the expected cash benefit payments for the next five years and in the aggregate for the years 2021 through 2025:

	2016	2017	2018	2019	2020	2021- 2025
Retirement Plans <sup>(1)</sup>	\$ 30	\$ 30	\$ 30	\$ 30	\$ 31	\$ 153
Postretirement Healthcare Plan	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 2

Includes benefit payments expected to be paid from the U.S. qualified retirement plans of \$28 million in 2016, \$28 million in 2017, \$27 million in 2018, \$27 million in 2019, \$28 million in 2020, and \$134 million in the aggregate for the period 2021 through 2025.

Retirement and Postretirement Healthcare Expense — The table below presents the components of net periodic cost (income) associated with the U.S. and foreign plans recognized in the Consolidated Statements of Operations for 2015, 2014, and 2013:

	Retirement Plans			Postretirement Healthcare Plans		
	Year Ended December 31,			Year Ended December 31,		
	2015	2014	2013	2015	2014	2013
Net periodic cost:						
Service cost	\$4	\$4	\$5	\$—	\$ 1	\$ 1
Interest cost	19	21	20	1	1	1
Expected return on plan assets	(22)	(23)	(20)	—	—	—
Net amortization of actuarial loss	3	1	2	—	1	—
Curtailement gains	—	(3 )	—	—	(6 )	—
Total net periodic cost (income)	\$4	\$—	\$7	\$1	\$(3 )	\$ 2

Pretax amounts that are expected to be reclassified from “Accumulated other comprehensive loss” in the Consolidated Balance Sheets to retirement expense during 2016 related to unrecognized actuarial gains are \$2 million for the U.S. retirement plans and unrecognized settlement gain of \$3 million for the U.S. postretirement healthcare plan.

Assumptions — The following weighted average assumptions were used to determine net periodic cost:

	2015			2014			2013		
	Qualified Plan	Alkali Qualified Plan	Netherlands Plan	Qualified Plan	Alkali Qualified Plan	Netherlands Plan	Qualified Plan	Alkali Qualified Plan	Netherlands Plan
Discount rate	3.75%	4.15 %	2.25 %	4.50%	—	3.50 %	3.75%	—	3.50 %
Expected return on plan assets	5.95%	4.46 %	4.75 %	6.50%	—	4.75 %	5.30%	—	4.75 %
Rate of compensation increases	—	—	—	—	—	3.25 %	—	—	3.50 %

The following weighted average assumptions were used in estimating the actuarial present value of the plans' benefit obligations:

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	2015			2014			2013		
	Qualified Plan	Alkali Qualified Plan	Netherlands Plan	Qualified Plan	Alkali Qualified Plan	Netherlands Plan	Qualified Plan	Alkali Qualified Plan	Netherlands Plan
Discount rate	4.75%	5.00%	2.25%	3.75%	—	2.25%	4.50%	—	3.50%
Rate of compensation increases	—	—	—	—	—	—	—	—	3.25%

During 2014, the Society of Actuaries issued an updated mortality table and improvement scale that indicated significant mortality improvement over the prior table. We concluded that the updated table represented our best estimate of mortality. This change in assumption resulted in an increase in our projected benefit obligation of \$36 million as compared to December 31, 2013. In 2015, the mortality improvement scale that had been used in the 2014 mortality table was updated by the Society of Actuaries to reflect actual experience in mortality rates. We updated our mortality assumption accordingly resulting in a decrease of \$8 million to our projected benefit obligation as compared to December 31, 2014.

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The following weighted-average assumptions were used in determining the actuarial present value of the South African Postretirement Healthcare Plan:

	2015	2014	2013
Discount rate	10.94%	9.16%	10.14%

Expected Return on Plan Assets — In forming the assumption of the U.S. long-term rate of return on plan assets, we took into account the expected earnings on funds already invested, earnings on contributions expected to be received in the current year, and earnings on reinvested returns. The long-term rate of return estimation methodology for U.S. plans is based on a capital asset pricing model using historical data and a forecasted earnings model. An expected return on plan assets analysis is performed which incorporates the current portfolio allocation, historical asset-class returns, and an assessment of expected future performance using asset-class risk factors. Our assumption of the long-term rate of return for The Netherlands plan was developed considering the portfolio mix and country-specific economic data that includes the rates of return on local government and corporate bonds.

Discount Rate — The discount rates selected for estimation of the actuarial present value of the benefit obligations the qualified plan were 4.75% and 3.75% as of December 31, 2015 and 2014, respectively. The 2015 and 2014 rates were selected based on the results of a cash flow matching analysis, which projected the expected cash flows of the plans using a yield curves model developed from a universe of Aa-graded U.S. currency corporate bonds (obtained from Bloomberg) with at least \$50 million outstanding. Bonds with features that imply unreliable pricing, a less than certain cash flow, or other indicators of optionality are filtered out of the universe. The remaining universe is categorized into maturity groups, and within each of the maturity groups yields are ranked into percentiles.

The discount rates selected for estimating the actuarial present value of the benefit obligation of Alkali plan was 5.0% as of December 31, 2015 which was selected based on the results of a cash flow matching analysis, which projected the expected cash flows of the plan using Aon Hewitt AA Above Median yield curve developed from a U.S. currency corporate bonds with at least \$250 million outstanding.

The discount rates selected for estimating the actuarial present value of the benefit obligation of The Netherlands plan was 2.25% both as of December 31, 2015 and 2014, which is based on long-term Euro corporate bond index rates that correlate with anticipated cash flows associated with future benefit payments.

Plan Assets — Asset categories and associated asset allocations for our funded retirement plans at December 31, 2015 and 2014:

	December 31,			
	2015		2014	
	Actual	Target	Actual	Target
Qualified Plan:				
Equity securities	37 %	38 %	37 %	38 %
Debt securities	61	62	62	62
Cash and cash equivalents	2	—	1	—
Total	100 %	100 %	100 %	100 %
Alkali Qualified Plan:				
Debt securities	100 %	100 %	—	—
Total	100 %	100 %	—	—
Netherlands:				



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Equity securities	24 %	25 %	35 %	35 %
Debt securities	64	62	63	62
Real estate	11	10	—	—
Cash and cash equivalents	1	3	2	3
Total	100 %	100 %	100 %	100 %

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The U.S. Qualified Retirement Plan is administered by a board-appointed committee that has fiduciary responsibility for the plan's management. The committee maintains an investment policy stating the guidelines for the performance and allocation of plan assets, performance review procedures and updating of the policy. At least annually, the U.S. plan's asset allocation guidelines are reviewed in light of evolving risk and return expectations.

Substantially all of the plan's assets are invested with nine equity fund managers, three fixed-income fund managers and one money-market fund manager. To control risk, equity fund managers are prohibited from entering into the following transactions, (i) investing in commodities, including all futures contracts, (ii) purchasing letter stock, (iii) short selling, and (iv) option trading. In addition, equity fund managers are prohibited from purchasing on margin and are prohibited from purchasing Tronox securities. Equity managers are monitored to ensure investments are in line with their style and are generally permitted to invest in U.S. common stock, U.S. preferred stock, U.S. securities convertible into common stock, common stock of foreign companies listed on major U.S. exchanges, common stock of foreign companies listed on foreign exchanges, covered call writing, and cash and cash equivalents.

Fixed-income fund managers are prohibited from investing in (i) direct real estate mortgages or commingled real estate funds, (ii) private placements above certain portfolio thresholds, (iii) tax exempt debt of state and local governments above certain portfolio thresholds, (iv) fixed income derivatives that would cause leverage, (v) guaranteed investment contracts, and (vi) Tronox securities. They are permitted to invest in debt securities issued by the U.S. government, its agencies or instrumentalities, commercial paper rated A3/P3, FDIC insured certificates of deposit or bankers' acceptances and corporate debt obligations. Each fund manager's portfolio has an average credit rating of A or better.

The Alkali plan is administered by a board-appointed committee that has fiduciary responsibility for the plan's management. The committee is responsible for the oversight and management of the plan's investments. The committee maintains an investment policy that provides guidelines for selection and retention of investment managers or funds, allocation of plan assets and performance review procedures and updating of the policy. At least annually, the Alkali plan's asset allocation guidelines are reviewed in light of evolving risk and return expectations.

The objective of the committee's investment policy is to manage the plan assets in such a way that will allow for the on-going payment of the Company's obligation to the beneficiaries. To meet this objective, the committee has structured a portfolio that will provide liquidity to meet the plan benefit payments and expense payable from the plan under ERISA and manage the plan asset in a liability framework. To provide adequate liquidity and control risk, the investment policy sets our broad investment guidelines that permit investment managers and funds to invest in liability-hedging assets to control the plan's surplus volatility. This includes investment in high-quality, investment grade bonds with durations that approximate the durations of the liabilities.

Fixed income portfolio managers are permitted to use fixed income derivative contracts to achieve general portfolio objectives in accordance with the risk management and internal control procedures agreed between the manager and the committee's advisor. The overall performance of the liability-hedging assets will be determined primarily by how they track the investable custom liability-hedging mandate they are designed to hedge. Cash equivalents can be held to meet the benefits obligations of the plan and to pay fees. The plan's cash equivalents investments could be invested in a diversified mix of high-quality, short-term debt securities, including commercial paper, bankers' acceptance, certificates of deposits and US government obligations.

Investment in return seeking assets is prohibited.

The Netherlands plan is administered by a pension committee representing the employer, the employees, and the pensioners. The pension committee has six members, whereby three members are elected by the employer, two members are elected by the employees and one member is elected by the pensioners, and each member has one vote. The pension committee meets at least quarterly to discuss regulatory changes, asset performance, and asset allocation.

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The plan assets are managed by one Dutch fund manager against a mandate set at least annually by the pension committee. The plan assets are evaluated annually by a multinational benefits consultant against state defined actuarial tests to determine funding requirements.

The fair values of pension investments as of December 31, 2015 are summarized below:

Asset category:	U.S. Qualified Pension Fair Value Measurement at December 31, 2015, Using:				Total
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)		
Commingled Equity Funds	\$—	\$ 93	(1)	\$ —	\$ 93
Debt securities					
Commingled Fixed Income Funds	—	155	(2)	—	155
Cash & cash equivalents					
Commingled Cash Equivalents Fund	—	6	(3)	—	6
Total at fair value	\$—	\$ 254		\$ —	\$ 254

(1) For commingled equity funds owned by the funds, fair value is based on observable inputs of comparable market transactions, which are Level 2 inputs.

(2) For commingled fixed income funds, fair value is based on observable inputs of comparable market transactions, which are Level 2 inputs.

(3) For commingled cash equivalents funds, fair value is based on observable inputs of comparable market transactions, which are Level 2 inputs.

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	Alkali Pension Fair Value Measurement at December 31, 2015, Using:				
	Quoted Prices in Active Markets for Identical Assets (Level 1)		Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Asset category:					
Debt securities					
US Fixed Income Funds	\$ 1 <sup>(1)</sup>	\$ —		\$ —	1
Commingled Fixed Income Funds	—	1	<sup>(2)</sup>	—	1
Total at fair value	\$ 1	\$ 1		\$ —	\$ 2

<sup>(1)</sup> For US fixed income funds owned by the funds, fair value is based on observable quoted prices on active exchanges, which are Level 1.

<sup>(2)</sup> For commingled fixed income funds, fair value is based on observable inputs of comparable market transactions, which are Level 2 inputs.

	Netherlands Pension Fair Value Measurement at December 31, 2015, Using:				
	Quoted Prices in Active Markets for Identical Assets (Level 1)		Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Asset category:					
Equity securities — Non-U.S. Pooled Funds	\$ —	\$ 29	<sup>(1)</sup>	\$ —	\$ 29
Debt securities — Non-U.S. Pooled Funds	—	77	<sup>(2)</sup>	—	77
Real Estate Pooled Funds	—	13	<sup>(3)</sup>	—	13
Cash equivalents	—	2	<sup>(4)</sup>	—	2
Total at fair value	\$ —	\$ 121		\$ —	\$ 121

<sup>(1)</sup> For equity securities in the form of fund units that are redeemable at the measurement date, the unit value is deemed

a Level 2 input.

- (2) For pooled fund debt securities, the fair value is based on observable inputs, but do not solely rely on quoted market prices, and are therefore deemed Level 2 inputs.
- (3) For real estate pooled funds, the fair value is based on observable inputs, but do not solely rely on quoted market prices, and are therefore deemed Level 2 inputs.
- (4) For cash equivalents, the fair value is based on observable inputs but do not solely rely on quoted market prices and are therefore deemed level 2 inputs.

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The fair values of pension investments as of December 31, 2014 are summarized below:

	U.S. Pension Fair Value Measurement at December 31, 2014, Using:				
	Quoted Prices in Active Markets for Identical Assets (Level 1)		Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Asset category:					
Commingled Equity Funds	\$—	\$ 104	(1)	\$ —	\$ 104
Debt securities					
Commingled Fixed Income Funds	—	172	(2)	—	172
Cash & cash equivalents					
Commingled Cash Equivalents Fund	—	4	(3)	—	4
Total at fair value	\$—	\$ 280		\$ —	\$ 280

(1) For commingled equity funds owned by the funds, fair value is based on observable inputs of comparable market transactions, which are Level 2 inputs.

(2) For commingled fixed income funds, fair value is based on observable inputs of comparable market transactions, which are Level 2 inputs.

(3) For commingled cash equivalents funds, fair value is based on observable inputs of comparable market transactions, which are Level 2 inputs.

	Netherlands Pension Fair Value Measurement at December 31, 2014, Using:				
	Quoted Prices in Active Markets for Identical Assets (Level 1)		Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Asset category:					
Equity securities — Non-U.S. Pooled Funds	\$—	\$ 36	(1)	\$ —	\$ 36
Debt securities — Non-U.S. Pooled Funds	—	86	(2)	—	86
Real Estate Pooled Funds	—	15	(3)	—	15

Total at fair value	\$—\$ 137	\$ — \$ 137
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- (1) For equity securities in the form of fund units that are redeemable at the measurement date, the unit value is deemed a Level 2 input.
- (2) For pooled fund debt securities, the fair value is based on observable inputs, but do not solely rely on quoted market prices, and therefore are deemed Level 2 inputs.
- (3) For real estate pooled funds, the fair value is based on observable inputs, but do not solely rely on quoted market prices, and therefore are deemed Level 2 inputs.

#### Defined Contribution Plans

##### U.S. Savings Investment Plan

In 2006, we established the U.S. Savings Investment Plan (the “SIP”), a qualified defined contribution plan under section 401(k) of the Internal Revenue Code. Under the SIP, our regular full-time and part-time employees contribute a portion of their earnings, and we match these contributions up to a predefined threshold. During 2015, 2014 and 2013, our matching contribution was 100% of the first 6% of employee contributions. The Board has approved an additional company discretionary contribution of 6% of pay for 2015, 2014 and 2013. The discretionary contribution is subject to approval each year by the Board. Our matching contribution to the SIP vests immediately; however, our discretionary contribution is subject to vesting conditions that must be satisfied over a three year vesting period. Contributions under SIP, including our match, are invested in accordance with the investment options elected by plan participants. Compensation expense associated with our matching contribution to the SIP was \$5 million, \$4 million, and \$3 million during 2015, 2014, and 2013, respectively, which was included in “Selling, general and administrative expenses” in the Consolidated Statements of Operations. Compensation expense associated with our discretionary contribution was \$5 million, \$4 million, and \$4 million during 2015, 2014, and 2013, respectively, which was included in “Selling, general and administrative expenses” in the Consolidated Statements of Operations.

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## U.S. Savings Restoration Plan

In 2006, we established the U.S. Savings Restoration Plan (the “SRP”), a nonqualified defined contribution plan, for employees whose eligible compensation is expected to exceed the IRS compensation limits for qualified plans. Under the SRP, participants can contribute up to 20% of their annual compensation and incentive. Our matching contribution under the SRP is the same as the SIP. Our matching contribution under this plan vests immediately to plan participants. Contributions under the SRP, including our match, are invested in accordance with the investment options elected by plan participants. Compensation expense associated with our matching contribution to the SRP was \$1 million, \$1 million, and less than \$1 million during 2015, 2014, and 2013, respectively, which was included in “Selling, general and administrative expenses” in the Consolidated Statements of Operations.

## 24. Related Party Transactions

## Exxaro

We have service level agreements with Exxaro for services including research and development, as well as information technology services, which expired during 2014. Such service level agreements amounted to \$2 million, \$3 million, and \$5 million of expense during 2015, 2014, and 2013, respectively, which was included in “Selling general and administrative expense” in the Consolidated Statements of Operations. Additionally, we have a professional service agreement with Exxaro related to the Fairbreeze construction project. During 2015, 2014, and 2013, we paid \$3 million each to Exxaro, which was capitalized in “Property, plant and equipment, net” on our Consolidated Balance Sheets. At December 31, 2015 and 2014, we had \$1 million of related party payables, which were recorded in “Accounts payable” on our Consolidated Balance Sheets.

## Agreements and Transactions with Affiliates

We hold a membership in ANSAC, which is responsible for promoting exports of US-produced soda ash. Under the ANSAC membership agreement, Alkali’s exports of soda ash to all markets except Canada, European community, European Free Trade Association and the South African Customs Union are exclusively through ANSAC. Certain sales and marketing costs incurred by ANSAC are charged directly to us. Selling, general and administrative expenses in the Consolidated Statements of Operations include amounts charged to us by ANSAC principally consisting of salaries, benefits, office supplies, professional fees, travel, rent and certain other costs, amounted to \$3 million for 2015. These transactions do not necessarily represent arm’s length transactions and may not represent all costs if Alkali operated on a stand-alone basis. During 2015, we recorded net sales to ANSAC of \$210 million which was included in “Net sales” in the Consolidated Statements of Operations. At December 31, 2015, we had \$47 million of related party receivable from ANSAC and \$2 million of related party payables to ANSAC, which were recorded in “Accounts receivable” and “Accounts payable”, respectively, on our Consolidated Balance Sheets. Additionally, at December 31, 2015, we had a \$1 million payable to ANSAC for freight costs incurred on our behalf, which was included in “Accounts payable” in the Consolidated Balance Sheet.

In connection with the Alkali Transaction, we acquired FMC’s one-third ownership interest in a joint venture, Natronx Technologies LLC “Natronx”. Natronx manufactures and markets sodium-based, dry sorbents for air pollution control in electric utility and industrial boiler operations. Pursuant to an agreement with Natronx, we purchase ground trona from a third-party vendor as an agent on its behalf (the “Supply Agreement”). We also provide certain administrative services such as accounting, technology and customer services to Natronx under a service level agreement (the “SLA”). We are reimbursed by Natronx for the related costs incurred under the Supply Agreement and the SLA. At December 31, 2015, we had \$1 million of receivables related to these agreements, which were recorded in “Accounts receivable, net of allowance for doubtful accounts” on the Consolidated Balance Sheets.

## 25. Segment Information



The reportable segments presented below represent our operating segments for which separate financial information is available and which is utilized on a regular basis by our Chief Executive Officer, who is our chief operating decision maker (“CODM”), to assess performance and to allocate resources.

Prior to the Alkali Transaction, we had two operating and reportable segments, Mineral Sands and Pigment, based on the way the management team was organized and our CODM monitored performance, aligned strategies, and allocated resources. As a result of the increased interdependency between the Mineral Sands and Pigment businesses and related organizational changes, our CODM determined that it was better to review the Mineral Sands and Pigment businesses, along with our electrolytic business, as a combined one, TiO<sub>2</sub>, and to assess performance and allocate resources at that level. Following the Alkali Transaction, we restructured our organization to reflect two business segments, TiO<sub>2</sub> and Alkali. The change in reportable segments for financial reporting purposes that occurred in the second quarter of 2015 has been retrospectively applied.

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Our TiO<sub>2</sub> operating segment includes the following:

- exploration, mining, and beneficiation of mineral sands deposits;
- production of titanium feedstock (including chloride slag, slag fines, and rutile), pig iron, and zircon;
  - production and marketing of TiO<sub>2</sub>; and
- electrolytic manganese dioxide manufacturing and marketing.

Our Alkali operating segment includes the mining of trona ore for the production from trona of natural soda ash and its derivatives: sodium bicarbonate, sodium sesquicarbonate and caustic soda (collectively referred to as “alkali-products”).

Segment performance is evaluated based on segment operating income (loss), which represents the results of segment operations before unallocated costs, such as general corporate expenses not identified to a specific segment, interest expense, other income (expense), and income tax expense or benefit.

Net sales and income (loss) from operations by segment were as follows:

	Year Ended December 31,		
	2015	2014	2013
TiO <sub>2</sub> segment	\$1,510	\$1,737	\$1,922
Alkali segment	602	—	—
Net sales	\$2,112	\$1,737	\$1,922
TiO <sub>2</sub> segment	\$(123 )	\$78	\$70
Alkali segment	69	—	—
Corporate	(64 )	(78 )	(67 )
Income (loss) from operations	(118 )	—	3
Interest and debt expense, net	(176 )	(133 )	(130 )
Net gain (loss) on liquidation of non-operating subsidiaries	—	(35 )	24
Loss on extinguishment of debt	—	(8 )	(4 )
Other income, net	28	27	46
Loss before income taxes	(266 )	(149 )	(61 )
Income tax provision	(41 )	(268 )	(29 )
Net loss	\$(307 )	\$(417 )	\$(90 )

Net sales to external customers, by geographic region, based on country of production, were as follows:

	Year Ended December 31,		
	2015	2014	2013
U.S. operations	\$1,223	\$749	\$793

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International operations:

Australia	380	426	424
South Africa	313	329	481
The Netherlands	196	233	224
Total net sales	\$2,112	\$1,737	\$1,922

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Net sales from external customers for each similar product were as follows:

	Year Ended December 31,		
	2015	2014	2013
Pigment	\$976	\$1,179	\$1,169
Alkali	602	—	—
Titanium feedstock and co-products	426	445	625
Electrolytic	108	113	128
Total net sales	\$2,112	\$1,737	\$1,922

During 2015, our ten largest third-party TiO<sub>2</sub> customers and our ten largest Alkali customers represented approximately 29% and 18%, respectively, of our consolidated net sales. ANSAC accounted for 10% of our consolidated net sales. See Note 24 for further details.

Depreciation, amortization and depletion by segment were as follows:

	Year Ended December 31,		
	2015	2014	2013
TiO <sub>2</sub> segment	\$246	\$289	\$327
Alkali segment	42	—	—
Corporate	6	6	6
Total depreciation, amortization and depletion	\$294	\$295	\$333

Capital expenditures by segment were as follows:

	Year Ended December 31,		
	2015	2014	2013
TiO <sub>2</sub> segment	\$164	\$184	\$159
Alkali segment	26	—	—
Corporate	1	3	6
Total capital expenditures	\$191	\$187	\$165

Total assets by segment were as follows:

	December 31,	
	2015	2014
TiO <sub>2</sub> segment	\$3,055	\$3,821
Alkali segment	1,690	—
Corporate	327	1,244
Total	\$5,072	\$5,065

Property, plant and equipment, net and mineral leaseholds, net, by geographic region, were as follows:

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	December 31,	
	2015	2014
U.S. operations	\$1,687	\$211
International operations:		
South Africa	747	941
Australia	968	1,083
The Netherlands	45	50
Total	\$3,447	\$2,285

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26. Guarantor Condensed Consolidating Financial Statements

The obligations of Tronox Finance, our wholly-owned subsidiary, under the Senior Notes due 2020 are fully and unconditionally (subject to certain customary circumstances providing for the release of a guarantor subsidiary) guaranteed on a senior unsecured basis, jointly and severally, by Tronox Limited (referred to for purposes of this note only as the “Parent Company”) and each of its current and future restricted subsidiaries, other than excluded subsidiaries, that guarantee any indebtedness of the Parent Company or its restricted subsidiaries (collectively, the “Guarantor Subsidiaries”). The Subsidiary Issuer, Tronox Finance, and each of the Guarantor Subsidiaries are 100% owned, directly or indirectly, by the Parent Company. Our subsidiaries that do not guarantee the Senior Notes due 2020 are referred to as the “Non-Guarantor Subsidiaries.” The guarantor condensed consolidating financial statements presented below presents the statements of operations, statements of comprehensive income (loss), balance sheets and statements of cash flow data for: (i) the Parent Company, the Guarantor Subsidiaries, the Non-Guarantor Subsidiaries, and the subsidiary issuer, on a consolidated basis (which is derived from Tronox historical reported financial information); (ii) the Parent Company, alone (accounting for our Guarantor Subsidiaries, the Non-Guarantor Subsidiaries, and Tronox Finance on an equity basis under which the investments are recorded by each entity owning a portion of another entity at cost, adjusted for the applicable share of the subsidiary’s cumulative results of operations, capital contributions and distributions, and other equity changes); (iii) the Guarantor Subsidiaries alone; (iv) the Non-Guarantor Subsidiaries alone; and (v) the subsidiary issuer, Tronox Finance.

The guarantor condensed consolidating financial statements are presented on a legal entity basis, not on a business segment basis. The indentures governing the Senior Notes due 2020 provide for a Guarantor Subsidiary to be automatically and unconditionally released and discharged from its guarantee obligations in certain customary circumstances, including:

- Sale or other disposition of such Guarantor Subsidiary’s capital stock or all or substantially all of its assets and all of the indenture obligations (other than contingent obligations) of such Subsidiary Guarantor in respect of all other indebtedness of the Subsidiary Guarantors terminate upon the consummation of such transaction;
- Designation of such Guarantor Subsidiary as an “unrestricted subsidiary” under the indenture;
- In the case of certain Guarantor Subsidiaries that incur or guarantee indebtedness under certain credit facilities, upon the release or discharge of such Guarantor Subsidiary’s guarantee or incurrence of indebtedness that resulted in the creation of such guarantee, except a discharge or release as a result of payment under such guarantee;
- Legal defeasance, covenant defeasance, or satisfaction and discharge of the indenture obligations;
- Payment in full of the aggregate principal amount of all outstanding Senior Notes due 2020 and all other obligations under the indenture; or
- Release or discharge of the Guarantor Subsidiary’s guarantee of certain other indebtedness.

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## GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF OPERATIONS

Year Ended December 31, 2015

(Millions of U.S. dollars)

	Consolidated	Eliminations	Tronox Finance LLC	Parent Company	Guarantor Subsidiaries	Non- Guarantor Subsidiaries
Net sales	\$ 2,112	\$ (178 )	\$ —	\$ —	\$ 1,636	\$ 654
Cost of goods sold	1,992	(165 )	—	—	1,527	630
Gross profit	120	(13 )	—	—	109	24
Selling, general and administrative expenses	(217 )	3	(1 )	(23 )	(155 )	(41 )
Restructuring expenses	(21 )	—	—	—	(15 )	(6 )
Income (loss) from operations	(118 )	(10 )	(1 )	(23 )	(61 )	(23 )
Interest and debt expense, net	(176 )	—	(103 )	—	(7 )	(66 )
Intercompany interest income (expense)	—	—	—	518	(568 )	50
Other income (expense), net	28	(1 )	—	4	(2 )	27
Equity in earnings of subsidiary	—	672	—	(616 )	(56 )	—
Income (loss) before income taxes	(266 )	661	(104 )	(117 )	(694 )	(12 )
Income tax benefit (provision)	(41 )	—	31	(201 )	133	(4 )
Net income (loss)	(307 )	661	(73 )	(318 )	(561 )	(16 )
Net income attributable to noncontrolling interest	11	11	—	—	—	—
Net income (loss) attributable to Tronox Limited	\$ (318 )	\$ 650	\$ (73 )	\$ (318 )	\$ (561 )	\$ (16 )

## GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

Year Ended December 31, 2015

(Millions of U.S. dollars)

	Consolidated	Eliminations	Tronox Finance LLC	Parent Company	Guarantor Subsidiaries	Non- Guarantor Subsidiaries
Net income (loss)	\$ (307 )	\$ 661	\$ (73 )	\$ (318 )	\$ (561 )	\$ (16 )
Other comprehensive income (loss):						
Foreign currency translation adjustments	(292 )	508	—	(215 )	(293 )	(292 )
Pension and postretirement plans	15	(14 )	—	15	18	(4 )
Other comprehensive income (loss)	(277 )	494	—	(200 )	(275 )	(296 )
Total comprehensive income (loss)	(584 )	1,155	(73 )	(518 )	(836 )	(312 )
Comprehensive income (loss) attributable to noncontrolling interest:						

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Net income	11	11	—	—	—	—
Foreign currency translation adjustments	(77 )	(77 )	—	—	—	—
Comprehensive income (loss) attributable to noncontrolling interest	(66 )	(66 )	—	—	—	—
Comprehensive income (loss) attributable to Tronox Limited	\$ (518 )	\$ 1,221	\$ (73 )	\$ (518 )	\$ (836 )	\$ (312 )

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## GUARANTOR CONDENSED CONSOLIDATING BALANCE SHEETS

As of December 31, 2015

(Millions of U.S. dollars)

	Consolidated	Eliminations	Tronox Finance LLC	Parent Company	Guarantor Subsidiaries	Non- Guarantor Subsidiaries
<b>ASSETS</b>						
Cash and cash equivalents	\$ 229	\$ —	\$—	\$ 1	\$ 165	\$ 63
Restricted cash	5	—	—	—	5	—
Accounts receivable	391	—	—	—	303	88
Inventories, net	630	(24 )	—	—	439	215
Other current assets	46	(4,345 )	657	1,473	1,149	1,112
Investment in subsidiaries	—	2,596	—	(3,274 )	678	—
Property, plant and equipment, net	1,843	—	—	—	1,388	455
Mineral leaseholds, net	1,604	—	—	—	1,266	338
Intercompany loans receivable	—	(7,106 )	692	5,936	72	406
Other long-term assets	324	—	32	—	258	34
<b>Total assets</b>	<b>\$ 5,072</b>	<b>\$ (8,879 )</b>	<b>\$ 1,381</b>	<b>\$ 4,136</b>	<b>\$ 5,723</b>	<b>\$ 2,711</b>
<b>LIABILITIES AND EQUITY</b>						
Short-term debt	\$ 150	\$ —	\$—	\$ —	\$ 150	\$ —
Other current liabilities	398	(4,345 )	45	2,443	2,081	174
Long-term debt	2,955	—	1,498	—	—	1,457
Intercompany loans payable	—	(7,106 )	9	694	6,334	69
Other long-term liabilities	459	—	—	1	267	191
<b>Total liabilities</b>	<b>3,962</b>	<b>(11,451 )</b>	<b>1,552</b>	<b>3,138</b>	<b>8,832</b>	<b>1,891</b>
<b>Total equity</b>	<b>1,110</b>	<b>2,572</b>	<b>(171 )</b>	<b>998</b>	<b>(3,109 )</b>	<b>820</b>
<b>Total liabilities and equity</b>	<b>\$ 5,072</b>	<b>\$ (8,879 )</b>	<b>\$ 1,381</b>	<b>\$ 4,136</b>	<b>\$ 5,723</b>	<b>\$ 2,711</b>

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## GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF CASH FLOWS

Year Ended December 31, 2015

(Millions of U.S. dollars)

	Consolidated	Eliminations	Tronox Finance LLC	Parent Company	Guarantor Subsidiaries	Non- Guarantor Subsidiaries
<b>Cash Flows from Operating Activities:</b>						
Net income (loss)	\$ (307 )	\$ 661	\$ (73 )	\$ (318 )	\$ (561 )	\$ (16 )
Depreciation, depletion and amortization	294	—	—	—	232	62
Other	229	(662 )	596	352	542	(599 )
<b>Cash provided by (used in) operating activities</b>	<b>216</b>	<b>(1 )</b>	<b>523</b>	<b>34</b>	<b>213</b>	<b>(553 )</b>
<b>Cash Flows from Investing Activities:</b>						
Capital expenditures	(191 )	—	—	—	(68 )	(123 )
Proceeds on sale of assets	1	—	—	—	1	—
Acquisition of business	(1,650 )	—	—	—	(1,650 )	—
Investment in subsidiaries	—	1,526	—	(1,526 )	—	—
Return of capital from subsidiaries	—	(24 )	—	24	—	—
Collections of intercompany loans	—	(725 )	79	26	43	577
Intercompany loans	—	1,386	(589 )	(3 )	(237 )	(557 )
<b>Cash provided by (used in) investing activities</b>	<b>(1,840 )</b>	<b>2,163</b>	<b>(510 )</b>	<b>(1,479 )</b>	<b>(1,911 )</b>	<b>(103 )</b>
<b>Cash Flows from Financing Activities:</b>						
Repayments of debt	(18 )	—	—	—	(2 )	(16 )
Repayments of intercompany loans	—	725	—	(103 )	(602 )	(20 )
Proceeds from debt	750	—	—	—	150	600
Proceeds from intercompany loans	—	(1,386 )	—	1,380	3	3
Contribution from parent	—	(1,526 )	—	—	1,526	—
Return of capital to parent	—	24	—	—	(24 )	—
Partnership distribution to parent	—	1	—	—	(1 )	—
Debt issuance costs	(15 )	—	(13 )	—	(2 )	—
Dividends paid	(117 )	—	—	(117 )	—	—
Proceeds from the exercise of warrants and options	3	—	—	3	—	—
<b>Cash provided by (used in) financing activities</b>	<b>603</b>	<b>(2,162 )</b>	<b>(13 )</b>	<b>1,163</b>	<b>1,048</b>	<b>567</b>
Effects of exchange rate changes on cash and cash equivalents	(26 )	—	—	—	—	(26 )
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>(1,047 )</b>	<b>—</b>	<b>—</b>	<b>(282 )</b>	<b>(650 )</b>	<b>(115 )</b>
Cash and cash equivalents at beginning of period	\$ 1,276	\$ —	\$ —	\$ 283	\$ 815	\$ 178

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Cash and cash equivalents at end of period	\$ 229	\$ —	\$ —	\$ 1	\$ 165	\$ 63
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We revised each of our guarantor condensed consolidating financial statements as of December 31, 2014 and 2013 and for the two years then ended as follows:

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Certain amounts within the guarantor condensed consolidating statements of comprehensive income (loss) were revised to primarily reflect the proportionate share of cumulative translation adjustments between the Parent Company and Eliminations column.

Certain financial statement line items have been expanded and reclassifications were made to enhance transparency.

These revisions, which we determined are not material to our prior year condensed financial statements or consolidated financial statements based on quantitative and qualitative considerations, did not affect our consolidated financial position, consolidated results of operations or consolidated cash flows.

## REVISED GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF OPERATIONS

Year Ended December 31, 2014

(Millions of U.S. dollars)

	Consolidated	Eliminations	Tronox Finance LLC	Parent Company	Guarantor Subsidiaries	Non- Guarantor Subsidiaries
Net sales	\$ 1,737	\$ (211 )	\$ —	\$ —	\$ 1,224	\$ 724
Cost of goods sold	1,530	(238 )	—	—	1,113	655
Gross profit	207	27	—	—	111	69
Selling, general and administrative expenses	(192 )	3	—	(13 )	(140 )	(42 )
Restructuring expenses	(15 )	—	—	—	(6 )	(9 )
Income (loss) from operations	—	30	—	(13 )	(35 )	18
Interest and debt expense, net	(133 )	—	(59 )	—	(4 )	(70 )
Intercompany interest income (expense)	—	—	—	546	(578 )	32
Net loss on liquidation of non-operating subsidiaries	(35 )	—	—	—	(33 )	(2 )
Loss on extinguishment of debt	(8 )	—	—	—	(2 )	(6 )
Other income (expense), net	27	53	—	1	(15 )	(12 )
Equity in earnings of subsidiary	—	759	—	(706 )	(53 )	—
Income (loss) before income taxes	(149 )	842	(59 )	(172 )	(720 )	(40 )
Income tax benefit (provision)	(268 )	—	18	(255 )	20	(51 )
Net income (loss)	(417 )	842	(41 )	(427 )	(700 )	(91 )
Net income attributable to noncontrolling interest	10	10	—	—	—	—
Net income (loss) attributable to Tronox Limited	\$ (427 )	\$ 832	\$ (41 )	\$ (427 )	\$ (700 )	\$ (91 )

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## GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF OPERATIONS

Year Ended December 31, 2014

(Millions of U.S. dollars)

	Consolidated	Eliminations	Tronox Finance LLC	Parent Company	Guarantor Subsidiaries	Non- Guarantor Subsidiaries
Net sales	\$ 1,737	\$ (211 )	\$ —	\$ —	\$ 1,224	\$ 724
Cost of goods sold	(1,530 )	238	—	—	(1,113 )	(655 )
Gross profit	207	27	—	—	111	69
Selling, general and administrative expenses	(192 )	3	—	(13 )	(140 )	(42 )
Restructuring expenses	(15 )	—	—	—	(6 )	(9 )
Income (loss) from operations	—	30	—	(13 )	(35 )	18
Interest and debt expense, net	(133 )	—	(59 )	—	(4 )	(70 )
Intercompany interest income (expense)	—	—	—	546	(578 )	32
Net loss on liquidation of non-operating subsidiaries	(35 )	—	—	—	(33 )	(2 )
Loss on extinguishment of debt	(8 )	—	—	—	(2 )	(6 )
Other income (expense), net	27	53	—	1	(15 )	(12 )
Equity in earnings of subsidiary	—	759	—	(706 )	(53 )	—
Income (loss) before income taxes	(149 )	842	(59 )	(172 )	(720 )	(40 )
Income tax benefit (provision)	(268 )	—	18	(255 )	20	(51 )
Net income (loss)	(417 )	842	(41 )	(427 )	(700 )	(91 )
Net income attributable to noncontrolling interest	10	10	—	—	—	—
Net income (loss) attributable to Tronox Limited	\$ (427 )	\$ 832	\$ (41 )	\$ (427 )	\$ (700 )	\$ (91 )

## REVISED GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

Year Ended December 31, 2014

(Millions of U.S. dollars)

	Consolidated	Eliminations	Tronox Finance LLC	Parent Company	Guarantor Subsidiaries	Non- Guarantor Subsidiaries
Net income (loss)	\$ (417 )	\$ 842	\$ (41 )	\$ (427 )	\$ (700 )	\$ (91 )
Other comprehensive income (loss):						
Foreign currency translation adjustments	(95 )	186	—	(64 )	(85 )	(132 )
Pension and postretirement plans	(48 )	50	—	(48 )	(47 )	(3 )
Other comprehensive income (loss)	(143 )	236	—	(112 )	(132 )	(135 )
Total comprehensive income (loss)	(560 )	1,078	(41 )	(539 )	(832 )	(226 )

Comprehensive income (loss) attributable to noncontrolling interest:						
Net income	10	10	—	—	—	—
Foreign currency translation adjustments	(31 )	(31 )	—	—	—	—
Comprehensive income (loss) attributable to noncontrolling interest						
	(21 )	(21 )	—	—	—	—
Comprehensive income (loss) attributable to Tronox Limited						
	\$ (539 )	\$ 1,099	\$ (41 )	\$ (539 )	\$ (832 )	\$ (226 )

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GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF  
COMPREHENSIVE INCOME (LOSS)

Year Ended December 31, 2014

(Millions of U.S. dollars)

	Consolidated	Eliminations	Tronox Finance LLC	Parent Company	Guarantor Subsidiaries	Non- Guarantor Subsidiaries
Net income (loss)	\$ (417 )	\$ 842	\$ (41 )	\$ (427 )	\$ (700 )	\$ (91 )
Other comprehensive income (loss):						
Foreign currency translation adjustments	(95 )	217	—	(95 )	(85 )	(132 )
Pension and postretirement plans	(48 )	50	—	(48 )	(47 )	(3 )
Other comprehensive income (loss)	(143 )	267	—	(143 )	(132 )	(135 )
Total comprehensive income (loss)	(560 )	1,109	(41 )	(570 )	(832 )	(226 )
Comprehensive income (loss) attributable to noncontrolling interest:						
Net income	10	10	—	—	—	—
Foreign currency translation adjustments	(31 )	—	—	(31 )	—	—
Comprehensive income (loss) attributable to noncontrolling interest	(21 )	10	—	(31 )	—	—
Comprehensive income (loss) attributable to Tronox Limited	\$ (539 )	\$ 1,099	\$ (41 )	\$ (539 )	\$ (832 )	\$ (226 )

## REVISED GUARANTOR CONDENSED CONSOLIDATING BALANCE SHEETS

As of December 31, 2014

(Millions of U.S. dollars)

	Consolidated	Eliminations	Tronox Finance LLC	Parent Company	Guarantor Subsidiaries	Non- Guarantor Subsidiaries
<b>ASSETS</b>						
Cash and cash equivalents	\$ 1,276	\$ —	\$ —	\$ 283	\$ 815	\$ 178
Restricted cash	3	—	—	—	3	—
Accounts receivable	277	—	—	—	188	89
Inventories, net	770	(13 )	—	—	448	335
Other current assets	55	(2,857 )	35	973	719	1,185
Investment in subsidiaries	—	2,934	—	(3,961 )	1,027	—
Property, plant and equipment, net	1,227	—	—	—	696	531
Mineral leaseholds, net	1,058	—	—	—	599	459
Intercompany loans receivable	—	(7,130 )	773	5,937	92	328
Other long-term assets	399	(1 )	23	—	331	46
Total assets	\$ 5,065	\$ (7,067 )	\$ 831	\$ 3,232	\$ 4,918	\$ 3,151

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LIABILITIES AND EQUITY

Total current liabilities	\$ 366	\$ (2,857	) \$ 22	\$ 846	\$ 2,152	\$ 203
Long-term debt	2,375	—	898	—	—	1,477
Intercompany loans payable	—	(7,130	) 9	774	6,257	90
Other long-term liabilities	536	(1	) —	2	284	251
Total liabilities	3,277	(9,988	) 929	1,622	8,693	2,021
Total equity	1,788	2,921	(98 )	1,610	(3,775	) 1,130
Total liabilities and equity	\$ 5,065	\$ (7,067	) \$ 831	\$ 3,232	\$ 4,918	\$ 3,151

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AS PREVIOUS FILED

## GUARANTOR CONDENSED CONSOLIDATING BALANCE SHEETS

As of December 31, 2014

(Millions of U.S. dollars)

	Consolidated	Eliminations	Tronox Finance LLC	Parent Company	Guarantor Subsidiaries	Non- Guarantor Subsidiaries
<b>ASSETS</b>						
Cash and cash equivalents	\$ 1,279	\$ —	\$ —	\$ 283	\$ 818	\$ 178
Inventories, net	770	(13 )	—	—	448	335
Other current assets	332	(2,857 )	35	973	907	1,274
Investment in subsidiaries	—	2,934	—	(3,961 )	1,027	—
Property, plant and equipment, net	1,227	—	—	—	696	531
Mineral leaseholds, net	1,058	—	—	—	599	459
Intercompany loans receivable	—	(7,130 )	773	5,937	92	328
Other long-term assets	399	—	23	(1 )	331	46
Total assets	\$ 5,065	\$ (7,066 )	\$ 831	\$ 3,231	\$ 4,918	\$ 3,151
<b>LIABILITIES AND EQUITY</b>						
Total current liabilities	\$ 366	\$ (2,857 )	\$ 22	\$ 846	\$ 2,152	\$ 203
Long-term debt	2,375	—	898	—	—	1,477
Intercompany loans payable	—	(7,130 )	9	774	6,257	90
Other long-term liabilities	536	—	—	1	284	251
Total liabilities	3,277	(9,987 )	929	1,621	8,693	2,021
Total equity	1,788	2,921	(98 )	1,610	(3,775 )	1,130
Total liabilities and equity	\$ 5,065	\$ (7,066 )	\$ 831	\$ 3,231	\$ 4,918	\$ 3,151

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## REVISED GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF CASH FLOWS

Year Ended December 31, 2014

(Millions of U.S. dollars)

	Consolidated	Eliminations	Tronox Finance LLC	Parent Company	Guarantor Subsidiaries	Non- Guarantor Subsidiaries
Cash Flows from Operating Activities:						
Net income (loss)	\$ (417 )	\$ 842	\$ (41 )	\$ (427 )	\$ (700 )	\$ (91 )
Depreciation, depletion and amortization	295	—	—	—	217	78
Other	263	(842 )	(10 )	692	286	137
Cash provided by (used in) operating activities	141	—	(51 )	265	(197 )	124
Cash Flows from Investing Activities:						
Capital expenditures	(187 )	—	—	—	(76 )	(111 )
Collections of intercompany loans	—	(51 )	51	—	—	—
Cash provided by (used in) investing activities	(187 )	(51 )	51	—	(76 )	(111 )
Cash Flows from Financing Activities:						
Repayments of debt	(20 )	—	—	—	(3 )	(17 )
Repayments of intercompany loans	—	51	—	(51 )	—	—
Debt issuance costs	(2 )	—	—	—	—	(2 )
Dividends paid	(116 )	—	—	(116 )	—	—
Proceeds from the exercise of warrants and options	6	—	—	6	—	—
Cash provided by (used in) financing activities	(132 )	51	—	(161 )	(3 )	(19 )
Effects of exchange rate changes on cash and cash equivalents	(21 )	—	—	—	—	(21 )
Net increase (decrease) in cash and cash equivalents	(199 )	—	—	104	(276 )	(27 )
Cash and cash equivalents at beginning of period	\$ 1,475	\$ —	\$ —	\$ 179	\$ 1,091	\$ 205
Cash and cash equivalents at end of period	\$ 1,276	\$ —	\$ —	\$ 283	\$ 815	\$ 178

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AS PREVIOUSLY FILED

## GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF CASH FLOWS

Year Ended December 31, 2014

(Millions of U.S. dollars)

	Consolidated	Eliminations	Tronox Finance LLC	Parent Company	Guarantor Subsidiaries	Non- Guarantor Subsidiaries
Cash Flows from Operating Activities:						
Net income (loss)	\$ (417 )	\$ 842	\$ (41 )	\$ (427 )	\$ (700 )	\$ (91 )
Depreciation, depletion and amortization	295	—	—	—	217	78
Other	263	(842 )	(10 )	692	286	137
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Cash Flows from Investing Activities:						
Capital expenditures	(187 )	—	—	—	(76 )	(111 )
Collections of intercompany debt	—	(51 )	51	—	—	—
Cash provided by (used in) investing activities	(187 )	(51 )	51	—	(76 )	(111 )
Cash Flows from Financing Activities:						
Repayments of debt	(20 )	—	—	—	(3 )	(17 )
Repayments of intercompany debt	—	51	—	(51 )	—	—
Debt issuance costs	(2 )	—	—	—	—	(2 )
Dividends paid	(116 )	—	—	(116 )	—	—
Proceeds from the exercise of warrants and options	6	—	—	6	—	—
Cash provided by (used in) financing activities	(132 )	51	—	(161 )	(3 )	(19 )
Effects of exchange rate changes on cash and cash equivalents	(21 )	—	—	—	—	(21 )
Net increase (decrease) in cash and cash equivalents	(199 )	—	—	104	(276 )	(27 )
Cash and cash equivalents at beginning of period	\$ 1,478	\$ —	\$ —	\$ 179	\$ 1,094	\$ 205
Cash and cash equivalents at end of period	\$ 1,279	\$ —	\$ —	\$ 283	\$ 818	\$ 178

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## GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF OPERATIONS

Year Ended December 31, 2013

(Millions of U.S. dollars)

	Consolidated	Eliminations	Tronox Finance LLC	Parent Company	Guarantor Subsidiaries	Non- Guarantor Subsidiaries
Net sales	\$ 1,922	\$ (275 )	\$ —	\$ —	\$ 1,298	\$ 899
Cost of goods sold	1,732	(282 )	—	—	1,242	772
	1					
Gross profit	190	7	—	—	56	127
Selling, general and administrative expenses	(187 )	4	—	(34 )	(113 )	(44 )
Income (loss) from operations	3	11	—	(34 )	(57 )	83
Interest and debt expense, net	(130 )	—	(59 )	—	(6 )	(65 )
Intercompany interest income (expense)	—	—	—	546	(579 )	(33 )
Net gain (loss) on liquidation of non-operating subsidiaries	24	—	—	—	(23 )	47
Loss on extinguishment of debt	(4 )	—	—	—	(3 )	(1 )
Other income (expense), net	46	1	—	1	12	32
Equity in earnings of subsidiary	—	348	—	(473 )	125	—
Income (loss) before income taxes	(61 )	360	(59 )	40	(531 )	129
Income tax benefit (provision)	(29 )	—	18	(166 )	150	(31 )
Net income (loss)	(90 )	360	(41 )	(126 )	(381 )	98
Net income attributable to noncontrolling interest	36	36	—	—	—	—
Net income (loss) attributable to Tronox Limited	\$ (126 )	\$ 324	\$ (41 )	\$ (126 )	\$ (381 )	\$ 98

IndexREVISED GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF  
COMPREHENSIVE INCOME (LOSS)

Year Ended December 31, 2013

(Millions of U.S. dollars)

	Consolidated	Eliminations	Tronox Finance LLC	Parent Company	Guarantor Subsidiaries	Non- Guarantor Subsidiaries
Net income (loss)	\$ (90 )	\$ 360	\$ (41 )	\$ (126 )	\$ (381 )	\$ 98
Other comprehensive income (loss):						
Foreign currency translation adjustments	(289 )	504	—	(219 )	(264 )	(310 )
Pension and postretirement plans	30	(31 )	—	30	27	4
Other comprehensive income (loss)	(259 )	473	—	(189 )	(237 )	(306 )
Total comprehensive income (loss)	(349 )	833	(41 )	(315 )	(618 )	(208 )
Comprehensive income (loss) attributable to noncontrolling interest:						
Net income	36	36	—	—	—	—
Foreign currency translation adjustments	(70 )	(70 )	—	—	—	—
Comprehensive income (loss) attributable to noncontrolling interest	(34 )	(34 )	—	—	—	—
Comprehensive income (loss) attributable to Tronox Limited	\$ (315 )	\$ 867	\$ (41 )	\$ (315 )	\$ (618 )	\$ (208 )

## AS PREVIOUSLY FILED

## GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

Year Ended December 31, 2013

(Millions of U.S. dollars)

	Consolidated	Eliminations	Tronox Finance LLC	Parent Company	Guarantor Subsidiaries	Non- Guarantor Subsidiaries
Net income (loss)	\$ (90 )	\$ 360	\$ (41 )	\$ (126 )	\$ (381 )	\$ 98
Other comprehensive income (loss):						
Foreign currency translation adjustments	(289 )	574	—	(289 )	(264 )	(310 )
Pension and postretirement plans	30	(31 )	—	30	27	4
Other comprehensive income (loss)	(259 )	543	—	(259 )	(237 )	(306 )
Total comprehensive income (loss)	(349 )	903	(41 )	(385 )	(618 )	(208 )
Comprehensive income (loss) attributable to noncontrolling interest:						
Net income	36	36	—	—	—	—
Foreign currency translation adjustments	(70 )	—	—	(70 )	—	—

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Comprehensive income (loss) attributable to noncontrolling interest	(34 )	36	—	(70 )	—	—
Comprehensive income (loss) attributable to Tronox Limited	\$ (315 )	\$ 867	\$ (41 )	\$ (315 )	\$ (618 )	\$ (208 )

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## REVISED GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF CASH FLOWS

Year Ended December 31, 2013

(Millions of U.S. dollars)

	Consolidated	Eliminations	Tronox Finance LLC	Parent Company	Guarantor Subsidiaries	Non- Guarantor Subsidiaries
<b>Cash Flows from Operating Activities:</b>						
Net income (loss)	\$ (90 )	\$ 360	\$ (41 )	\$ (126 )	\$ (381 )	\$ 98
Depreciation, depletion and amortization	333	—	—	—	221	112
Other	87	(360 )	(16 )	(58 )	1,243	(722 )
Cash provided by (used in) operating activities	330	—	(57 )	(184 )	1,083	(512 )
<b>Cash Flows from Investing Activities:</b>						
Capital expenditures	(165 )	—	—	—	(71 )	(94 )
Proceeds from the sale of assets	1	—	—	—	—	1
Collections of intercompany loans	—	(57 )	57	—	—	—
Cash provided by (used in) investing activities	(164 )	(57 )	57	—	(71 )	(93 )
<b>Cash Flows from Financing Activities:</b>						
Repayments of debt	(189 )	—	—	—	(3 )	(186 )
Repayments of intercompany loans	—	57	—	(57 )	—	—
Proceeds from debt	945	—	—	—	—	945
Debt issuance costs	(29 )	—	—	—	—	(29 )
Dividends paid	(115 )	—	—	(115 )	—	—
Proceeds from the exercise of warrants and options	2	—	—	2	—	—
Cash provided by (used in) financing activities	614	57	—	(170 )	(3 )	730
Effects of exchange rate changes on cash and cash equivalents	(18 )	—	—	—	—	(18 )
Net increase (decrease) in cash and cash equivalents	762	—	—	(354 )	1,009	107
Cash and cash equivalents at beginning of period	\$ 713	\$ —	\$ —	\$ 533	\$ 82	\$ 98
Cash and cash equivalents at end of period	\$ 1,475	\$ —	\$ —	\$ 179	\$ 1,091	\$ 205

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AS PREVIOUSLY FILED

## GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF CASH FLOWS

Year Ended December 31, 2013

(Millions of U.S. dollars)

	Consolidated	Eliminations	Tronox Finance LLC	Parent Company	Guarantor Subsidiaries	Non- Guarantor Subsidiaries
<b>Cash Flows from Operating Activities:</b>						
Net income (loss)	\$ (90 )	\$ 360	\$ (41 )	\$ (126 )	\$ (381 )	\$ 98
Depreciation, depletion and amortization	333	—	—	—	221	112
Other	87	(360 )	(16 )	(58 )	1,243	(722 )
Cash provided by (used in) operating activities	330	—	(57 )	(184 )	1,083	(512 )
<b>Cash Flows from Investing Activities:</b>						
Capital expenditures	(165 )	—	—	—	(71 )	(94 )
Proceeds from the sale of assets	1	—	—	—	—	1
Collections of intercompany debt	—	(57 )	57	—	—	—
Cash provided by (used in) investing activities	(164 )	(57 )	57	—	(71 )	(93 )
<b>Cash Flows from Financing Activities:</b>						
Repayments of debt	(189 )	—	—	—	(3 )	(186 )
Repayments of intercompany loans	—	57	—	(57 )	—	—
Proceeds from debt	945	—	—	—	—	945
Debt issuance costs	(29 )	—	—	—	—	(29 )
Dividends paid	(115 )	—	—	(115 )	—	—
Proceeds from the exercise of warrants and options	2	—	—	2	—	—
Cash provided by (used in) financing activities	614	57	—	(170 )	(3 )	730
Effects of exchange rate changes on cash and cash equivalents	(18 )	—	—	—	—	(18 )
Net increase (decrease) in cash and cash equivalents	762	—	—	(354 )	1,009	107
Cash and cash equivalents at beginning of period	\$ 716	\$ —	\$ —	\$ 533	\$ 85	\$ 98
Cash and cash equivalents at end of period	\$ 1,478	\$ —	\$ —	\$ 179	\$ 1,094	\$ 205



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## 27. Quarterly Results of Operations (Unaudited)

The following represents our unaudited quarterly results for the years ended December 31, 2015 and 2014. These quarterly results were prepared in conformity with generally accepted accounting principles and reflect all adjustments that are, in the opinion of management, necessary for a fair statement of the results, and were of a normal recurring nature.

## Unaudited quarterly results for 2015:

	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter
Net sales	\$ 385	\$ 617	\$ 575	\$ 535
Cost of goods sold	350	593	536	513
Gross profit	35	24	39	22
Net loss	(46 )	(118 )	(54 )	(89 )
Net income attributable to noncontrolling interest	3	1	6	1
Net loss attributable to Tronox Limited	\$ (49 )	\$ (119 )	\$ (60 )	\$ (90 )
Loss per share, basic and diluted	\$ (0.42 )	\$ (1.03 )	\$ (0.52 )	\$ (0.78 )

## Unaudited quarterly results for 2014:

	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter
Net sales	\$ 418	\$ 490	\$ 429	\$ 400
Cost of goods sold	393	430	361	346
Gross profit	25	60	68	54
Net income (loss)	(54 )	2	\$ (90 )	\$ (275 )
Net income attributable to noncontrolling interest	4	2	3	1
Net loss attributable to Tronox Limited	\$ (58 )	\$ —	\$ (93 )	\$ (276 )
Loss per share, basic and diluted	\$ (0.51 )	\$ —	\$ (0.82 )	\$ (2.40 )

The sum of the quarterly per share amounts may not equal the annual per share amounts due to relative changes in the weighted average number of shares used to calculate net income (loss) per share.

The \$275 million net loss in the fourth quarter of 2014 reflects, in part, a \$255 million increase to a full tax valuation allowance for Australia.

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Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

As of December 31, 2015, our management, with the participation of our Chief Executive Officer (“CEO”) and Chief Financial Officer (“CFO”), has conducted an evaluation of our disclosure controls and procedures. Based on that evaluation, our CEO and CFO concluded that our disclosure controls and procedures were effective as of December 31, 2015.

Management’s Report on Internal Controls Over Financial Reporting

Management of Tronox Limited and its subsidiaries is responsible for establishing and maintaining adequate internal controls over financial reporting. Internal controls over financial reporting is a process designed under the supervision of our principal executive and principal financial officers to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the Company’s financial statements for external purposes in accordance with U.S. generally accepted accounting principles.

Our internal controls over financial reporting include those policies and procedures that:

pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company;

provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of the Company’s management and directors; and

provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Management assessed the effectiveness of our internal controls over financial reporting as of December 31, 2015. In making this assessment, management used the criteria in Internal Control-Integrated Framework (2013) set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on our assessment using those criteria, management concluded that our internal control over financial reporting as of December 31, 2015 was effective.

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

In accordance with SEC guidance, management has elected to exclude Alkali from its December 31, 2015 assessment of internal control over financial reporting. Alkali is a wholly-owned subsidiary and reportable segment, acquired in a purchase business combination on April 1, 2015 whose total assets and net sales represent 33% and 29%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2015.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2015 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.

#### Remediation of Prior Material Weaknesses

As previously reported in our Annual Report on Form 10-K for the year ended December 31, 2014, we identified the following material weaknesses in our internal control over financial reporting:

The controls over the information and communication related to our South African operations were improperly designed and not effective. Specifically, information required to execute control activities to completely and accurately record and disclose transactions was not communicated timely to the individuals responsible for executing control activities. The controls over our calculation of accrued royalty expense relating to our mining operations in Namakwa South Africa were improperly designed and not effective.

Additionally, the controls over restricted access and segregation of duties ("SOD") within our SAP systems were improperly designed and not effective as certain personnel have inappropriate access to execute conflicting transactions. Further, certain personnel have the ability to prepare and post journal entries without an independent review required by someone other than the preparer. Specifically, the controls were not designed to provide reasonable assurance that incompatible access within the system, including the ability to record transactions, was appropriately segregated, impacting the validity, accuracy, and completeness of all key accounts and disclosures.

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Beginning in February 2015, with the oversight of the Audit Committee, management began to design and implement certain remediation measures to address the material weaknesses discussed above and to improve its internal control over financial reporting.

We enhanced several of our existing controls and added new controls beginning in the quarter ended March 31, 2015. The controls have improved the level of precision around key accounts, disclosures and SOD that could lead to conflicts within roles. In addition, during the first quarter of 2015, we appointed a project management officer to oversee the remediation effort and track the progress of the remediation. Internal Audit has provided training to all functions globally on the COSO 2013 framework, enhanced controls and internal controls over the financial reporting assessment process. In addition, we also designed controls with detailed test attributes to help strengthen the control environment.

Throughout the year, members of our senior management team visited our South African operations to meet with finance management and employees to address our communication and coordination efforts in the region including performing reviews of key processes and controls. We have designed and implemented controls over our calculation of accrued royalty expense relating to our mining operations in Namakwa South Africa. Additionally, Management has reorganized the reporting lines and personnel over the past year to improve transparency and communication across our Finance and Operations functions.

Our efforts included training employees and enhancing our global ‘end-to-end’ control mapping. We also designed and implemented mitigating controls for high risk conflicts and roles within SAP that are now provisioned utilizing a new Governance Risk & Compliance (GRC) tool which mitigates the risk of access with SOD conflicts.

We are committed to maintaining a strong control environment. These remediation efforts represent a significant and sustained improvement in our control environment that has allowed us to fully remediate the material weaknesses outlined above as of December 31, 2015.

### Changes in Internal Control Over Financial Reporting

During the quarter ended December 31, 2015, we implemented additional controls to ensure appropriate segregation of duties over our manual journal entry review process. These additional controls represent changes during the quarter ended December 31, 2015 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

### Item 9B. Other Information

Not Applicable.

## PART III

### Item 10. Directors, Executive Officers and Corporate Governance

Information regarding our executive officers, members of the Board of Directors, including its audit committee and audit committee financial experts, as well as information regarding our Code of Business Conduct and Ethics that applies to our Chief Executive Officer and senior financial officers, will be presented in Tronox Limited’s definitive proxy statement for its 2016 annual general meeting of shareholders, which will be held May 25, 2016, and is incorporated herein by reference.

The information required to be furnished pursuant to this item with respect to compliance with Section 16(a) of the Exchange Act will be set forth under the caption “Section 16(a) Beneficial Ownership Reporting Compliance” in

Tronox Limited's definitive proxy statement for its 2016 annual general meeting of shareholders, and is incorporated herein by reference.

Item 11. Executive Compensation

Information regarding executive officer and director compensation will be presented in Tronox Limited's definitive proxy statement for its 2016 annual general meeting of shareholders, which will be held May 25, 2016, and is incorporated herein by reference.

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## Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Shareholder Matters

Information regarding security ownership of certain beneficial owners and management and related shareholder matters will be presented in Tronox Limited's definitive proxy statement for its 2016 annual general meeting of shareholders, which will be held May 25, 2016, and is incorporated herein by reference.

## Equity Compensation Plan Information

The following table provides information as of December 31, 2015 regarding securities issued under the Tronox Limited Management Equity Incentive Plan (the "Tronox Limited MEIP").

	Number of securities to be issued upon exercise of outstanding restricted shares, restricted share units and options <sup>(2)</sup>	Weighted-average exercise price of outstanding restricted shares, restricted share units and	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in the second column) <sup>(1)</sup>
Equity compensation plans approved by security holders	4,057,272	\$ 21.96	7,212,101
Equity compensation plans not approved by security holders	—	—	—
Total	4,057,272	\$ 21.96	7,212,101

(1) Each share unit awarded under the Tronox Limited MEIP was granted at no cost to the persons receiving them and represents the contingent right to receive the equivalent number of Class A Shares.

(2) Excludes Warrants, as they were not issued under the Tronox Limited MEIP.

## Item 13. Certain Relationships and Related Transactions, and Director Independence.

Information regarding certain relationships and related transactions and director independence will be presented in Tronox Limited's definitive proxy statement for its 2016 annual general meeting of shareholders, which will be held May 25, 2016, and is incorporated herein by reference.

## Item 14. Principal Accounting Fees and Services.

Information regarding principal accounting fees and services will be presented in Tronox Limited's definitive proxy statement for its 2016 annual general meeting of shareholders, which will be held May 25, 2016, and is incorporated herein by reference.

## PART IV

## Item 15. Exhibits, Financial Statement Schedules.

(a) The following documents are filed as part of this Annual Report on Form 10-K:

1. Consolidated Financial Statements

Reference is made to the Index to Consolidated Financial Statements and Consolidated Financial Statement Schedules appearing at “Item 8. Financial Statements and Supplementary Data” in this report.

2. Consolidated Financial Statement Schedules

All financial statement schedules are omitted as they are inapplicable, or the required information has been included in the consolidated financial statements or notes thereto.

- Amended and Restated Transaction Agreement by and among Tronox Incorporated, Tronox Limited, Concordia Acquisition Corporation, Concordia Merger Corporation, Exxaro Resources Limited, Exxaro Holdings Sands
- 2.1 (Proprietary) Limited and Exxaro International BV, dated as of April 20, 2012 (incorporated by reference to Annex A to the proxy statement/prospectus which forms a part of the Registration Statement on Form S-4 filed by Tronox Limited and Tronox Incorporated on May 4, 2012).
- Stock and Asset Purchase Agreement, dated as of February 3, 2015, by and among FMC Corporation, Tronox US
- 2.2 Holdings Inc. and Tronox Limited (incorporated by reference to Exhibit 2.1 of the Current Report on Form 8-K filed by Tronox Limited on February 4, 2015).
- 3.1 Constitution of Tronox Limited (incorporated by reference to Exhibit 3.1 of the Current Report on Form 8-K filed by Tronox Limited on June 20, 2012).

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- 4.1 Indenture, dated as of August, 20, 2012, among Tronox Finance LLC, Tronox Limited, the other guarantors named therein and Wilmington Trust, National Association, as Trustee (incorporated by reference to Exhibit 4.1 of the Quarterly Report on Form 10-Q filed by Tronox Limited on November 14, 2012).
- 4.2 Registration Rights Agreement, dated as of August 20, 2012, among Tronox Finance LLC, Tronox Limited, the other guarantors named therein and Goldman, Sachs & Co., Credit Suisse Securities (USA) LLC and UBS Securities LLC, as representative of the initial purchasers (incorporated by reference to Exhibit 4.2 of the Quarterly Report on Form 10-Q filed by Tronox Limited on November 14, 2012).
- 4.3 First Supplemental Indenture, dated August 29, 2012, to the Indenture, dated as of August, 20, 2012 among Tronox Finance LLC, Tronox Limited, the other guarantors named therein and Wilmington Trust, National Association, as Trustee (incorporated by reference to Exhibit 4.3 of the Quarterly Report on Form 10-Q filed by Tronox Limited on November 14, 2012).
- 4.4 Indenture dated as of March 19, 2015 between Evolution Escrow Issuer LLC to be merged into Tronox Finance LLC and Wilmington Trust, National Association, as trustee (incorporated by reference to Exhibit 4.1 to the Company's Report on Form 8-K filed on April 7, 2015)
- 4.5 First Supplemental Indenture dated as of April 1, 2015 among Tronox Finance LLC (as successor to Evolution Escrow Issuer LLC), the parties named in Schedule I thereto and Wilmington Trust, National Association, as trustee (incorporated by reference to Exhibit 4.2 to the Company's Report on Form 8-K filed on April 7, 2015).
- 4.6 Fifth Supplemental Indenture dated as of April 1, 2015 among Tronox Finance LLC, the guarantors named therein and Wilmington Trust, National Association, as trustee (incorporated by reference to Exhibit 4.3 to the Company's Report on Form 8-K filed on April 7, 2015).
- 10.1 Amended and Restated Warrant Agreement, dated as of June 15, 2012, by and between Tronox Incorporated, Tronox Limited, Computershare Inc. and its wholly owned subsidiary, Computershare Trust Company, N.A. (incorporated by reference to Exhibit 10.6 of the Current Report on Form 8-K filed by Tronox Limited on June 20, 2012).
- 10.2\* Employment Agreement entered into as of February 14, 2011 by and between Tronox LLC and John D. Romano (incorporated by reference to Exhibit 10.5 of the Registration Statement on Form S-4 filed by Tronox Limited and Tronox Incorporated on December 30, 2011).
- 10.3\* Employment Agreement entered into as of February 14, 2011 by and between Tronox LLC and Michael J. Foster (incorporated by reference to Exhibit 10.6 of the Registration Statement on Form S-4 filed by Tronox Limited and Tronox Incorporated on December 30, 2011).
- 10.4 Shareholders' Agreement by and between Tronox Sands Holdings PTY Limited, Tronox Limited, Exxaro Resources Limited, Exxaro Sands (Proprietary) Limited and Exxaro TSA Sands Proprietary Limited (incorporated by reference to Exhibit 10.10 of the Current Report on Form 8-K filed by Tronox Limited on June 20, 2012).
- 10.5 Shareholder's Deed dated June 15, 2012 by and between Tronox Limited, Thomas Casey, and Exxaro Resources Limited (incorporated by reference to Exhibit 10.1 of the Current Report on Form 8-K filed by Tronox Limited on June 20, 2012).
- 10.6 Credit and Guaranty Agreement, dated February 8, 2012, by and among Tronox Pigments (Netherlands) B.V., Tronox Incorporated, the guarantors listed therein, the lenders listed therein, and Goldman Sachs Bank USA (incorporated by reference to Exhibit 10.14 of the Registration Statement on Form S-4 filed by Tronox Limited and Tronox Incorporated on March 22, 2012).
- 10.07\* Employment Agreement entered into as of April 19, 2012 by and between Tronox LLC and Thomas J. Casey (incorporated by reference to Exhibit 10.15 of the Registration Statement on Form S-4 filed by Tronox Limited and Tronox Incorporated on April 23, 2012).
- 10.8\* Tronox Limited Management Equity Incentive Plan (incorporated by reference to Exhibit 10.16 of the Registration Statement on Form S-4 filed by Tronox Limited and Tronox Incorporated on April 23, 2012).
- 10.9 First Amendment to the Credit and Guaranty Agreement, dated May 11, 2012, by and among Tronox Pigments (Netherlands) B.V., Tronox Incorporated, Goldman Sachs Bank USA, the requisite lenders party thereto and the guarantors party thereto (incorporated by reference to Exhibit 10.12 of the Annual Report on Form 10-K for the Fiscal Year Ended December 31, 2012 filed by Tronox Limited on February 28, 2013).



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- 10.10 Technical Amendment to the Credit and Guaranty Agreement, dated June 12, 2012, by and among Goldman Sachs Bank USA and Tronox Pigments (Netherlands) B.V. (incorporated by reference to Exhibit 10.13 of the Annual Report on Form 10-K for the Fiscal Year Ended December 31, 2012 filed by Tronox Limited on February 28, 2013).
- 10.11 Transition Services Agreement, dated June 15, 2012, by and between Tronox Limited, Exxaro Resources Limited, Exxaro TSA Sands Proprietary Limited and Exxaro Sands (Proprietary) Limited (incorporated by reference to Exhibit 10.3 of the Current Report on Form 8-K filed by Tronox Limited on June 20, 2012).
- 10.12 General Services Agreement, dated June 15, 2012, by and between Tronox Limited, Exxaro Resources Limited, Exxaro TSA Sands Proprietary Limited and Exxaro Sands (Proprietary) Limited (incorporated by reference to Exhibit 10.4 of the Current Report on Form 8-K filed by Tronox Limited on June 20, 2012).

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- 10.13 Template Project Services Agreement, dated June 15, 2012, by and between Tronox Limited and Exxaro Resources Limited (incorporated by reference to Exhibit 10.5 of the Current Report on Form 8-K filed by Tronox Limited on June 20, 2012).
- 10.14 Revolving Syndicated Facility Agreement, dated June 18, 2012, among Tronox Incorporated, Tronox Limited, Guarantors named therein, Lenders named therein, UBS Securities LLC, as Arranger, Bookmanager, Documentation Agent and Syndication Agent, UBS AG, Stamford Branch, as Issuing Bank, Administrative Agent and Collateral Agent, UBS Loan Finance LLC, as Swingline Lender, and UBS AG, Stamford Branch, as Australian Security Trustee (incorporated by reference to Exhibit 10.7 of the Current Report on Form 8-K filed by Tronox Limited on June 20, 2012).
- 10.15 First Amendment to Revolving Syndicated Facility Agreement, dated August 8, 2012, among Tronox Limited, the other borrowers and the guarantors party thereto, the lenders party thereto and UBS AG, Stamford Branch (incorporated by reference to Exhibit 10.18 of the Annual Report on Form 10-K for the Fiscal Year Ended December 31, 2012 filed by Tronox Limited on February 28, 2013).
- 10.16\* Separation Agreement and Release entered into as of February 9, 2013, by and between Tronox Limited and Daniel D. Greenwell (incorporated by reference to Exhibit 10.1 of the Current Report on Form 8-K filed by Tronox Limited on February 13, 2013).
- 10.17\* First Amendment to that Certain Employment Agreement entered into as of February 22, 2013, by and between Tronox LLC and Thomas J. Casey (incorporated by reference to Exhibit 10.21 of the Annual Report on Form 10-K for the Fiscal Year Ended December 31, 2012 filed by Tronox Limited on February 28, 2013).
- 10.18 Single Tenant Industrial Lease by and between Le Petomane XXVII, Inc., not individually but solely in the representative capacity as the Trustee of the Nevada Environmental Response Trust, and Tronox LLC dated February 14, 2011 (incorporated by reference to Exhibit 10.3 of the Annual Report on Form 10-K filed by Tronox Limited on February 27, 2014).
- 10.19\* Tronox Limited Annual Performance Bonus Plan (incorporated by reference to Exhibit B of the Definitive Proxy Statement of Tronox Limited filed on Form DEF 14A on April 15, 2013).
- 10.20\* Employment Agreement entered into as of July 25, 2013 by and between Tronox LLC and Jean Francois Turgeon (incorporated by reference to Exhibit 10.1 of the Current Report on Form 8-K filed by Tronox Limited on August 7, 2013).
- 10.21\* Employment Agreement entered into as of August 1, 2013 by and between Tronox LLC and Katherine C. Harper (incorporated by reference to Exhibit 10.2 of the Current Report on Form 8-K filed by Tronox Limited on August 7, 2013).
- 10.22\* Employment Agreement entered into as of March 1, 2014 by and between Tronox LLC and Richard L. Muglia (incorporated by reference to Exhibit 10.1 of the Quarterly Report on Form 10-Q filed by Tronox Limited on May 8, 2014).
- 10.23\* Separation Agreement entered into as of March 1, 2014 by and between Tronox Limited and Michael J. Foster (incorporated by reference to Exhibit 10.2 of the Quarterly Report on Form 10-Q filed by Tronox Limited on May 8, 2014).
- 10.24 Third Amendment to Credit and Guaranty Agreement, dated as of April 23, 2014, among Tronox Pigments (Netherlands) B.V., Tronox Limited, the guarantors listed therein, the lender parties thereto and Goldman Sachs Bank USA (incorporated by reference to Exhibit 10.1 of the Current Report on Form 8-K filed by Tronox Limited on April 29, 2014).
- 10.25\* Amended and Restated Employment Agreement dated as of August 14, 2014 by and between Tronox Limited, Tronox LLC and Thomas Casey (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on August 20, 2014).
- 10.26\* Amendment to Certain Equity-Based Award Agreements, dated as of August 14, 2014, between Tronox Limited and Thomas Casey (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on August 20, 2014).
- 10.27\* Settlement Agreement entered into as of October 6, 2014 by and between Tronox Mineral Sands Proprietary Limited and Pravindran Trevor Arran (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on October 9, 2014).

- 10.28\* Amended and Restated Employment Agreement dated as of December 23, 2014 by and between Tronox LLC and John Romano (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on December 23, 2014).
- 10.29\* Employment Agreement dated as of June 15, 2012 by and between Tronox LLC and Willem Van Niekerk (filed herewith).
- 10.30 Amended and Restated Revolving Syndicated Facility Agreement dated as of April 1, 2015, among Tronox Incorporated, Tronox Limited, Tronox Pigments (Holland) B.V., Guarantors named therein, Lenders named therein, UBS Securities LLC, as Lead Arranger and Bookmanager, Goldman Sachs Bank USA and Royal Bank of Canada, as Co-Syndication Agents, Credit Suisse AG, Cayman Islands Branch and Wells Fargo Bank, N.A., as Co-Documentation Agents, UBS AG, Stamford Branch, as Issuing Bank, Swingline Lender, Administrative Agent and Collateral Agent, and UBS AG, Stamford Branch, as Australian Security Trustee (incorporated by reference to Exhibit 10.1 to the Company's Report on Form 8-K filed on April 7, 2015).

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12.1 Ratio of Earnings to Fixed Charges.

14.1 Tronox Code of Business Conduct, Code of Ethics (incorporated by reference to Exhibit 14.1 to the Company's Annual Report on Form 10-K filed on February 27, 2014).

21.1 Subsidiaries of Tronox Limited.

23.1 Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm for Tronox Limited.

23.2 Consent of Grant Thornton LLP, Independent Registered Public Accounting Firm for Tronox Limited.

31.1 Rule 13a-14(a) Certification of Thomas Casey.

31.2 Rule 13a-14(a) Certification of Katherine C. Harper.

32.1 Section 1350 Certification for Thomas Casey.

32.2 Section 1350 Certification for Katherine C. Harper.

95 Mine Safety Disclosures.

XBRL Instance Document (incorporated by reference to Exhibit 101.INS of the Annual Report on Form 101.INS 10-K for the Fiscal Year Ended December 31, 2013 filed by Tronox Limited on February 27, 2014 (Commission File Number 001-35573).

XBRL Taxonomy Extension Schema Document (incorporated by reference to Exhibit 101.SCH of the 101.SCH Annual Report on Form 10-K for the Fiscal Year Ended December 31, 2013 filed by Tronox Limited on February 27, 2014 (Commission File Number 001-35573).

XBRL Taxonomy Extension Calculation Linkbase Document (incorporated by reference to Exhibit 21.1 of 101.CAL the Annual Report on Form 10-K for the Fiscal Year Ended December 31, 2013 filed by Tronox Limited on February 27, 2014 (Commission File Number 001-35573).

XBRL Taxonomy Extension Label Linkbase Document (incorporated by reference to Exhibit 101.LAB of 101.LAB the Annual Report on Form 10-K for the Fiscal Year Ended December 31, 2013 filed by Tronox Limited on February 27, 2014 (Commission File Number 001-35573).

XBRL Taxonomy Extension Definition Linkbase Document (incorporated by reference to Exhibit 101.DEF 101.DEF of the Annual Report on Form 10-K for the Fiscal Year Ended December 31, 2013 filed by Tronox Limited on February 27, 2014 (Commission File Number 001-35573).

XBRL Taxonomy Extension Presentation Linkbase Document (incorporated by reference to Exhibit 101.PRE 101.PRE of the Annual Report on Form 10-K for the Fiscal Year Ended December 31, 2013 filed by Tronox Limited on February 27, 2014 (Commission File Number 001-35573).

\*Indicates management contract or compensatory plan or arrangement.

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## 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, on this 24<sup>th</sup> day of February 2016.

## TRONOX LIMITED

(Registrant)

By: /s/ Katherine C. Harper  
 Name: Katherine C. Harper  
 Title: Senior Vice President and Chief  
 Financial Officer

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

Signature	Title	Date
/s/ Thomas Casey Thomas Casey	Chairman of the Board and Chief Executive Officer (Principal Executive Officer)	February 24, 2016
/s/ Katherine C. Harper Katherine C. Harper	Senior Vice President and Chief Financial Officer (Principal Financial Officer)	February 24, 2016
/s/ Kevin V. Mahoney Kevin V. Mahoney	Vice President and Controller (Principal Accounting Officer)	February 24, 2016
/s/ Daniel Blue Daniel Blue	Director	February 24, 2016
/s/ Wim de Klerk Wim de Klerk	Director	February 24, 2016
/s/ Andrew P. Hines Andrew P. Hines	Director	February 24, 2016
/s/ Wayne A. Hinman Wayne A. Hinman	Director	February 24, 2016
/s/ Peter Johnston Peter Johnston	Director	February 24, 2016
/s/ Ilan Kaufthal Ilan Kaufthal	Director	February 24, 2016
/s/ Siphon Nkosi Siphon Nkosi	Director	February 24, 2016

/s/ Jeffrey N. Quinn  
Jeffrey N. Quinn

Director

February 24, 2016

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