

2016

FORM 10-K



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 fiscal year ended December 31, 2016

OR

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

For the transition period from

to

Commission file number: 001-33492

CVR Energy, Inc.

(Exact name of registrant as specified in its charter)

Delaware

(State or Other Jurisdiction of
Incorporation or Organization)

2277 Plaza Drive, Suite 500
Sugar Land, Texas

(Address of Principal Executive Offices)

61-1512186

(I.R.S. Employer
Identification No.)

77479

(Zip Code)

Registrant's Telephone Number, including Area Code:
(281) 207-3200

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

<u>Title of Each Class</u>	<u>Name of Each Exchange on Which Registered</u>
Common Stock, \$0.01 par value per share	The 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

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 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 or 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.

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

(Do not check if a 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 voting and non-voting common equity held by non-affiliates of the registrant computed based on the New York Stock Exchange closing price on June 30, 2016 (the last business day of the registrant's second fiscal quarter) was \$242,301,131. Shares of the registrant's common stock held by each executive officer and director and by each entity or person that, to the registrant's knowledge, owned 10% or more of the registrant's outstanding common stock as of June 30, 2016 have been excluded from this number in that these persons may be deemed affiliates of the registrant. This determination of possible affiliate status is not necessarily a conclusive determination for other purposes.

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date.

<u>Class</u>	<u>Outstanding at February 14, 2017</u>
Common Stock, par value \$0.01 per share	86,831,050 shares

Documents Incorporated By Reference

Document
Proxy Statement for the 2017 Annual Meeting of Stockholders

Parts Incorporated
Items 10, 11, 12, 13 and 14 of Part III

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GLOSSARY OF SELECTED TERMS

The following are definitions of certain terms used in this Annual Report on Form 10-K for the year ended December 31, 2016 (this "Report").

2021 Notes — \$320.0 million aggregate principal amount of 6.5% Senior Notes due 2021, which were issued by CVR Nitrogen and CVR Nitrogen Finance.

2022 Notes — \$500.0 million aggregate principal amount of 6.5% Senior Notes due 2022, which were issued by Refining, LLC and Coffeyville Finance on October 23, 2012 and fully and unconditionally guaranteed by the Refining Partnership and each of Refining LLC's domestic subsidiaries other than Coffeyville Finance.

2023 Notes — \$645.0 million aggregate principal amount of 9.25% Senior Secured Notes due 2023, which were issued through CVR Partners and CVR Nitrogen Finance.

2-1-1 crack spread — The approximate gross margin resulting from processing two barrels of crude oil to produce one barrel of gasoline and one barrel of distillate. The 2-1-1 crack spread is expressed in dollars per barrel.

ABL Credit Facility — The Nitrogen Fertilizer Partnership's senior secured asset based revolving credit facility with a group of lenders and UBS AG, Stamford Branch, as administrative agent and collateral agent.

Amended and Restated ABL Credit Facility — The Refining Partnership's senior secured asset based revolving credit facility with a group of lenders and Wells Fargo, as administrative agent and collateral agent.

ammonia — Ammonia is a direct application fertilizer and is primarily used as a building block for other nitrogen products for industrial applications and finished fertilizer products.

barrel — Common unit of measure in the oil industry which equates to 42 gallons.

blendstocks — Various compounds that are combined with gasoline or diesel from the crude oil refining process to make finished gasoline and diesel fuel; these may include natural gasoline, fluid catalytic cracking unit or FCCU gasoline, ethanol, reformat or butane, among others.

bpd — Abbreviation for barrels per day.

bpcd — Abbreviation for barrels per calendar day, which refers to the total number of barrels processed in a refinery within a year, divided by the total number of days in the year (365 or 366 days), thus reflecting all operational and logistical limitations.

bulk sales — Volume sales through third-party pipelines, in contrast to tanker truck quantity rack sales.

capacity — Capacity is defined as the throughput a process unit is capable of sustaining, either on a calendar or stream day basis. The throughput may be expressed in terms of maximum sustainable, nameplate or economic capacity. The maximum sustainable or nameplate capacities may not be the most economical. The economic capacity is the throughput that generally provides the greatest economic benefit based on considerations such as crude oil and other feedstock costs, product values and downstream unit constraints.

catalyst — A substance that alters, accelerates, or instigates chemical changes, but is neither produced, consumed nor altered in the process.

Coffeyville Fertilizer Facility — CVR Partners' nitrogen fertilizer manufacturing facility located in Coffeyville, Kansas.

Coffeyville Finance — Coffeyville Finance Inc., a wholly-owned subsidiary of Refining LLC and an indirect wholly-owned subsidiary of the Refining Partnership.

corn belt — The primary corn producing region of the United States, which includes Illinois, Indiana, Iowa, Minnesota, Missouri, Nebraska, Ohio and Wisconsin.

crack spread — A simplified calculation that measures the difference between the price for light products and crude oil. For example, the 2-1-1 crack spread is often referenced and represents the approximate gross margin resulting from processing two barrels of crude oil to produce one barrel of gasoline and one barrel of distillate.

Credit Parties — CRLLC and certain subsidiaries party to the Amended and Restated ABL Credit Facility.

CRLLC — Coffeyville Resources, LLC, a wholly-owned subsidiary of the Company.

CRPLLC — Coffeyville Resources Pipeline, LLC.

CRLLC Facility — The Nitrogen Fertilizer Partnership's \$300.0 million senior term loan credit facility with CRLLC, which was repaid in full and terminated on June 10, 2016.

CRNF — Coffeyville Resources Nitrogen Fertilizers, LLC a subsidiary of the Nitrogen Fertilizer Partnership.

CRRM — Coffeyville Resources Refining & Marketing, LLC, a wholly-owned subsidiary of Refining LLC and indirect wholly-owned subsidiary of the Refining Partnership.

CVR Energy or CVR or Company — CVR Energy, Inc.

CVR Nitrogen — CVR Nitrogen, LP (formerly known as East Dubuque Nitrogen Partners, L.P. and also formerly known as Rentech Nitrogen Partners L.P.).

CVR Nitrogen GP — CVR Nitrogen GP, LLC (formerly known as East Dubuque Nitrogen GP, LLC and also formerly known as Rentech Nitrogen GP, LLC).

CVR Partners or the Nitrogen Fertilizer Partnership — CVR Partners, LP.

CVR Refining or the Refining Partnership — CVR Refining, LP. and its subsidiaries.

CVR Refining GP — CVR Refining GP, LLC.

distillates — Primarily diesel fuel, kerosene and jet fuel.

East Dubuque Facility — CVR Partners' nitrogen fertilizer manufacturing facility located in East Dubuque, Illinois.

East Dubuque Merger — The transactions contemplated by the Merger Agreement, whereby the Nitrogen Fertilizer Partnership acquired CVR Nitrogen and CVR Nitrogen GP on April 1, 2016.

EPA — The United States Environmental Protection Agency.

ethanol — A clear, colorless, flammable oxygenated hydrocarbon. Ethanol is typically produced chemically from ethylene, or biologically from fermentation of various sugars from carbohydrates found in agricultural crops and cellulosic residues from crops or wood. It is used in the United States as a gasoline octane enhancer and oxygenate.

Excel Pipeline — Excel Pipeline LLC.

Exchange Act — Securities Exchange Act of 1934, as amended.

farm belt — Refers to the states of Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, Texas and Wisconsin.

feedstocks — Petroleum products, such as crude oil and natural gas liquids, that are processed and blended into refined products, such as gasoline, diesel fuel and jet fuel during the refining process.

FIFO — First-in, first-out.

GAAP — U.S. generally accepted accounting principles.

Group 3 — A geographic subset of the PADD II region comprising refineries in Oklahoma, Kansas, Missouri, Nebraska and Iowa. Current Group 3 refineries include the Refining Partnership's Coffeyville and Wynnewood refineries; the Valero Ardmore refinery in Ardmore, OK; HollyFrontier's Tulsa refinery in Tulsa, OK and El Dorado refinery in El Dorado, KS; Phillips 66's Ponca City refinery in Ponca City, OK; and CHS Inc.'s refinery in McPherson, KS.

heavy crude oil — A relatively inexpensive crude oil characterized by high relative density and viscosity. Heavy crude oils require greater levels of processing to produce high value products such as gasoline and diesel fuel.

independent petroleum refiner — A refiner that does not have crude oil exploration or production operations. An independent refiner purchases the crude oil throughputs in its refinery operations from third parties.

intercompany credit facility — A \$250.0 million senior unsecured revolving credit facility between CRLLC and Refining LLC.

light crude oil — A relatively expensive crude oil characterized by low relative density and viscosity. Light crude oils require lower levels of processing to produce high value products such as gasoline and diesel fuel.

Magellan — Magellan Midstream Partners L.P., a publicly traded company whose business is the transportation, storage and distribution of refined petroleum products.

Merger Agreement — The Agreement and Plan of Merger, dated as of August 9, 2015, whereby the Nitrogen Fertilizer Partnership acquired CVR Nitrogen and CVR Nitrogen GP.

MMBtu — One million British thermal units or Btu: a measure of energy. One Btu of heat is required to raise the temperature of one pound of water one degree Fahrenheit.

MSCF — One thousand standard cubic feet, a customary gas measurement unit.

natural gas liquids — Natural gas liquids, often referred to as NGLs, are both feedstocks used in the manufacture of refined fuels, as well as products of the refining process. Common NGLs used include propane, isobutane, normal butane and natural gasoline.

Nitrogen Fertilizer Partnership credit facility — CRNF's \$125.0 million term loan, \$25.0 million revolving and \$50.0 million uncommitted incremental credit facility, guaranteed by the Nitrogen Fertilizer Partnership, entered into with a group of lenders including Goldman Sachs Lending Partners LLC, as administrative and collateral agent, which was repaid in full and terminated on April 1, 2016.

PADD II — Midwest Petroleum Area for Defense District which includes Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, Tennessee, and Wisconsin.

petroleum coke (pet coke) — A coal-like substance that is produced during the refining process.

product pricing at gate — Product pricing at gate represents net sales less freight revenue divided by product sales volume in tons. Product pricing at gate is also referred to as netback.

rack sales — Sales which are made at terminals into third-party tanker trucks.

refined products — Petroleum products, such as gasoline, diesel fuel and jet fuel, that are produced by a refinery.

Refining LLC — CVR Refining, LLC, a wholly-owned subsidiary of the Refining Partnership.

Refining Partnership IPO — The initial public offering of 27,600,000 common units representing limited partner interests of the Refining Partnership, which closed on January 23, 2013 (which includes the underwriters' subsequently exercised option to purchase additional common units).

RFS — Renewable Fuel Standard of the EPA.

RINs — Renewable fuel credits, known as renewable identification numbers.

SEC — Securities and Exchange Commission.

Second Underwritten Offering — The second underwritten offering of 7,475,000 common units of the Refining Partnership, which closed on June 30, 2014 (which includes the underwriters' subsequently exercised option to purchase additional common units).

sour crude oil — A crude oil that is relatively high in sulfur content, requiring additional processing to remove the sulfur. Sour crude oil is typically less expensive than sweet crude oil.

spot market — A market in which commodities are bought and sold for cash and delivered immediately.

sweet crude oil — A crude oil that is relatively low in sulfur content, requiring less processing to remove the sulfur. Sweet crude oil is typically more expensive than sour crude oil.

Tender Offer — The cash tender offer commenced on April 29, 2016 by CVR Nitrogen and CVR Nitrogen Finance Corporation to purchase any and all of the outstanding 2021 Notes at 101.5% of par value.

throughput — The volume processed through a unit or a refinery or transported on a pipeline.

turnaround — A periodically required standard procedure to inspect, refurbish, repair and maintain the refinery or nitrogen fertilizer plant assets. This process involves the shutdown and inspection of major processing units and occurs every four to five years for the refineries and every two to three years for the nitrogen fertilizer plant.

UAN — An aqueous solution of urea and ammonium nitrate used as a fertilizer.

Underwritten Offering — The underwritten offering of 13,209,236 common units of the Refining Partnership, which closed on May 20, 2013 (which includes the underwriters' subsequently exercised option to purchase additional common units).

Velocity — Velocity Central Oklahoma Pipeline LLC.

Vitol — Vitol Inc.

Vitol Agreement — The Amended and Restated Crude Oil Supply Agreement between Vitol and CRRM.

VPP — Velocity Pipeline Partners, LLC.

WCS — Western Canadian Select crude oil, a medium to heavy, sour crude oil, characterized by an American Petroleum Institute gravity ("API gravity") of between 20 and 22 degrees and a sulfur content of approximately 3.3 weight percent.

Wells Fargo — Wells Fargo Bank, National Association.

Wells Fargo Credit Agreement — CVR Nitrogen's credit agreement with Wells Fargo, as successor-in-interest by assignment from General Electric Company, as administrative agent, which was repaid in April 2016 and terminated.

WTI — West Texas Intermediate crude oil, a light, sweet crude oil, characterized by an API gravity between 39 and 41 degrees and a sulfur content of approximately 0.4 weight percent that is used as a benchmark for other crude oils.

WTS — West Texas Sour crude oil, a relatively light, sour crude oil characterized by an API gravity of between 30 and 32 degrees and a sulfur content of approximately 2.0 weight percent.

yield — The percentage of refined products that is produced from crude oil and other feedstocks.

PART I

Item 1. *Business*

Overview

CVR Energy, Inc. and, unless the context otherwise requires, its subsidiaries ("CVR Energy," the "Company," "we," "us," or "our") is a diversified holding company primarily engaged in the petroleum refining and nitrogen fertilizer manufacturing industries through its holdings in CVR Refining, LP ("CVR Refining" or the "Refining Partnership") and CVR Partners, LP ("CVR Partners" or the "Nitrogen Fertilizer Partnership"). The Refining Partnership is an independent petroleum refiner and marketer of high value transportation fuels. The Nitrogen Fertilizer Partnership produces and markets nitrogen fertilizers in the form of UAN and ammonia. We own the general partner and approximately 66% and 34% respectively, of the outstanding common units representing limited partner interests in each of the Refining Partnership and the Nitrogen Fertilizer Partnership. CVR Energy's common stock is listed on the New York Stock Exchange ("NYSE") under the symbol "CVI," the Refining Partnership's common units are listed on the NYSE under the symbol "CVRR" and the Nitrogen Fertilizer Partnership's common units are listed on the NYSE under the symbol "UAN." As of December 31, 2016, Icahn Enterprises L.P. and its affiliates owned approximately 82% of our outstanding common stock.

We operate under two business segments: petroleum (the petroleum and related businesses operated by the Refining Partnership) and nitrogen fertilizer (the nitrogen fertilizer business operated by the Nitrogen Fertilizer Partnership). Throughout the remainder of this document, our business segments are referred to as the "petroleum business" and the "nitrogen fertilizer business," respectively.

For the fiscal years ended December 31, 2016, 2015 and 2014, we generated consolidated net sales of \$4.8 billion, \$5.4 billion and \$9.1 billion, respectively, and operating income of \$90.9 million, \$421.6 million and \$264.3 million, respectively. The petroleum business generated \$4.4 billion, \$5.2 billion and \$8.8 billion of net sales and the nitrogen fertilizer business generated \$356.3 million, \$289.2 million and \$298.7 million of net sales, in each case, for the years ended December 31, 2016, 2015 and 2014, respectively. The petroleum business generated operating income of \$77.8 million, \$361.7 million and \$207.2 million and the nitrogen fertilizer business generated operating income of \$26.8 million, \$68.7 million and \$82.8 million, in each case, for the years ended December 31, 2016, 2015 and 2014, respectively. Our consolidated results of operations include certain other unallocated corporate activities and the elimination of intercompany transactions and, therefore, are not a sum of the operating results of the petroleum and nitrogen fertilizer businesses.

Refer to Item 1, "Petroleum Business" and Item 1, "Nitrogen Fertilizer Business" and Item 8, Note 18 ("Business Segments") for further details on our business segments.

Our History

The Coffeyville refinery, which began operations in 1906, and the Coffeyville nitrogen fertilizer plant, built in 2000, were operated as components of Farmland Industries, Inc. ("Farmland") until March 3, 2004, the date on which Coffeyville Resources, LLC ("CRLLC") completed the acquisition of these assets through a bankruptcy court auction.

On June 24, 2005, Coffeyville Acquisition LLC ("CALLC"), which was formed by certain funds affiliated with Goldman, Sachs & Co. and Kelso & Company, L.P. (the "Goldman Sachs Funds" and the "Kelso Funds," respectively), acquired these businesses. CALLC operated our business from June 24, 2005 until CVR Energy's initial public offering in October 2007.

CVR Energy was formed in September 2006 as a subsidiary of CALLC in order to consummate an initial public offering of its businesses. CVR Energy consummated its initial public offering on October 26, 2007. The Goldman Sachs Funds and the Kelso Funds completely sold their ownership interests by February 2011 and May 2011, respectively.

On April 13, 2011, the Nitrogen Fertilizer Partnership completed the Nitrogen Fertilizer Partnership IPO. The Nitrogen Fertilizer Partnership sold 22,080,000 common units at a price of \$16.00 per common unit, resulting in gross proceeds of \$353.3 million. The Nitrogen Fertilizer Partnership's common units are listed on the NYSE and are traded under the symbol "UAN." In connection with the Nitrogen Fertilizer Partnership IPO, the Nitrogen Fertilizer Partnership paid approximately \$24.7 million in underwriting fees and incurred approximately \$4.4 million of other offering costs. As a result of the Nitrogen Fertilizer Partnership IPO and through May 27, 2013, CVR Energy indirectly owned approximately 70% of the Nitrogen Fertilizer Partnership's outstanding common units and 100% of the Nitrogen Fertilizer Partnership's general partner with its non-economic general partner interest.

On December 15, 2011, CVR Energy acquired all of the issued and outstanding shares of WEC. Assets acquired include a 70,000 bpcd rated capacity refinery in Wynnewood, Oklahoma and approximately 2.0 million barrels of company-owned storage tanks.

On April 18, 2012, CVR Energy entered into a Transaction Agreement (the "Transaction Agreement") with an affiliate of Icahn Enterprises L.P. ("IEP"). Pursuant to the Transaction Agreement, IEP's affiliate offered (the "Offer") to purchase all of the issued and outstanding shares of CVR Energy's common stock for a price of \$30.00 per share in cash, without interest, less any applicable withholding taxes, plus one non-transferable contingent cash payment ("CCP") right for each share, which represented the contractual right to receive an additional cash payment per share if a definitive agreement for the sale of CVR Energy was executed on or before August 18, 2013 and such transaction closed. As no sale of the Company was executed by the date outlined in the Transaction Agreement, the CCPs expired on August 19, 2013.

In May 2012, IEP's affiliate acquired a majority of the common stock of CVR Energy through the Offer. As of December 31, 2016, IEP and its affiliates owned approximately 82% of CVR Energy's outstanding common stock.

On January 23, 2013, the Refining Partnership completed the Refining Partnership IPO. The Refining Partnership sold 24,000,000 common units at a price of \$25.00 per unit, resulting in gross proceeds of \$600.0 million. Of the common units issued, 4,000,000 units were purchased by an affiliate of IEP. Additionally, on January 30, 2013, the underwriters closed their option to purchase an additional 3,600,000 common units at a price of \$25.00 per unit resulting in gross proceeds of \$90.0 million. The common units, which are listed on the NYSE, began trading on January 17, 2013 under the symbol "CVRR." In connection with the Refining Partnership IPO, the Refining Partnership paid approximately \$32.5 million in underwriting fees and incurred approximately \$3.9 million of other offering costs.

Immediately following the Refining Partnership IPO and through May 19, 2013, CVR Energy indirectly owned approximately 81% of the total Refining Partnership common units and 100% of the Refining Partnership's general partner, which holds a non-economic general partner interest. Prior to the Refining Partnership IPO, CVR Energy owned 100% of the Refining Partnership and net income earned during this period was fully attributable to the Company.

On May 20, 2013, the Refining Partnership completed an underwritten offering (the "Underwritten Offering") by selling 12,000,000 common units to the public at a price of \$30.75 per unit. American Entertainment Properties Corporation ("AEP"), an affiliate of IEP, also purchased an additional 2,000,000 common units at the public offering price in a privately negotiated transaction with a subsidiary of CVR Energy, which was completed on May 29, 2013. In connection with the Underwritten Offering, on June 10, 2013, the Refining Partnership sold an additional 1,209,236 common units to the public at a price of \$30.75 per unit in connection with a partial exercise by the underwriters of their option to purchase additional common units. The transactions described in this paragraph are collectively referred to as the "Transactions." In connection with the Transactions, the Refining Partnership paid approximately \$12.2 million in underwriting fees and approximately \$0.4 million in offering costs.

The Refining Partnership utilized net proceeds of approximately \$394.0 million from the Underwritten Offering (including the underwriters' option) to redeem 13,209,236 common units from CVR Refining Holdings, LLC ("CVR Refining Holdings"), an indirect wholly-owned subsidiary of CVR Energy. The net proceeds to a subsidiary of CVR

Energy from the sale of 2,000,000 common units to AEPC were approximately \$61.5 million. The Refining Partnership did not receive any of the proceeds from the sale of common units by CVR Energy to AEPC.

Immediately following the closing of the Transactions and prior to June 30, 2014, public security holders held approximately 29% of the total Refining Partnership common units (including units owned by affiliates of IEP representing 4% of total Refining Partnership common units), and CVR Refining Holdings held approximately 71% of the total Refining Partnership common units.

On May 28, 2013, CRLLC completed a registered public offering (the "Secondary Offering") whereby it sold 12,000,000 Nitrogen Fertilizer Partnership common units to the public at a price of \$25.15 per unit. The net proceeds to CRLLC from the Secondary Offering were approximately \$292.6 million, after deducting approximately \$9.2 million in underwriting discounts and commissions. The Nitrogen Fertilizer Partnership did not receive any of the proceeds from the sale of common units by CRLLC. In connection with the Secondary Offering, the Nitrogen Fertilizer Partnership incurred approximately \$0.5 million in offering costs.

Immediately subsequent to the closing of the Secondary Offering, public security holders held approximately 47% of the total Nitrogen Fertilizer Partnership common units, and CRLLC held approximately 53% of the total Nitrogen Fertilizer Partnership common units. In addition, CRLLC owns 100% of the Nitrogen Fertilizer Partnership's general partner, CVR GP, LLC, which only holds a non-economic general partner interest.

On June 30, 2014, the Refining Partnership completed a second underwritten offering (the "Second Underwritten Offering") by selling 6,500,000 common units to the public at a price of \$26.07 per unit. The Refining Partnership paid approximately \$5.3 million in underwriting fees and approximately \$0.5 million in offering costs. The Refining Partnership utilized net proceeds of approximately \$164.1 million from the Second Underwritten Offering to redeem 6,500,000 common units from CVR Refining Holdings. Immediately subsequent to the closing of the Second Underwritten Offering and through July 23, 2014, public security holders held approximately 33% of the total Refining Partnership common units, and CVR Refining Holdings held approximately 67% of the total Refining Partnership common units.

On July 24, 2014, the Refining Partnership sold an additional 589,100 common units to the public at a price of \$26.07 per unit in connection with the underwriters' exercise of their option to purchase additional common units. The Refining Partnership utilized net proceeds of approximately \$14.9 million from the underwriters' exercise of their option to purchase additional common units to redeem an equal amount of common units from CVR Refining Holdings. Additionally, on July 24, 2014, CVR Refining Holdings sold 385,900 common units to the public at a price of \$26.07 per unit in connection with the underwriters' exercise of their remaining option to purchase additional common units. CVR Refining Holdings received net proceeds of \$9.7 million.

On April 1, 2016, the Nitrogen Fertilizer Partnership completed the East Dubuque Merger as contemplated by the Agreement and Plan of Merger, dated as of August 9, 2015 (the "Merger Agreement"), whereby the Nitrogen Fertilizer Partnership acquired CVR Nitrogen and CVR Nitrogen GP. Pursuant to the East Dubuque Merger, the Nitrogen Fertilizer Partnership acquired the East Dubuque Facility.

Immediately following the closing of the East Dubuque Merger and as of December 31, 2016, public security holders held approximately 66% of total Nitrogen Fertilizer Partnership common units, and CRLLC held approximately 34% of total Nitrogen Fertilizer Partnership common units in addition to owning 100% of the Nitrogen Fertilizer Partnership's general partner.

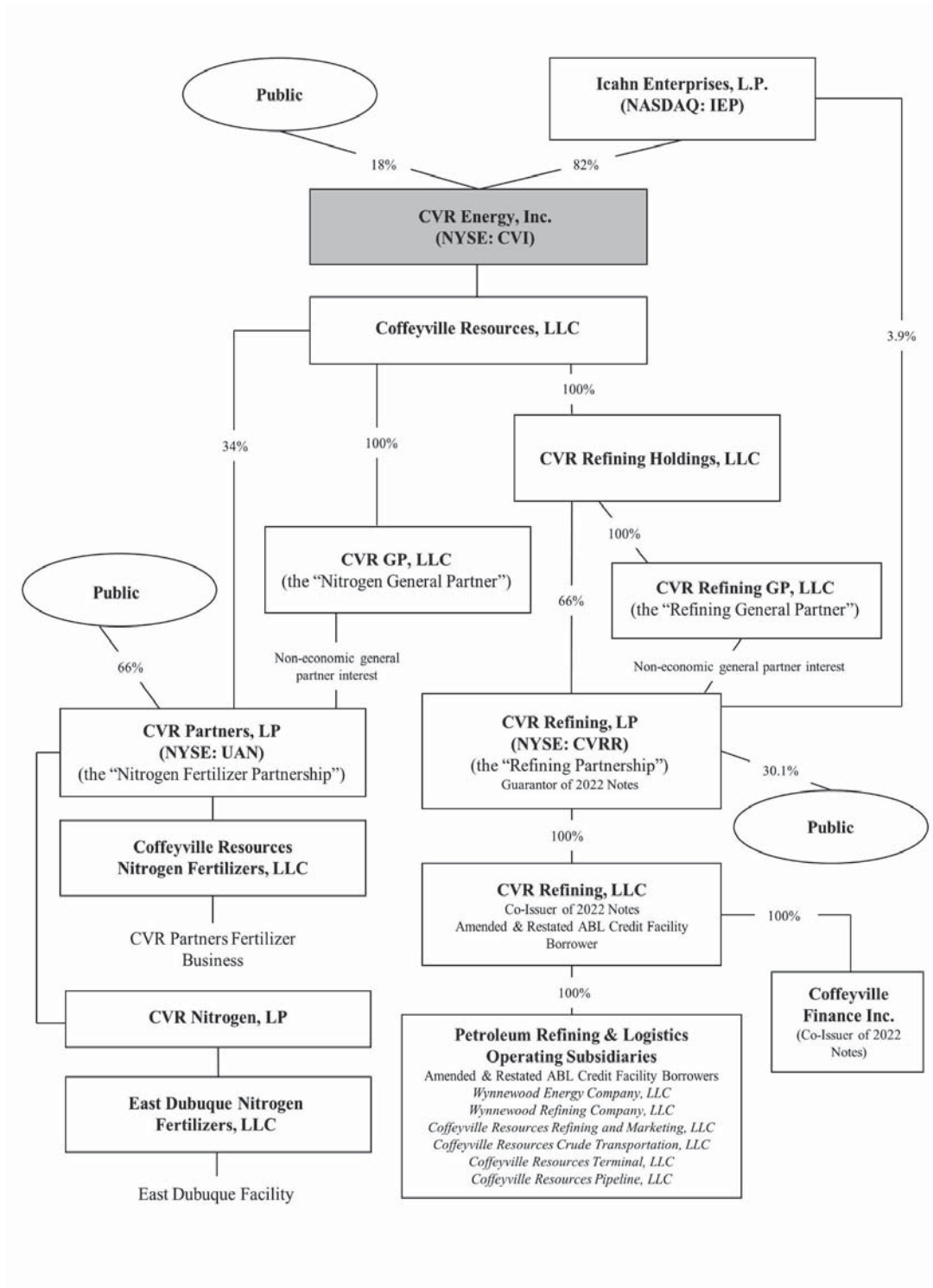
On August 2, 2016, an affiliate of IEP sold 250,000 common units of CVR Refining. As a result of this transaction, CVR Refining GP and its affiliates collectively own 69.99% of CVR Refining's outstanding common units. Pursuant to CVR Refining's partnership agreement, in certain circumstances, CVR Refining GP has the right to purchase all, but not less than all, of CVR Refining common units held by unaffiliated unit holders at a price not less than their then-current market price, as calculated pursuant to the terms of such partnership agreement (the "Call Right"). Pursuant to the terms of the partnership agreement, because CVR Refining GP and its affiliates' holdings were reduced to less than 70.0% of CVR Refining's outstanding common units, the ownership threshold for the

application of such Call Right was permanently reduced from 95% to 80%. Accordingly, if at any time CVR Refining GP and its affiliates own more than 80% of CVR Refining common units, it will have the right, but not the obligation, to exercise such Call Right.

As of December 31, 2016, public security holders held approximately 34% of the total Refining Partnership common units (including units owned by affiliates of IEP, representing 3.9% of the total Refining Partnership common units), and CVR Refining Holdings held approximately 66% of the total Refining Partnership common units, in addition to owning 100% of the Refining Partnership's general partner.

Organizational Structure and Related Ownership

The following chart illustrates our organizational structure and the organizational structure of the Refining Partnership and the Nitrogen Fertilizer Partnership as of the date of this Report.



Petroleum Business

The petroleum business, operated by the Refining Partnership, includes a complex full coking medium-sour crude oil refinery in Coffeyville, Kansas with a rated capacity of 115,000 bpcd and a complex crude oil refinery in Wynnewood, Oklahoma with a rated capacity of 70,000 bpcd capable of processing 20,000 bpcd of light sour crude oil (within its rated capacity of 70,000 bpcd). The combined crude capacity represents approximately 22% of the region's refining capacity. The Coffeyville refinery located in southeast Kansas is approximately 100 miles from Cushing, Oklahoma ("Cushing"), a major crude oil trading and storage hub. The Wynnewood refinery is located approximately 65 miles south of Oklahoma City, Oklahoma and approximately 130 miles from Cushing.

For the year ended December 31, 2016, the Coffeyville refinery's product yield included gasoline (51%), diesel fuel (primarily ultra-low sulfur diesel) (42%), and pet coke and other refined products such as natural gas liquids ("NGL") (propane and butane), slurry, sulfur and gas oil (7%). The Wynnewood refinery's product yield included gasoline (53%), diesel fuel (primarily ultra-low sulfur diesel) (35%), asphalt (5%), jet fuel (4%) and other products (3%).

The petroleum business also includes the following auxiliary operating assets:

- *Crude Oil Gathering System.* The petroleum business owns and operates a crude oil gathering system serving Kansas, Nebraska, Oklahoma, Missouri, Colorado and Texas. The system has field offices in Bartlesville and Pauls Valley, Oklahoma, Plainville and Winfield, Kansas and Denver, Colorado. The gathering system includes approximately 340 miles of active owned and leased pipelines and approximately 150 crude oil transports and associated storage facilities, which allows it to gather crude oils from independent crude oil producers. The crude oil gathering system has a gathering capacity of over 70,000 bpd. Gathered crude oil provides an attractive and competitive base supply of crude oil for the Coffeyville and Wynnewood refineries. During 2016, the petroleum business gathered an average of approximately 71,000 bpd. The petroleum business also has 35,000 bpd of contracted capacity on the Keystone and Spearhead pipelines that allow it to supply price-advantaged Canadian crude to its refineries. It also has contracted capacity on the Pony Express and White Cliffs pipelines, which both became in-service during 2015. Both the Pony Express and White Cliffs pipelines originate in Colorado and extend to Cushing.
- *Pipelines and Storage Tanks.* The petroleum business owns a proprietary pipeline system capable of transporting approximately 170,000 bpd of crude oil from its Broome Station facility located near Caney, Kansas to its Coffeyville refinery. Crude oils sourced outside of the proprietary gathering system are delivered by common carrier pipelines into various terminals in Cushing, where they are blended and then delivered to the Broome Station tank farm via a pipeline owned by Plains Pipeline L.P. ("Plains"). The petroleum business owns approximately (i) 1.5 million barrels of crude oil storage capacity that supports the gathering system and the Coffeyville refinery, (ii) 0.9 million barrels of crude oil storage capacity at the Wynnewood refinery and (iii) 1.5 million barrels of crude oil storage capacity in Cushing. The petroleum business also leases additional crude oil storage capacity of approximately (iv) 2.2 million barrels in Cushing, (v) 0.2 million barrels in Duncan, Oklahoma and (vi) 0.1 million barrels at the Wynnewood refinery. In addition to crude oil storage, the petroleum business owns over 4.5 million barrels of combined refined products and feedstocks storage capacity.
- *Marketing and Product Supply.* The petroleum business also has a rack marketing division supplying product through tanker trucks directly to customers located in geographic proximity to Coffeyville, Kansas and Wynnewood, Oklahoma and to customers at throughput terminals on Magellan Midstream Partners, L.P. ("Magellan") and NuStar Energy, LP's ("NuStar") refined products distribution systems.

The refineries' complexity allows the petroleum business to optimize the yields (the percentage of refined product that is produced from crude oil and other feedstocks) of higher value transportation fuels (gasoline and diesel). Complexity is a measure of a refinery's ability to process lower quality crude oil and feedstocks in an economic manner. The two refineries' capacity weighted average complexity is 13.0. As a result of key investments

in its refining assets and the addition of process units to comply with gasoline quality regulations, both of the refinery's complexities have increased. The Coffeyville refinery's complexity score is 13.3, and the Wynnewood refinery's complexity score is 12.6. The petroleum business' higher complexity provides it the flexibility to increase its refining margin over comparable refiners with lower complexities. The petroleum business has achieved significant increases in its refinery crude throughput rates over historical levels. As a result of the increasing complexities, the petroleum business is capable of processing a variety of crudes, including WTS, WTI, sweet and sour Canadian, and locally gathered crudes.

Crude and Feedstock Supply

The Coffeyville refinery has the capability to process blends of a variety of crude oil ranging from heavy sour to light sweet crude oil. Currently, the Coffeyville refinery crude oil slate consists of a blend of mid-continent domestic grades and various Canadian medium and heavy sour, and it has recently introduced North Dakota Bakken and other similarly sourced crudes into its crude slate. While crude oil has historically constituted over 90% of the Coffeyville refinery's total throughput over the last five years, other feedstock inputs include normal butane, natural gasoline, alkylation feeds, naphtha, gas oil and vacuum tower bottoms.

The Wynnewood refinery has the capability to process blends of a variety of crude oil ranging from medium sour to light sweet crude oil, although isobutane, gasoline components, and normal butane are also typically used. Historically most of the Wynnewood refinery's crude oil has been acquired domestically, mainly from Texas and Oklahoma, but it can also access and process various light and medium Canadian grades.

Crude oil is supplied to the Coffeyville and Wynnewood refineries through the wholly-owned gathering system and by pipeline. The petroleum business has continued to increase the number of barrels of crude oil supplied through its crude oil gathering system in 2016 and it now has the capacity of supplying over 70,000 bpd of crude oil to the refineries. For the year ended December 31, 2016, the gathering system supplied approximately 41% and 34% of the Coffeyville and Wynnewood refineries' crude oil demand, respectively. Locally produced crude oils are delivered to the refineries at a discount to WTI, and although sometimes slightly heavier and more sour, offer good economics to the refineries. These crude oils are light and sweet enough to allow the refineries to blend higher percentages of lower cost crude oils such as heavy sour Canadian crude oil while maintaining their target medium sour blend with an API gravity of between 28 and 36 degrees and between 0.9% and 1.2% sulfur. Crude oils sourced outside of the proprietary gathering system are delivered to Cushing by various pipelines including the Keystone and Spearhead pipelines, and subsequently to the Broome Station facility via the Plains pipeline. In May 2015 and November 2015, the petroleum business' contracted capacity included the Pony Express and White Cliffs pipelines, respectively. From the Broome Station facility, crude oil is delivered to the Coffeyville refinery via the petroleum business' 170,000 bpd proprietary pipeline system. Crude oils are delivered to the Wynnewood refinery by three separate pipelines, and received into storage tanks at terminals located on or near the refinery.

For the year ended December 31, 2016, the Coffeyville refinery's crude oil supply blend was comprised of approximately 84.3% light sweet crude oil, 14.7% heavy sour crude oil and 1% light/medium sour crude oil. For the year ended December 31, 2016, the Wynnewood refinery's crude oil supply blend was comprised of approximately 98.2% light sweet crude oil and 1.8% light/medium sour crude oil. The light sweet crude oil supply blend includes its locally gathered crude oil.

The Coffeyville refinery is connected to the mid-continent natural gas liquids commercial hub of Conway, Kansas by the inbound Enterprise Pipeline Blue Line. Natural gas liquids feedstock supplies such as butanes and natural gasoline are sourced and delivered directly into the refinery. In addition, Coffeyville's proximity to Conway provides access to the natural gas liquid and liquid petroleum gas fractionation and storage capabilities as well as the commercial markets available at Conway.

Crude Oil Supply Agreement

On August 31, 2012, Coffeyville Resources Refining & Marketing, LLC ("CRRM") and Vitol Inc. ("Vitol") entered into an Amended and Restated Crude Oil Supply Agreement (as amended, the "Vitol Agreement"). Under

the Vitol Agreement, Vitol supplies the petroleum business with crude oil and intermediation logistics, which helps the petroleum business to reduce its inventory position and mitigate crude oil pricing risk. The Vitol Agreement will automatically renew for successive one-year terms (each such term, a "Renewal Term") unless either party provides the other with notice of nonrenewal at least 180 days prior to expiration of any Renewal Term. The Vitol Agreement currently extends through December 31, 2017.

Refining Process

Coffeyville Refinery

The Coffeyville refinery is a 115,000 bpcd rated capacity facility with operations including fractionation, catalytic cracking, hydrotreating, reforming, coking, isomerization, alkylation, sulfur recovery and propane and butane recovery. The Coffeyville refinery benefits from significant refining unit redundancies, which include two crude oil distillation and vacuum towers, three sulfur recovery units and four hydrotreating units. These redundancies allow the Refining Partnership to continue to receive and process crude oil even if one tower requires unplanned maintenance without having to shut down the entire refinery in the case of a major unit turnaround. In addition, the Coffeyville refinery has a redundant supply of hydrogen pursuant to its feedstock and shared services agreement with a subsidiary of CVR Partners. The Coffeyville refinery has the capability to process blends of a variety of crude oil ranging from heavy sour to light sweet crude oil into products such as gasoline, diesel, kerosene, propane, butane, sulfur, heavy oil and petroleum coke. During the year ended December 31, 2016, the Coffeyville refinery processed approximately 124,200 bpd and 8,500 bpd of crude oil and feedstocks and blendstocks, respectively. These throughput rates for 2016 reflect the second phase of the major scheduled turnaround completed in the first quarter of 2016.

Wynnewood Refinery

The Wynnewood refinery is a 70,000 bpcd rated capacity facility with operations including fractionation, cracking, hydrotreating, hydrocracking, reforming, solvent deasphalting, alkylation, sulfur recovery and propane and butane recovery. Similar to the Coffeyville refinery, the Wynnewood refinery benefits from unit redundancies, including two crude oil distillation and vacuum towers and four hydrotreating units. The Wynnewood refinery has the capability to process blends of a variety of crude oil ranging from medium sour to light sweet crude oil (although isobutane, gasoline components, and normal butane are also typically used) into products such as gasoline, jet fuel, kerosene, propane, butane, propylene, sulfur, solvents, heavy oil and asphalt. During the year ended December 31, 2016, our Wynnewood refinery processed approximately 73,900 bpd and 2,600 bpd of crude oil and feedstocks and blendstocks, respectively.

Marketing and Distribution

The petroleum business focuses its Coffeyville petroleum product marketing efforts in the central mid-continent area, because of its relative proximity to the refinery and pipeline access. Coffeyville also has access to the Rocky Mountain area. Coffeyville engages in rack marketing, which is the supply of product through tanker trucks directly to customers located in close geographic proximity to the refinery and to customers at throughput terminals on the refined products distribution systems of Magellan and NuStar. Coffeyville also makes bulk sales (sales into third-party pipelines) into the mid-continent markets and other destinations utilizing the product pipeline networks owned by Magellan, Enterprise and NuStar. The outbound Enterprise Pipeline Red Line provides Coffeyville with access to the NuStar Refined Products Pipeline system. This allows gasoline and ULSD product sales from Kansas up into North Dakota.

The Wynnewood refinery ships its finished product via pipeline, railcar, and truck. It focuses its efforts in the southern portion of the Magellan system which covers all of Oklahoma, parts of Arkansas as well as eastern Missouri, and all other Magellan terminals. The pipeline system is also able to flow in the opposite direction, providing access to Texas markets as well as some adjoining states with pipeline connections. Wynnewood also sells jet fuel to the U.S. Department of Defense via its segregated truck rack and can offer asphalts, solvents and other specialty products via both truck and rail.

Customers

Customers for the refined petroleum products primarily include retailers, railroads, and farm cooperatives and other refiners/marketers in Group 3 of the PADD II region because of their relative proximity to the refineries and pipeline access. The petroleum business sells bulk products to long-standing customers at spot market prices based on a Group 3 basis differential to prices quoted on the New York Mercantile Exchange ("NYMEX"), which are reported by industry market-related indices such as Platts and Oil Price Information Service.

The petroleum business also has a rack marketing business supplying product through tanker trucks directly to customers located in proximity to the Coffeyville and Wynnewood refineries, as well as to customers located at throughput terminals on refined products distribution systems run by Magellan and NuStar. Rack sales are at posted prices that are influenced by competitor pricing and Group 3 spot market differentials. Additionally, the Wynnewood refinery supplies jet fuel to the U.S. Department of Defense. For the year ended December 31, 2016, the two largest customers accounted for approximately 15% and 10% of the petroleum business net sales and approximately 54% of the petroleum business net sales were made to its ten largest customers.

Competition

The petroleum business competes primarily on the basis of price, reliability of supply, availability of multiple grades of products and location. The principal competitive factors affecting its refining operations are cost of crude oil and other feedstock costs, refinery complexity, refinery efficiency, refinery product mix and product distribution and transportation costs. The location of the refineries provides the petroleum business with a reliable supply of crude oil and a transportation cost advantage over its competitors. The petroleum business primarily competes against five refineries operated in the mid-continent region. In addition to these refineries, the refineries compete against trading companies, as well as other refineries located outside the region that are linked to the mid-continent market through an extensive product pipeline system. These competitors include refineries located near the Gulf Coast and the Texas panhandle region. The petroleum business refinery competition also includes branded, integrated and independent oil refining companies, such as Phillips 66, HollyFrontier, CHS, Valero and Flint Hills Resources.

Seasonality

The petroleum business experiences seasonal effects as demand for gasoline products is generally higher during the summer months than during the winter months due to seasonal increases in highway traffic and road construction work. Demand for diesel fuel is higher during the planting and harvesting seasons. As a result, the petroleum business' results of operations for the first and fourth calendar quarters are generally lower compared to its results for the second and third calendar quarters. In addition, unseasonably cool weather in the summer months and/or unseasonably warm weather in the winter months in the markets in which the petroleum business sells its petroleum products can impact the demand for gasoline and diesel fuel. The demand for asphalt is also seasonal and is generally higher during the months of March through October.

Nitrogen Fertilizer Business

The nitrogen fertilizer business, operated by the Nitrogen Fertilizer Partnership, consists of two nitrogen fertilizer manufacturing facilities which are located in Coffeyville, Kansas and East Dubuque, Illinois. The nitrogen fertilizer business produces and distributes nitrogen fertilizer products, which are used primarily by farmers to improve the yield and quality of their crops. The principal products are UAN and ammonia, and all products are sold on a wholesale basis. The Coffeyville Fertilizer Facility includes a 1,300 ton-per-day capacity ammonia unit, a 3,000 ton-per-day capacity UAN unit and a gasifier complex having a capacity of 89 million standard cubic feet per day of hydrogen. The Coffeyville Fertilizer Facility is the only nitrogen fertilizer plant in North America that utilizes a pet coke gasification process to produce nitrogen fertilizer. The East Dubuque Facility, which includes a 1,075 ton-per-day capacity ammonia unit and a 1,100 ton-per-day capacity UAN unit, has the flexibility to vary its product mix enabling the East Dubuque Facility to upgrade a portion of its ammonia production into varying amounts of

UAN, nitric acid and liquid and granulated urea each season, depending on market demand, pricing and storage availability. The East Dubuque Facility's product sales are heavily weighted toward sales of ammonia and UAN.

Raw Material Supply

Coffeyville Fertilizer Facility

The Coffeyville Fertilizer Facility was built in 2000 and uses a gasification process to convert pet coke to high purity hydrogen for subsequent conversion to ammonia. The Coffeyville nitrogen fertilizer facility's pet coke gasification process results in a significantly higher percentage of fixed costs than a natural gas-based fertilizer plant. During the past five years, over 70% of the Coffeyville nitrogen fertilizer facility's pet coke requirements on average were supplied by CVR Refining's adjacent crude oil refinery pursuant to a renewable long-term agreement. Historically the Coffeyville nitrogen fertilizer plant has obtained the remainder of its pet coke requirements from third parties such as other Midwestern refineries or pet coke brokers at spot-prices. The Nitrogen Fertilizer Partnership is party to a pet coke supply agreement with HollyFrontier Corporation. The term of this agreement expires in December 2017 and historically has been renewed annually. If necessary, there are other pet coke suppliers and the gasification process can be modified to operate on coal as an alternative, which provides an additional raw material source. There are significant supplies of coal within a 60-mile radius of the Coffeyville nitrogen fertilizer plant.

The Coffeyville Fertilizer Facility also purchased some of its hydrogen from the Coffeyville Refinery, pursuant to a feedstock and shared services agreement having an initial term that ends in 2027, subject to renewal. Effective January 2017, CRRM and CRNF entered into a hydrogen purchase and sale agreement, pursuant to which, CRRM agrees to sell and deliver a committed hydrogen volume of 90,000 mscf per month, and CRNF agrees to purchase and receive the committed volume. CRNF also has the option to purchase excess volume of up to 60,000 mscf per month, or more upon mutual agreement, from CRRM, if available for purchase. The agreement has an initial term of 20 years and will be automatically extended following the initial term for additional successive five-year renewal term unless either party gives 180 days written notice.

The pet coke gasification process is licensed from an affiliate of General Electric Company. The license grants the Coffeyville Fertilizer Facility perpetual rights to use the pet coke gasification process on specified terms and conditions, and the license is fully paid.

Linde LLC ("Linde") owns, operates, and maintains the air separation plant that provides contract volumes of oxygen, nitrogen, and compressed dry air to the Coffeyville Fertilizer Facility for a monthly fee. The Coffeyville Fertilizer Facility provides and pays for all utilities required for operation of the air separation plant. The air separation plant has not experienced any long-term operating problems; however, CVR Energy maintains contingent business interruption insurance with a \$200.0 million limit for any interruption caused by physical damage to the air separation plant that results in a loss of production from an insured peril.

Although the Coffeyville Fertilizer Facility has its own boiler that is used to create start-up steam, it also has the ability to import start-up steam from the adjacent Coffeyville crude oil refinery and then export steam back to the crude oil refinery once all units in the Coffeyville Fertilizer Facility are in service. The Coffeyville Fertilizer Facility entered into a feedstock and shared services agreement with a subsidiary of CVR Refining, which regulates, among other things, the import and export of start-up steam between the adjacent Coffeyville crude oil refinery and the Coffeyville Fertilizer Facility. Monthly charges and credits are recorded with the steam valued at the natural gas price for the month.

East Dubuque Facility

The East Dubuque Facility uses natural gas to produce nitrogen fertilizer, primarily ammonia and UAN. The East Dubuque Facility is able to purchase natural gas at competitive prices due to the plant's connection to the Northern Natural Gas interstate pipeline system, which is within one mile of the facility, and the ANR Pipeline Company pipeline. The pipelines are connected to Nicor Inc.'s distribution system at the Chicago Citygate receipt

point and at the Hampshire interconnect, respectively, from which natural gas is transported to the facility. Though the East Dubuque Facility does not typically purchase natural gas for the purpose of resale, it may occasionally sell natural gas when purchase commitments exceed production requirements and/or storage capacities, or when the margin from selling natural gas significantly exceeds the margin from producing additional ammonia. The East Dubuque nitrogen Fertilizer Facility's receipt point locations and access to the Chicago Citygate receipt point has allowed it to obtain relatively favorable natural gas prices for sales of excess natural gas due to its proximity to the stable residential demand for the commodity in Chicago, Illinois.

Changes in the levels of natural gas prices and market prices of nitrogen-based products can materially affect the East Dubuque Facility's financial position and results of operations. Natural gas prices in the United States have experienced significant fluctuations over the last several years, increasing substantially in 2008 and subsequently declining to the current lower levels. Several recent discoveries of large natural gas deposits in North America, combined with advances in technology for natural gas production have caused large increases in the estimates of available natural gas reserves and production in the United States, contributing to significant reductions in the market price of natural gas. From time to time, the nitrogen fertilizer business enters into forward contracts with fixed delivery prices to purchase portions of its natural gas requirements. As of December 31, 2016, the nitrogen business segment had commitments to purchase 1.5 million MMBtus of natural gas supply for use in its East Dubuque Facility in January and February 2017 at a weighted average rate per MMBtu of \$3.46, exclusive of transportation cost.

Nitrogen Production Process

The Coffeyville nitrogen fertilizer plant was built in 2000 with two separate gasifiers to provide redundancy and reliability. The plant, which uses a gasification process to convert pet coke to high purity hydrogen for subsequent conversion to ammonia, is capable of producing approximately 1,300 tons per day of ammonia. Substantially all of the ammonia produced is converted to approximately 3,000 tons per day of UAN, which has historically commanded a premium price over ammonia. Typically, approximately 0.41 tons of ammonia is required to produce one ton of UAN. The plant completed a significant two-year plant expansion in February 2013, which increased UAN production capacity by 400,000 tons or approximately 50%, per year. The expanded Coffeyville Fertilizer Facility was operating at full rates since the end of the first quarter of 2013.

The East Dubuque Facility was built in 1965 and expanded in 2014 to manufacture natural-gas based nitrogen fertilizer products. The plant is capable of producing 1,075 tons per day of ammonia and 1,100 tons per day of UAN and has the flexibility to vary its product mix.

In 2016, the nitrogen fertilizer business produced, from both the Coffeyville Fertilizer Facility and East Dubuque Facility, a total of 1.2 million tons of UAN and 0.7 million tons of ammonia.

Distribution, Sales and Marketing

The primary geographic markets for the nitrogen fertilizer business' fertilizer products are Illinois, Kansas, Nebraska, Iowa and Texas. The nitrogen fertilizer business primarily markets the UAN products to agricultural customers and the ammonia products to agricultural and industrial customers.

UAN and ammonia are distributed by truck or by railcar. If delivered by truck, products are sold on a freight-on-board basis, and freight is normally arranged by the customer. The nitrogen fertilizer business leases and owns a fleet of railcars for use in product delivery, and, if delivered by railcar, the products are most commonly sold on a FOB destination point basis and the nitrogen fertilizer business typically arranges the freight. The nitrogen fertilizer business incurs costs to maintain and repair its railcar fleet that include expenses related to regulatory inspections and repairs. For example, many of the nitrogen fertilizer business' railcars require specific regulatory inspections and repairs due on ten-year intervals. The extent and frequency of railcar fleet maintenance and repair costs are generally expected to change based partially on when regulatory inspections and repairs are due for its railcars under the relevant regulations.

The nitrogen fertilizer business's fertilizer products leave the Coffeyville Fertilizer Facility either in railcars for destinations located principally on the Union Pacific Railroad or in trucks for direct shipment to customers. The nitrogen fertilizer business does not currently incur significant intermediate transfer, storage, barge freight or pipeline freight charges; however, it does incur costs to maintain and repair our railcar fleet as discussed above.

The East Dubuque Facility is located in northwest Illinois, in the corn belt. The East Dubuque nitrogen fertilizer facility primarily sells its product to customers located within 200 miles of the facility. In most instances, customers take delivery of nitrogen products at the East Dubuque nitrogen fertilizer facility and arrange and pay to transport them to their final destinations by truck. The East Dubuque nitrogen fertilizer facility has direct access to a barge dock on the Mississippi River as well as a nearby rail spur serviced by the Canadian National Railway Company.

The heavy in-season demand periods are spring and fall in the corn belt and summer in the wheat belt. The corn belt is the primary corn producing region of the United States, which includes Illinois, Indiana, Iowa, Minnesota, Missouri, Nebraska, Ohio and Wisconsin. The wheat belt is the primary wheat producing region of the United States, which includes Kansas, North Dakota, Oklahoma, South Dakota and Texas. Most of the industrial sales are contractual agreements.

The nitrogen fertilizer business has the capacity to store approximately 160,000 tons of UAN and 80,000 tons of ammonia. The nitrogen fertilizer's business storage tanks are located primarily at its two production facilities. Inventories are often allowed to accumulate to allow customers to take delivery to meet the seasonal demand.

The nitrogen fertilizer business offers agricultural products on a spot, forward or prepay basis and often uses forward sales of fertilizer products to optimize its asset utilization, planning process and production scheduling. These sales are made by offering customers the opportunity to purchase product on a forward basis at prices and delivery dates that it proposes. The nitrogen fertilizer business uses this program to varying degrees during the year and between years depending on market conditions. Fixing the selling prices of nitrogen fertilizer products months in advance of their ultimate delivery to customers typically causes the nitrogen fertilizer business reported selling prices and margins to differ from spot market prices and margins available at the time of shipment. Cash received as a result of prepayments is recognized as deferred revenue on the Consolidated Balance Sheet upon receipt, and revenue and resultant net income and EBITDA are recorded as the product is delivered.

Customers

The nitrogen fertilizer business sells UAN products to retailers and distributors. In addition, it sells ammonia to agricultural and industrial customers. Given the nature of its business, and consistent with industry practice, the nitrogen fertilizer business does not have long-term minimum purchase contracts with its UAN and ammonia customers.

For the year ended December 31, 2016, the top five customers in the aggregate represented 32% of the nitrogen fertilizer business' net sales. The nitrogen fertilizer business' top two customers on a consolidated basis each accounted for approximately 10% of the nitrogen fertilizer business' net sales. While it does have high concentration of customers, the nitrogen fertilizer business does not believe that the loss of any single customer would have a material adverse effect on its results of operations, financial condition and ability to make cash distributions.

Competition

The nitrogen fertilizer business has experienced and expect to continue to meet significant levels of competition from current and potential competitors, many of whom have significantly greater financial and other resources. Competition in the nitrogen fertilizer industry is dominated by price considerations. However, during the spring and fall application seasons, farming activities intensify and delivery capacity is a significant competitive factor. The nitrogen fertilizer business maintains a large fleet of leased and owned railcars and seasonally adjusts inventory to enhance its manufacturing and distribution operations.

The nitrogen fertilizer business' major competitors include Agrium, Inc.; CF Industries Holdings, Inc., including its majority owned subsidiary Terra Nitrogen Company, LP; Koch Nitrogen Company, LLC; and Potash Corporation of Saskatchewan, Inc. Domestic competition is intense due to customers' sophisticated buying tendencies and competitor strategies that focus on cost and service. The nitrogen fertilizer business also encounters competition from producers of fertilizer products manufactured in foreign countries. In certain cases, foreign producers of fertilizer who export to the United States may be subsidized by their respective governments.

Seasonality

Because the nitrogen fertilizer business primarily sells agricultural commodity products, its business is exposed to seasonal fluctuations in demand for nitrogen fertilizer products in the agricultural industry. As a result, the nitrogen fertilizer business typically generates greater net sales in the first half of each calendar year, which is referred to as the planting season, and its net sales tend to be lower during the second half of each calendar year, which is referred to as the fall season. In addition, the demand for fertilizers is affected by the aggregate crop planting decisions and fertilizer application rate decisions of individual farmers who make planting decisions based largely on the prospective profitability of a harvest. The specific varieties and amounts of fertilizer they apply depend on factors like crop prices, the farmers' current liquidity, soil conditions, weather patterns and the types of crops planted.

Environmental Matters

The petroleum and nitrogen fertilizer businesses are subject to extensive and frequently changing federal, state and local, environmental and health and safety laws and regulations governing the emission and release of hazardous substances into the environment, the treatment and discharge of waste water, the storage, handling, use and transportation of petroleum and nitrogen products, and the characteristics and composition of gasoline and diesel fuels. These laws and regulations, their underlying regulatory requirements and the enforcement thereof impact the petroleum business and operations and the nitrogen fertilizer business and operations by imposing:

- restrictions on operations or the need to install enhanced or additional controls;
- the need to obtain and comply with permits, licenses and authorizations;
- requirements for the investigation and remediation of contaminated soil and groundwater at current and former facilities (if any) and liability for off-site waste disposal locations; and
- specifications for the products marketed by the petroleum business and the nitrogen fertilizer business, primarily gasoline, diesel fuel, UAN and ammonia.

Our operations require numerous permits, licenses and authorizations. Failure to comply with these permits or environmental laws and regulations could result in fines, penalties or other sanctions or a revocation of our permits. In addition, the laws and regulations to which we are subject are often evolving and many of them have become more stringent or have become subject to more stringent interpretation or enforcement by federal or state agencies. The ultimate impact on our business of complying with evolving laws and regulations is not always clearly known or determinable due in part to the fact that our operations may change over time and certain implementing regulations for laws, such as the federal Clean Air Act, have not yet been finalized, are under governmental or judicial review or are being revised. These laws and regulations could result in increased capital, operating and compliance costs.

The principal environmental risks associated with our businesses are outlined below with additional details included in Part I, Item 1A, Risk Factors and Part II, Item 8, Note 14 ("Commitments and Contingencies") of this Report.

The Federal Clean Air Act

The federal Clean Air Act and its implementing regulations, as well as the corresponding state laws and regulations that regulate emissions of pollutants into the air, affect the petroleum business and the nitrogen fertilizer business both directly and indirectly. Direct impacts may occur through the federal Clean Air Act's permitting requirements and/or emission control requirements relating to specific air pollutants, as well as the requirement to maintain a risk management program to help prevent accidental releases of certain regulated substances. The federal Clean Air Act indirectly affects the petroleum business and the nitrogen fertilizer business by extensively regulating the air emissions of sulfur dioxide ("SO₂"), volatile organic compounds, nitrogen oxides and other substances, including those emitted by mobile sources, which are direct or indirect users of our products.

Some or all of the standards promulgated pursuant to the federal Clean Air Act, or any future promulgations of standards, may require the installation of controls or changes to the petroleum business or the nitrogen fertilizer facilities in order to comply. If new controls or changes to operations are needed, the costs could be material. These new requirements, other requirements of the federal Clean Air Act, or other presently existing or future environmental regulations could cause us to expend substantial amounts to comply and/or permit our facilities to produce products that meet applicable requirements.

The regulation of air emissions under the federal Clean Air Act requires that we obtain various construction and operating permits and incur capital expenditures for the installation of certain air pollution control devices at the petroleum and nitrogen fertilizer operations when regulations change or we add new equipment or modify existing equipment. Various regulations specific to our operations have been implemented, such as National Emission Standard for Hazardous Air Pollutants ("NESHAP"), New Source Performance Standards ("NSPS") and New Source Review/Prevention of Significant Deterioration ("PSD"). We have incurred, and may be required to make, substantial capital expenditures to attain or maintain compliance with these and other air emission regulations that have been promulgated or may be promulgated or revised in the future.

On September 12, 2012, the U.S. Environmental Protection Agency (the "EPA") published in the Federal Register final revisions to its NSPS for process heaters and flares at petroleum refineries. The EPA originally issued final standards in June 2008, but the portions of the rule relating to process heaters and flares were stayed pending reconsideration of certain provisions. The final standards regulate emissions of nitrogen oxide from process heaters and emissions of SO₂ from flares, as well as require certain work practice and monitoring standards for flares. We do not believe that the costs of complying with the rule will be material.

On August 14, 2012, the EPA sent both the Wynnewood and Coffeyville refineries letters regarding the EPA's 2012 enforcement alert entitled *EPA Enforcement Targets Flaring Efficiency Violations* signaling the agency's intention to begin a national enforcement program to conduct compliance evaluations and take enforcement actions against petroleum refining companies that operate flares that are not in compliance with standards articulated in the Enforcement Alert. The Enforcement Alert identified new standards that refiners are required to meet for flaring combustion efficiency. The EPA entered into consent decrees with several refining companies. Because the EPA has not specifically told us that our operations are not in compliance, we cannot say with certainty whether or when we may become an enforcement target under this initiative.

Refer to Part II, Item 8, Note 14 ("Commitments and Contingencies") of this Report for further discussion of recent environmental matters related to the Clean Air Act including the "Flood, Crude Oil Discharge and Insurance" and certain "Environmental, Health and Safety ("EHS") Matters," such as the "Coffeyville Second Consent Decree," "Wynnewood Clean Air Act Compliance" and other compliance evaluations.

The Federal Clean Water Act

The federal Clean Water Act ("CWA") and its implementing regulations, as well as the corresponding state laws and regulations that regulate the discharge of pollutants into the water, affect the petroleum business and the nitrogen fertilizer business. Direct impacts occur through the CWA's permitting requirements, which establish discharge limitations based on technology standards, water quality standards, and restrictions on the total maximum daily load of pollutants that may be released to a particular water body based on its use. In addition, water resources are becoming and in the future may become scarcer, and many refiners, including CRRM and WRC, are subject to restrictions on their ability to use water in the event of low availability conditions. Both CRRM and WRC have contracts in place to receive water during certain water shortage conditions, but these conditions could change over time if water becomes scarce.

Release Reporting

The release of hazardous substances or extremely hazardous substances into the environment is subject to release reporting requirements under federal and state environmental laws. Our facilities periodically experience releases of hazardous substances and extremely hazardous substances. For example, the nitrogen fertilizer facility periodically experiences minor releases of hazardous and extremely hazardous substances from its equipment. Our facilities periodically have excess emission events from flaring and other planned and unplanned start-up, shutdown and malfunction events. Such releases are reported to the EPA and relevant state and local agencies. From time to time, the EPA has conducted inspections and issued information requests to us with respect to our compliance with release reporting requirements under the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") and the Emergency Planning and Community Right-to-Know Act. If we fail to timely or properly report a release, or if the release violates the law or our permits, it could cause us to become the subject of a governmental enforcement action or third-party claims. Government enforcement or third-party claims relating to releases of hazardous or extremely hazardous substances could result in significant expenditures and liability.

Fuel Regulations

Tier 2, Low Sulfur Fuels. In February 2000, the EPA promulgated the Tier 2 Motor Vehicle Emission Standards Final Rule for all passenger vehicles, establishing standards for sulfur content in gasoline that were required to be met by 2006. In addition, in January 2001, the EPA promulgated its on-road diesel regulations, which required a 97% reduction in the sulfur content of diesel fuel sold for highway use by June 1, 2006, with full compliance by January 1, 2010. The refineries are in compliance with the EPA's low sulfur gasoline and diesel fuel standards.

Tier 3. In April 2014, the EPA promulgated the Tier 3 Motor Vehicle Emission and Fuel Standards, which will require that gasoline contain no more than ten parts per million of sulfur on an annual average basis. Refineries must be in compliance with the more stringent emission standards by January 1, 2017; however, compliance with the rule is extended until January 1, 2020 for approved small volume refineries and small refiners. In March 2015, the EPA approved the Wynnewood refinery's application requesting "small volume refinery" status; therefore, its compliance deadline is January 1, 2020. It is not anticipated that the refineries will require additional controls or capital expenditures to meet the anticipated new standard.

Mobile Source Air Toxic II Emissions

In 2007, the EPA promulgated the Mobile Source Air Toxic II ("MSAT II") rule that requires the reduction of benzene in gasoline by 2011. The MSAT II projects for CRRM and WRC were completed within the compliance deadline of November 1, 2014. The projects were completed at a total cost of approximately \$48.3 million and \$89.0 million, excluding capitalized interest, by CRRM and WRC, respectively.

Renewable Fuel Standards

Refer to Part I, Item 1A, Risk Factors, *If sufficient RINs are unavailable for purchase, if the petroleum business has to pay a significantly higher price for RINs or if the petroleum business is otherwise unable to meet the EPA's RFS mandates, the petroleum business' financial condition and results of operations could be materially adversely affected*, and Part II, Item 8, Note 14 ("Commitments and Contingencies"), "Environmental, Health and Safety ("EHS") Matters" of this Report for further discussion of the "Renewable Fuel Standards."

Greenhouse Gas Emissions

Refer to Part I, Item 1A, Risk Factors, *Climate change laws and regulations could have a material adverse effect on our results of operations, financial condition and cash flows*, of this Report for further discussion of the Greenhouse Gas ("GHG") Emissions regulations.

RCRA

Our operations are subject to the Resource Conservation and Recovery Act ("RCRA") requirements for the generation, transportation, treatment, storage and disposal of solid and hazardous wastes. When feasible, RCRA-regulated materials are recycled instead of being disposed of on-site or off-site. RCRA establishes standards for the management of solid and hazardous wastes. Besides governing current waste disposal practices, RCRA also addresses the environmental effects of certain past waste disposal practices, the recycling of wastes and the regulation of underground storage tanks containing regulated substances. Refer to Part II, Item 8, Note 14 ("Commitments and Contingencies"), "Environmental, Health and Safety ("EHS") Matters" for further discussion of "RCRA Compliance Matters."

Waste Management. There are two closed hazardous waste units at the Coffeyville refinery and eight other hazardous waste units in the process of being closed pending state agency approval. There is one closed hazardous waste unit and one active hazardous waste storage tank at the Wynnewood refinery. In addition, one closed interim status hazardous waste land farm located at the now-closed Phillipsburg terminal is under long-term post closure care.

Impacts of Past Manufacturing. The 2004 Consent Decree that CRRM signed with the EPA and the Kansas Department of Health and Environment (the "KDHE") required us to assume two RCRA corrective action orders issued to Farmland, the prior owner of the Coffeyville refinery. We are subject to a 1994 EPA administrative order related to investigation of possible past releases of hazardous materials to the environment at the Coffeyville refinery. In accordance with the order, we have documented existing soil and groundwater conditions, which required investigation and interim remediation projects. In December 2016, the Coffeyville refinery submitted a post-closure permit application to KDHE to complete closure of former hazardous waste management units at the Coffeyville refinery and perform corrective action at the site. The now-closed Phillipsburg terminal is subject to a 1996 EPA administrative order related to investigation of releases of hazardous materials to the environment at the Phillipsburg terminal, which operated as a refinery until 1991. The Phillipsburg terminal continues to implement interim measures to address the investigation's findings. Further remediation, if ordered necessary by EPA or the state, will be based on the results of the investigation. The Wynnewood refinery operates under a RCRA permit. A RCRA facility investigation has been completed in accordance with the terms of the permit. Based on the facility investigation and other available information, Oklahoma Department of Environmental Quality ("ODEQ") and WRC have entered into a Consent Order requiring further investigations of groundwater conditions and enhancements of existing remediation systems. The Wynnewood refinery has completed the groundwater investigation and ODEQ has approved our corrective action recommendations.

The anticipated investigation and remediation costs through 2020 were estimated, as of December 31, 2016, to be as follows:

<u>Facility</u>	<u>Site Investigation Costs</u>	<u>Capital Costs</u>	<u>Total Operation & Maintenance Costs Through 2020</u>	<u>Total Estimated Costs Through 2020</u>
	(in millions)			
Coffeyville Refinery	\$ 0.2	\$ —	\$ 1.0	\$ 1.2
Phillipsburg Terminal	0.5	—	0.7	1.2
Wynnewood Refinery	0.2	—	1.1	1.3
Total Estimated Costs	<u>\$ 0.9</u>	<u>\$ —</u>	<u>\$ 2.8</u>	<u>\$ 3.7</u>

These estimates are based on current information and could increase or decrease as additional information becomes available through our ongoing remediation and investigation activities. At this point, we have estimated that, over ten years starting in 2017, we will spend approximately \$6.5 million to remedy impacts from past manufacturing activity at the Coffeyville refinery and to address existing soil and groundwater contamination at the now-closed Phillipsburg terminal and at the Wynnewood refinery. It is possible that additional costs will be required after this ten year period. We spent approximately \$2.1 million in 2016 associated with related remediation.

Financial Assurance. We are required under the 2004 Consent Decree to establish financial assurance to secure the projected clean-up costs posed by the Coffeyville and the now-closed Phillipsburg facilities in the event we fail to fulfill our clean-up obligations. In accordance with the 2004 Consent Decree as modified by a 2010 agreement between CRRM, Coffeyville Resources Terminal, LLC, the EPA and the KDHE, this financial assurance is currently provided by a bond in the amount of \$3.6 million for clean-up obligations at the Phillipsburg terminal and a letter of credit in the amount of \$0.2 million for estimated costs to close regulated hazardous waste management units at the Coffeyville refinery. Additional self-funded financial assurance of approximately \$4.9 million and \$2.5 million is required by our post-closure care obligations and the 2004 Consent Decree for clean-up costs at the Coffeyville refinery and Phillipsburg terminal, respectively. The \$3.6 million bond amount is reduced each year based on actual expenditures for corrective actions and the letter of credit and the self-funded mechanisms are re-evaluated and adjusted on an annual basis. Current RCRA financial assurance requirements for the Wynnewood refinery total \$0.2 million for hazardous waste storage tank closure and post-closure monitoring of a closed storm water retention pond.

Environmental Remediation

Under the CERCLA, RCRA, and related state laws, certain persons may be liable for the release or threatened release of hazardous substances. These persons include the current owner or operator of property where a release or threatened release occurred, any persons who owned or operated the property when the release occurred, and any persons who disposed of, or arranged for the transportation or disposal of, hazardous substances at a contaminated property. Liability under CERCLA is strict, and under certain circumstances, joint and several, so that any responsible party may be held liable for the entire cost of investigating and remediating the release of hazardous substances. Similarly, the Oil Pollution Act of 1990 generally subjects owners and operators of facilities to strict, joint and several liability for all containment and clean-up costs, natural resource damages, and potential governmental oversight costs arising from oil spills into the waters of the United States, which has been broadly interpreted to include most water bodies including intermittent streams.

As is the case with all companies engaged in similar industries, we face potential exposure from future claims and lawsuits involving environmental matters, including soil and water contamination, personal injury or property damage allegedly caused by crude oil or hazardous substances that we manufactured, handled, used, stored, transported, spilled, disposed of or released. We cannot assure you that we will not become involved in future proceedings related to our release of hazardous or extremely hazardous substances or crude oil or that, if we were held responsible for damages in any existing or future proceedings, such costs would be covered by insurance or

would not be material. Refer to Part II, Item 8, Note 14 ("Commitments and Contingencies"), "Flood, Crude Oil Discharge and Insurance" of this Report for discussion of the environmental remediation associated with the discharge of crude oil on July 1, 2007 at the Coffeyville refinery.

Environmental Insurance

We are covered by a site pollution legal liability insurance policy with an aggregate limit of \$51.0 million per pollution condition, subject to a self-insured retention of \$1.0 million. The policy includes business interruption coverage, subject to a 5-day waiting period deductible. This insurance expires on March 1, 2017 and is expected to be renewed without any material changes in terms. The policy insures any location owned, leased or rented or operated by the Company, including the Coffeyville refinery, the Wynnewood refinery and the nitrogen fertilizer facility. The policy insures certain pollution conditions at or migrating from a covered location, certain waste transportation and disposal activities and business interruption.

In addition to the site pollution legal liability insurance policy, we maintain umbrella and excess casualty insurance policies having an aggregate and occurrence limit of \$300.0 million, subject to a self-insured retention and deductible of \$5.0 million. This insurance provides coverage due to named perils for claims involving pollutants where the discharge is sudden and accidental and first commenced at a specific day and time during the policy period. The casualty insurance policies, including umbrella and excess policies, expire on March 1, 2017 and are expected to be renewed or replaced by insurance policies containing materially equivalent sudden and accidental pollution coverage with no reduction in limits.

The site pollution legal liability policy and the pollution coverage provided in the casualty insurance policies contain discovery requirements, reporting requirements, exclusions, definitions, conditions and limitations that could apply to a particular pollution claim, and there can be no assurance such claim will be adequately insured for all potential damages.

Safety, Health and Security Matters

We are subject to a number of federal and state laws and regulations related to safety, including the Occupational Safety and Health Act ("OSHA") and comparable state statutes, the purpose of which are to protect the health and safety of workers. We also are subject to OSHA Process Safety Management regulations, which are designed to prevent or minimize the consequences of catastrophic releases of toxic, reactive, flammable or explosive chemicals.

We operate a comprehensive safety, health and security program, with participation by employees at all levels of the organization. We have developed comprehensive safety programs aimed at preventing OSHA recordable incidents. Despite our efforts to achieve excellence in our safety and health performance, there can be no assurances that there will not be accidents resulting in injuries or even fatalities. We routinely audit our programs and consider improvements in our management systems.

The Wynnewood refinery has been the subject of a number of OSHA inspections since 2006. As a result of these inspections, the Wynnewood refinery has entered into four OSHA settlement agreements in 2008, pursuant to which it has agreed to undertake certain studies, conduct abatement activities, and revise and enhance certain OSHA compliance programs. The remaining costs associated with implementing these studies, abatement activities and program revisions are not expected to exceed \$1.0 million.

Refer to Part II, Item 8, Note 14 ("Commitments and Contingencies"), "Wynnewood Refinery Incident" of this Report for further discussion of OSHA matters related to the Wynnewood refinery boiler explosion.

Employees

As of December 31, 2016, 968 employees were employed by the petroleum business, 299 employees were employed by the nitrogen fertilizer business and 220 employees were employed by the Company at our offices in Sugar Land, Texas and Kansas City, Kansas. The Nitrogen Fertilizer Partnership and the Refining Partnership each relies on the services of employees of CVR Energy and its subsidiaries pursuant to services agreements between each partnership, its general partner and CVR Energy. As of December 31, 2016, all these employees are covered by health insurance, disability and retirement plans established by the Company. We believe that our relationship with our employees is good.

As of December 31, 2016, (i) the Coffeyville refinery employed 327 of the petroleum business' employees, about 70% of whom are covered by a collective bargaining agreement with five unions of the Metal Trades Department of the AFL-CIO ("Metal Trade Unions"), which expires in March 2019, (ii) the petroleum business had 268 employees who work in crude transportation, about 32% of whom are covered by a collective bargaining agreement with the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union, AFL-CIO-CLC ("United Steelworkers"), which expires in March 2019 and automatically renews on an annual basis thereafter unless a written notice is received sixty days in advance of the relevant expiration date, and (iii) the Wynnewood refinery employed 323 of the petroleum business' employees, about 58% of whom were represented by the International Union of Operating Engineers, which expires in June 2017.

As of December 31, 2016, the Coffeyville Fertilizer Facility employed 146 of our employees, of whom none were unionized.

As of December 31, 2016, the East Dubuque Facility employed 150 of our employees, about 61% of whom were represented by the International Union of United Automobile, Aerospace, and Agricultural Implement Workers under a three-year collective bargaining agreement that expires in October 2019.

Available Information

Our website address is www.cvrenergy.com. Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and all amendments to those reports, filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act, are available free of charge through our website under "Investor Relations," as soon as reasonably practicable after the electronic filing or furnishing of these reports is made with the Securities and Exchange Commission (the "SEC"). In addition, our Corporate Governance Guidelines, Codes of Ethics and Charters of the Audit Committee, the Nominating and Corporate Governance Committee and the Compensation Committee of the Board of Directors are available on our website. These guidelines, policies and charters are also available in print without charge to any stockholder requesting them. We do not intend for information contained in our website to be part of this Report.

Item 1A. Risk Factors

You should carefully consider each of the following risks together with the other information contained in this Report and all of the information set forth in our filings with the SEC. If any of the following risks and uncertainties develops into actual events, our business, financial condition or results of operations could be materially adversely affected.

Risks Related to the Petroleum Business

The price volatility of crude oil and other feedstocks, refined products and utility services may have a material adverse effect on the petroleum business' earnings, profitability and cash flows.

The petroleum business' financial results are primarily affected by the relationship, or margin, between refined product prices and the prices for crude oil and other feedstocks. When the margin between refined product prices and crude oil and other feedstock prices tightens, the petroleum business' earnings, profitability and cash flows are negatively affected. Refining margins historically have been volatile and are likely to continue to be volatile, as a result of a variety of factors including fluctuations in prices of crude oil, other feedstocks and refined products. Continued future volatility in refining industry margins may cause a decline in the petroleum business' results of operations, since the margin between refined product prices and crude oil and other feedstock prices may decrease below the amount needed for the petroleum business to generate net cash flow sufficient for its needs. The effect of changes in crude oil prices on the petroleum business' results of operations therefore depends in part on how quickly and how fully refined product prices adjust to reflect these changes. A substantial or prolonged increase in crude oil prices without a corresponding increase in refined product prices, or a substantial or prolonged decrease in refined product prices without a corresponding decrease in crude oil prices, could have a significant negative impact on the petroleum business' earnings, results of operations and cash flows.

Profitability is also impacted by the ability to purchase crude oil at a discount to benchmark crude oils, such as WTI, as the petroleum business does not produce any crude oil and must purchase all of the crude oil it refines. Crude oil differentials can fluctuate significantly based upon overall economic and crude oil market conditions. Adverse changes in crude oil differentials can adversely impact refining margins, earnings and cash flows. In addition, the petroleum business' purchases of crude oil, although based on WTI prices, have historically been at a discount to WTI because of the proximity of the refineries to the sources, existing logistics infrastructure and quality differences. Any change in the sources of crude oil, infrastructure or logistical improvements or quality differences could result in a reduction of the petroleum business' historical discount to WTI and may result in a reduction of the petroleum business' cost advantage.

Refining margins are also impacted by domestic and global refining capacity. Downturns in the economy reduce the demand for refined fuels and, in turn, generate excess capacity. In addition, the expansion and construction of refineries domestically and globally can increase refined fuel production capacity. Excess capacity can adversely impact refining margins, earnings and cash flows. The Arabian Gulf and Far East regions added refining capacity in 2015 and 2016.

The petroleum business is significantly affected by developments in the markets in which it operates. For example, numerous pipeline projects in 2014 expanded the connectivity of the Cushing and Permian Basin markets to the gulf coast, resulting in a decrease in the domestic crude advantage.

Volatile prices for natural gas and electricity also affect the petroleum business' manufacturing and operating costs. Natural gas and electricity prices have been, and will continue to be, affected by supply and demand for fuel and utility services in both local and regional markets.

If the petroleum business is required to obtain its crude oil supply without the benefit of a crude oil supply agreement, its exposure to the risks associated with volatile crude oil prices may increase and its liquidity may be reduced.

Since December 31, 2009, the petroleum business has obtained substantially all of its crude oil supply for the Coffeyville refinery, other than the crude oil it gathers, through the Vitol Agreement. The Vitol Agreement was amended and restated on August 31, 2012 to include the provision of crude oil intermediation services to the Wynnewood refinery. The agreement, which currently extends through December 31, 2017, minimizes the amount of in-transit inventory and mitigates crude oil pricing risk by ensuring pricing takes place close to the time the crude oil is refined and the yielded products are sold. If the petroleum business were required to obtain its crude oil supply without the benefit of a supply intermediation agreement, its exposure to crude oil pricing risk may increase, despite any hedging activity in which it may engage, and its liquidity could be negatively impacted due to increased inventory, potential need to post letters of credit and negative impacts of market volatility. There is no assurance that the petroleum business will be able to renew or extend the Vitol Agreement beyond December 31, 2017.

Disruption of the petroleum business' ability to obtain an adequate supply of crude oil could reduce its liquidity and increase its costs.

In addition to the crude oil the petroleum business gathers locally in Kansas, Nebraska, Oklahoma, Missouri, Colorado and Texas, it also purchased additional crude oil to be refined into liquid fuels in 2016. In 2016, the Coffeyville refinery purchased an additional 70,000 to 75,000 bpd of crude oil while the Wynnewood refinery purchased approximately 45,000 to 50,000 bpd of crude oil. The Wynnewood refinery has historically acquired most of its crude oil from Texas and Oklahoma with smaller amounts purchased from other regions. The Coffeyville refinery obtained a portion of its non-gathered crude oil, approximately 25%, from Canada in 2016. The actual amount of Canadian crude oil the petroleum business purchases is dependent on market conditions and will vary from year to year. The petroleum business is subject to the political, geographic, and economic risks attendant to doing business with Canada. Disruption of production for any reason could have a material impact on the petroleum business. In the event that one or more of its traditional suppliers becomes unavailable, the petroleum business may be unable to obtain an adequate supply of crude oil, or it may only be able to obtain crude oil at unfavorable prices. As a result, the petroleum business may experience a reduction in its liquidity and its results of operations could be materially adversely affected.

If our access to the pipelines on which the petroleum business relies for the supply of its crude oil and the distribution of its products is interrupted, its inventory and costs may increase and it may be unable to efficiently distribute its products.

If one of the pipelines on which either of the Coffeyville or Wynnewood refineries relies for supply of crude oil becomes inoperative, the petroleum business would be required to obtain crude oil through alternative pipelines or from additional tanker trucks, which could increase its costs and result in lower production levels and profitability. Similarly, if a major refined fuels pipeline becomes inoperative, the petroleum business would be required to keep refined fuels in inventory or supply refined fuels to its customers through an alternative pipeline or by additional tanker trucks, which could increase the petroleum business' costs and result in a decline in profitability.

The geographic concentration of the petroleum business' refineries and related assets creates an exposure to the risks of the local economy in which we operate and other local adverse conditions. The location of its refineries also creates the risk of increased transportation costs should the supply/demand balance change in its region such that regional supply exceeds regional demand for refined products.

As the petroleum business' refineries are both located in the southern portion of Group 3 of the PADD II region, the petroleum business primarily markets its refined products in a relatively limited geographic area. As a result, it is more susceptible to regional economic conditions than the operations of more geographically diversified competitors, and any unforeseen events or circumstances that affect its operating area could also materially adversely affect its revenues and cash flows. These factors include, among other things, changes in the economy, weather conditions, demographics and population, increased supply of refined products from competitors and reductions in the supply of crude oil.

Should the supply/demand balance shift in its region as a result of changes in the local economy, an increase in refining capacity or other reasons, resulting in supply in the region exceeding demand, the petroleum business may

have to deliver refined products to customers outside of the region and thus incur considerably higher transportation costs, resulting in lower refining margins, if any.

If sufficient RINs are unavailable for purchase, if the petroleum business has to pay a significantly higher price for RINs or if the petroleum business is otherwise unable to meet RFS mandates, the petroleum business' financial condition and results of operations could be materially adversely affected.

Pursuant to the Energy Independence and Security Act of 2007, the EPA has promulgated the RFS, which requires refiners to either blend "renewable fuels," such as ethanol and biodiesel, into their transportation fuels or purchase renewable fuel credits, known as RINs, in lieu of blending. Under the RFS, the volume of renewable fuels refineries like Coffeyville and Wynnewood are obligated to blend into their finished petroleum products is adjusted annually. The petroleum business is not able to blend the substantial majority of its transportation fuels and has to purchase RINs on the open market as well as waiver credits for cellulosic biofuels from the EPA, in order to comply with the RFS. The price of RINs has been extremely volatile as the EPA's proposed renewable fuel volume mandates approached the "blend wall." The blend wall refers to the point at which the amount of ethanol blended into the transportation fuel supply exceeds the demand for transportation fuel containing such levels of ethanol. The blend wall is generally considered to be reached when more than 10% ethanol by volume ("E10 gasoline") is blended into transportation fuel.

On December 14, 2015, the EPA published in the Federal Register a final rule establishing the renewable fuel volume mandates for 2014, 2015 and 2016, and the biomass-based diesel mandate for 2017. On December 12, 2016, the EPA published in the Federal Register a final rule establishing the renewable fuel volume mandates for 2017 and the biomass-based diesel mandate for 2018. The volumes included in the EPA's final rule increase each year, but are lower, with the exception of the volumes for biomass-based diesel, than the volumes required by the Clean Air Act. The EPA used its waiver authorities to lower the volumes, but its decision to do so for the 2014-2016 compliance years has been challenged in the U.S. Court of Appeals for the District of Columbia Circuit. In addition, the EPA has articulated a policy to incentivize additional investments in renewable fuel blending and distribution infrastructure by increasing the price of RINs.

The petroleum business cannot predict the future prices of RINs or waiver credits. The price of RINs has been extremely volatile and has increased over the last year. Additionally, the cost of RINs is dependent upon a variety of factors, which include the availability of RINs for purchase, the price at which RINs can be purchased, transportation fuel production levels, the mix of the petroleum business' petroleum products, as well as the fuel blending performed at the refineries and downstream terminals, all of which can vary significantly from period to period. However, the costs to obtain the necessary number of RINs and waiver credits could be material, if the price for RINs continues to increase. Additionally, because the petroleum business does not produce renewable fuels, increasing the volume of renewable fuels that must be blended into its products displaces an increasing volume of the refineries' product pool, potentially resulting in lower earnings and materially adversely affecting the petroleum business' cash flows. If the demand for the petroleum business' transportation fuel decreases as a result of the use of increasing volumes of renewable fuels, increased fuel economy as a result of new EPA fuel economy standards, or other factors, the impact on its business could be material. If sufficient RINs are unavailable for purchase, if the petroleum business has to pay a significantly higher price for RINs or if the petroleum business is otherwise unable to meet the EPA's RFS mandates, its business, financial condition and results of operations could be materially adversely affected.

The petroleum business faces significant competition, both within and outside of its industry. Competitors who produce their own supply of crude oil or other feedstocks, have extensive retail outlets, make alternative fuels or have greater financial resources than it does may have a competitive advantage.

The refining industry is highly competitive with respect to both crude oil and other feedstock supply and refined product markets. The petroleum business may be unable to compete effectively with competitors within and outside of the industry, which could result in reduced profitability. The petroleum business competes with numerous other companies for available supplies of crude oil and other feedstocks and for outlets for its refined products. The petroleum business is not engaged in the petroleum exploration and production business and therefore it does not

produce any of its crude oil feedstocks. It does not have a retail business and therefore is dependent upon others for outlets for its refined products. It does not have long-term arrangements (those exceeding more than a twelve-month period) for much of its output. Many of its competitors obtain significant portions of their crude oil and other feedstocks from company-owned production and have extensive retail outlets. Competitors that have their own production or extensive retail outlets with brand-name recognition are at times able to offset losses from refining operations with profits from producing or retailing operations, and may be better positioned to withstand periods of depressed refining margins or feedstock shortages.

A number of the petroleum business' competitors also have materially greater financial and other resources than it does. These competitors may have a greater ability to bear the economic risks inherent in all aspects of the refining industry. An expansion or upgrade of its competitors' facilities, price volatility, international political and economic developments and other factors are likely to continue to play an important role in refining industry economics and may add additional competitive pressure.

In addition, the petroleum business competes with other industries that provide alternative means to satisfy the energy and fuel requirements of its industrial, commercial and individual customers. There are presently significant governmental incentives and consumer pressures to increase the use of alternative fuels in the United States. The more successful these alternatives become as a result of governmental incentives or regulations, technological advances, consumer demand, improved pricing or otherwise, the greater the negative impact on pricing and demand for the petroleum business' products and profitability.

Changes in the petroleum business' credit profile may affect its relationship with its suppliers, which could have a material adverse effect on its liquidity and its ability to operate the refineries at full capacity.

Changes in the petroleum business' credit profile may affect the way crude oil suppliers view its ability to make payments and may induce them to shorten the payment terms for purchases or require it to post security prior to payment. Given the large dollar amounts and volume of the petroleum business' crude oil and other feedstock purchases, a burdensome change in payment terms may have a material adverse effect on the petroleum business' liquidity and its ability to make payments to its suppliers. This, in turn, could cause it to be unable to operate the refineries at full capacity. A failure to operate the refineries at full capacity could adversely affect the petroleum business' profitability and cash flows.

The petroleum business' commodity derivative contracts may limit its potential gains, exacerbate potential losses and involve other risks.

The petroleum business enters into commodity derivatives contracts to mitigate crack spread risk with respect to a portion of its expected refined products production. However, its hedging arrangements may fail to fully achieve this objective for a variety of reasons, including its failure to have adequate hedging contracts, if any, in effect at any particular time and the failure of its hedging arrangements to produce the anticipated results. The petroleum business may not be able to procure adequate hedging arrangements due to a variety of factors. Moreover, such transactions may limit its ability to benefit from favorable changes in margins. In addition, the petroleum business' hedging activities may expose it to the risk of financial loss in certain circumstances, including instances in which:

- the volumes of its actual use of crude oil or production of the applicable refined products is less than the volumes subject to the hedging arrangement;
- accidents, interruptions in transportation, inclement weather or other events cause unscheduled shutdowns or otherwise adversely affect its refinery or suppliers or customers;
- the counterparties to its futures contracts fail to perform under the contracts; or
- a sudden, unexpected event materially impacts the commodity or crack spread subject to the hedging arrangement.

As a result, the effectiveness of the petroleum business' risk mitigation strategy could have a material adverse impact on the petroleum business' financial results and cash flows.

The adoption of derivatives legislation by the U.S. Congress could have an adverse effect on the petroleum business' ability to hedge risks associated with its business.

The U.S. Congress has adopted the Dodd-Frank Act, comprehensive financial reform legislation that establishes federal oversight and regulation of the over-the-counter derivatives market and entities, such as the petroleum business, that participate in that market, and requires the Commodities Futures Trading Commission ("CFTC") to institute broad new position limits for futures and options traded on regulated exchanges. The Dodd-Frank Act requires the CFTC, the SEC and other regulators to promulgate rules and regulations implementing the new legislation. The Dodd-Frank Act and implementing rules and regulations also require certain swap participants to comply with, among other things, certain margin requirements and clearing and trade-execution requirements in connection with certain derivative activities. The rulemaking process is still ongoing, and the petroleum business cannot predict the ultimate outcome of the rulemakings. New regulations in this area may result in increased costs and cash collateral requirements for derivative instruments the petroleum business may use to hedge and otherwise manage its financial risks related to volatility in oil and gas commodity prices.

If the petroleum business reduces its use of derivatives as a result of the Dodd-Frank Act and any new rules and regulations, its results of operations may become more volatile and its cash flows may be less predictable, which could adversely affect its ability to satisfy its debt obligations or plan for and fund capital expenditures. Increased volatility may make the petroleum business less attractive to certain types of investors. Finally, the Dodd-Frank Act was intended, in part, to reduce the volatility of oil and natural gas prices. If the Dodd-Frank Act and any new regulations result in lower commodity prices, the petroleum business' revenues could be adversely affected. Any of these consequences could adversely affect the petroleum business' financial condition and results of operations and therefore could have an adverse effect on its ability to satisfy its debt obligations.

The petroleum business' commodity derivative activities could result in period-to-period volatility.

The petroleum business does not apply hedge accounting to its commodity derivative contracts and, as a result, unrealized gains and losses are charged to its earnings based on the increase or decrease in the market value of the unsettled position. Such gains and losses are reflected in its income statement in periods that differ from when the underlying hedged items (i.e., gross margins) are reflected in its income statement. Such derivative gains or losses in earnings may produce significant period-to-period earnings volatility that is not necessarily reflective of the petroleum business' operational performance.

Existing design, operational, and maintenance issues associated with acquisitions may not be identified immediately and may require unanticipated capital expenditures that could adversely impact our financial condition, results of operations or cash flows.

Our due diligence associated with acquisitions may result in our assuming liabilities associated with unknown conditions or deficiencies, as well as known but undisclosed conditions and deficiencies, where we may have limited, if any, recourse for cost recovery. Such conditions and deficiencies may not become evident until sometime after cost recovery provisions, if any, have expired.

The petroleum business must make substantial capital expenditures on its refineries and other facilities to maintain their reliability and efficiency. If the petroleum business is unable to complete capital projects at their expected costs and/or in a timely manner, or if the market conditions assumed in project economics deteriorate, the petroleum business' financial condition, results of operations or cash flows could be adversely affected.

Delays or cost increases related to the engineering, procurement and construction of new facilities, or improvements and repairs to the petroleum business' existing facilities and equipment, could have a material adverse effect on the petroleum business' financial condition, results of operations or cash flows. Such delays or cost

increases may arise as a result of unpredictable factors in the marketplace, many of which are beyond its control, including:

- denial or delay in obtaining regulatory approvals and/or permits;
- unplanned increases in the cost of equipment, materials or labor;
- disruptions in transportation of equipment and materials;
- severe adverse weather conditions, natural disasters or other events (such as equipment malfunctions, explosions, fires or spills) affecting the petroleum business' facilities, or those of its vendors and suppliers;
- shortages of sufficiently skilled labor, or labor disagreements resulting in unplanned work stoppages;
- market-related increases in a project's debt or equity financing costs; and/or
- nonperformance or force majeure by, or disputes with, the petroleum business' vendors, suppliers, contractors or sub-contractors.

The Coffeyville and Wynnewood refineries have been in operation for many years. Equipment, even if properly maintained, may require significant capital expenditures and expenses to keep it operating at optimum efficiency. These refineries generally require facility turnaround every four to five years. The length of the turnaround is contingent upon the scope of work to be completed. For example, the petroleum business incurred approximately \$102.5 million associated with the turnaround for the Wynnewood refinery completed in December 2012. The petroleum business incurred approximately \$102.2 million associated with the first phase of the Coffeyville refinery turnaround which was completed in mid-November 2015 and approximately \$31.5 million associated with the second phase of the Coffeyville refinery turnaround completed during the first quarter of 2016. During the outage at the Coffeyville refinery as a result of the isomerization unit fire in the third quarter of 2014, the petroleum business accelerated certain planned 2015 turnaround activities and incurred approximately \$5.5 million in turnaround expenses. During the fluid catalytic cracking unit ("FCCU") outage at the Wynnewood refinery in the fourth quarter of 2014, the petroleum business accelerated certain planned turnaround activities and incurred approximately \$1.3 million in turnaround expenses. These costs do not result in increases in unit capacities, but rather are focused on trying to maintain safe, reliable operations. The next turnaround for the Wynnewood refinery will be performed as a two-phase turnaround. The first phase is scheduled to begin in the second half of 2017, with the second phase to begin in the second half of 2018.

Any one or more of these occurrences noted above could have a significant impact on the petroleum business. If the petroleum business was unable to make up for the delays or to recover the related costs, or if market conditions change, it could materially and adversely affect the petroleum business' financial position, results of operations or cash flows.

The petroleum business' plans to expand its gathering and logistics assets, which assist it in reducing costs and increasing processing margins, may expose it to significant additional risks, compliance costs and liabilities.

The petroleum business plans to continue to make investments to enhance the operating flexibility of its refineries and to improve its crude oil sourcing advantage through additional investments in gathering and logistics assets. If it is able to successfully increase the effectiveness of the supporting gathering and logistics assets, including the crude oil gathering operations, the petroleum business believes it will be able to enhance crude oil sourcing flexibility and reduce related crude oil purchasing and delivery costs. However, the acquisition of infrastructure assets to expand crude oil gathering may expose the petroleum business to risks in the future that are different than or incremental to the risks it faces with respect to its refineries and existing gathering and logistics assets. The storage and transportation of liquid hydrocarbons, including crude oil and refined products, are subject to stringent federal, state, and local laws and regulations governing the discharge of materials into the environment,

operational safety and related matters. Compliance with these laws and regulations could adversely affect the petroleum business' operating results, financial condition and cash flows. Moreover, failure to comply with these laws and regulations may result in the assessment of administrative, civil, and criminal penalties, the imposition of investigatory and remedial liabilities, the issuance of injunctions that may restrict or prohibit the petroleum business' operations, or claims of damages to property or persons resulting from its operations.

Any businesses or assets that the petroleum business may acquire in connection with an expansion of its crude oil gathering could expose it to the risk of releasing hazardous materials into the environment. These releases would expose the petroleum business to potentially substantial expenses, including clean-up and remediation costs, fines and penalties, and third-party claims for personal injury or property damage related to past or future releases. Accordingly, if the petroleum business does acquire any such businesses or assets, it could also incur additional expenses not covered by insurance which could be material.

More stringent trucking regulations may increase the petroleum business' costs and negatively impact its results of operations.

In connection with the trucking operations conducted by its crude gathering division, the petroleum business operates as a motor carrier and therefore is subject to regulation by the U.S. Department of Transportation and various state agencies. These regulatory authorities exercise broad powers, governing activities such as the authorization to engage in motor carrier operations and regulatory safety, and hazardous materials labeling, placarding and marking. There are additional regulations specifically relating to the trucking industry, including testing and specification of equipment and product handling requirements. The trucking industry is subject to possible regulatory and legislative changes that may affect the economics of the industry by requiring changes in operating practices or by changing the demand for common or contract carrier services or the cost of providing truckload services. Some of these possible changes include increasingly stringent environmental regulations, changes in the hours of service regulations that govern the amount of time a driver may drive in any specific period, onboard black box recorder devices or limits on vehicle weight and size.

To a large degree, intrastate motor carrier operations are subject to state safety regulations that mirror federal regulations. Such matters as weight and dimension of equipment are also subject to federal and state regulations. Furthermore, from time to time, various legislative proposals are introduced, such as proposals to increase federal, state or local taxes, including taxes on motor fuels, which may increase the petroleum business' costs or adversely impact the recruitment of drivers. The petroleum business cannot predict whether, or in what form, any increase in such taxes will be enacted or the extent to which they will apply to the petroleum business and its operations.

Risks Related to the Nitrogen Fertilizer Business

The nitrogen fertilizer business is, and nitrogen fertilizer prices are, cyclical and highly volatile, and the nitrogen fertilizer business has experienced substantial downturns in the past. Cycles in demand and pricing could potentially expose the nitrogen fertilizer business to significant fluctuations in its operating and financial results and have a material adverse effect on the nitrogen fertilizer business' results of operations, financial condition and cash flows.

The nitrogen fertilizer business is exposed to fluctuations in nitrogen fertilizer demand in the agricultural industry. These fluctuations historically have had and could in the future have significant effects on prices across all nitrogen fertilizer products and, in turn, our results of operations, financial condition and cash flows.

Nitrogen fertilizer products are commodities, the price of which can be highly volatile. The prices of nitrogen fertilizer products depend on a number of factors, including general economic conditions, cyclical trends in end-user markets, supply and demand imbalances, governmental policies and weather conditions, which have a greater relevance because of the seasonal nature of fertilizer application. If seasonal demand exceeds the projections on which the nitrogen fertilizer business bases production, customers may acquire nitrogen fertilizer products from competitors, and the profitability of the nitrogen fertilizer business will be negatively impacted. If seasonal demand

is less than expected, the nitrogen fertilizer business will be left with excess inventory that will have to be stored or liquidated.

Demand for nitrogen fertilizer products is dependent on demand for crop nutrients by the global agricultural industry. The international market for nitrogen fertilizers is influenced by such factors as the relative value of the U.S. dollar and its impact upon the cost of importing nitrogen fertilizers, foreign agricultural policies, the existence of, or changes in, import or foreign currency exchange barriers in certain foreign markets, changes in the hard currency demands of certain countries and other regulatory policies of foreign governments, as well as the laws and policies of the United States affecting foreign trade and investment. Nitrogen-based fertilizers remain solidly in demand, driven by a growing world population, changes in dietary habits and an expanded use of corn for the production of ethanol. Supply is affected by available capacity and operating rates, raw material costs, government policies and global trade. A decrease in nitrogen fertilizer prices would have a material adverse effect on the nitrogen fertilizer business' results of operations, financial condition and cash flows.

The costs associated with operating the nitrogen fertilizer plants include significant fixed costs. If nitrogen fertilizer prices fall below a certain level, the nitrogen fertilizer business may not generate sufficient revenue to operate profitably or cover its costs and ability to make distributions will be adversely impacted.

Unlike our competitors, whose primary costs are related to the purchase of natural gas and whose costs are therefore largely variable, the Coffeyville Fertilizer Facility has largely fixed costs. In addition, while less than the Coffeyville Fertilizer Facility, the East Dubuque Facility has a significant amount of fixed costs. As a result of the fixed cost nature of its operations, downtime, interruptions or low productivity due to reduced demand, adverse weather conditions, equipment failure, a decrease in nitrogen fertilizer prices or other causes can result in significant operating losses, which would have a material adverse effect on the nitrogen fertilizer business' results of operations, financial condition and ability to make cash distributions.

Continued low natural gas prices could impact the Coffeyville Fertilizer Facility's relative competitive position when compared to other nitrogen fertilizer producers.

Most nitrogen fertilizer manufacturers rely on natural gas as their primary feedstock, and the cost of natural gas is a large component of the total production cost for natural gas-based nitrogen fertilizer manufacturers. Low natural gas prices benefit the nitrogen fertilizer business' competitors and disproportionately impact our operations by making the nitrogen fertilizer business less competitive with natural gas-based nitrogen fertilizer manufacturers. Although our nitrogen fertilizer business diversified its operations in connection with the acquisition of the East Dubuque Facility, which primarily relies on natural gas feedstock, continued low natural gas prices could impair the ability of the Coffeyville Fertilizer Facility to compete with other nitrogen fertilizer producers who utilize natural gas as their primary feedstock if nitrogen fertilizer pricing drops as a result of low natural gas prices, and therefore have a material adverse impact on the nitrogen fertilizer business' results of operations, financial condition and ability to make cash distributions.

The market for natural gas has been volatile. Natural gas prices are currently at a relative low point. An increase in natural gas prices could impact the East Dubuque Nitrogen Fertilizer Facility's relative competitive position when compared to other foreign and domestic nitrogen fertilizer producers, and if prices for natural gas increase significantly, our nitrogen fertilizer business may not be able to economically operate the East Dubuque Facility.

The operation of the East Dubuque Facility with natural gas as the primary feedstock exposes the nitrogen fertilizer business to market risk due to increases in natural gas prices, particularly if the price of natural gas in the United States were to become higher than the price of natural gas outside the United States. An increase in natural gas prices would impact the East Dubuque Facility's operations by making it less competitive with competitors who do not use natural gas as their primary feedstock, and could therefore have a material adverse impact on the nitrogen fertilizer business' results of operations, financial condition and cash flows. In addition, if natural gas prices in the United States were to increase relative to prices of natural gas paid by foreign nitrogen fertilizer producers, this may

negatively affect the nitrogen fertilizer business' competitive position in the corn belt and thus have a material adverse effect on the nitrogen fertilizer business' results of operations, financial condition and cash flows.

The profitability of operating the East Dubuque Facility is significantly dependent on the cost of natural gas, and the East Dubuque Facility operated at certain times, and could operate in the future, at a net loss. Local factors may affect the price of natural gas available to the nitrogen fertilizer business, in addition to factors that determine the benchmark prices of natural gas. Since the nitrogen fertilizer business expects to purchase natural gas on the spot market and to enter into forward purchase contracts. Since we expect to purchase a portion of our natural gas for use in the East Dubuque Facility on the spot market, the Nitrogen Fertilizer business remains susceptible to fluctuations in the price of natural gas in general and in local markets in particular. The nitrogen fertilizer business also expect to use short-term, fixed supply, fixed price forward purchase contracts to lock in pricing for a portion of our natural gas requirements. The nitrogen fertilizer business' ability to enter into forward purchase contracts is dependent upon creditworthiness and, in the event of a deterioration in the nitrogen fertilizer business' credit, counterparties could refuse to enter into forward purchase contracts on acceptable terms. If the nitrogen fertilizer business is unable to enter into forward purchase contracts for the supply of natural gas, the nitrogen fertilizer business would need to purchase natural gas on the spot market, which would impair its ability to hedge exposure to risk from fluctuations in natural gas prices. If the nitrogen fertilizer business enters into forward purchase contracts for natural gas, and natural gas prices decrease, then its cost of sales could be higher than it would have been in the absence of the forward purchase contracts.

Any interruption in the supply of natural gas to the nitrogen fertilizer business' East Dubuque Facility through Nicor Inc. ("Nicor") could have a material adverse effect on the nitrogen fertilizer business' results of operations and financial condition.

Our nitrogen fertilizer business' East Dubuque operations depend on the availability of natural gas. East Dubuque has an agreement with Nicor pursuant to which it accesses natural gas from the ANR Pipeline Company and Northern Natural Gas pipelines. East Dubuque's access to satisfactory supplies of natural gas through Nicor could be disrupted due to a number of causes, including volume limitations under the agreement, pipeline malfunctions, service interruptions, mechanical failures or other reasons. The agreement extends through October 31, 2019. Upon expiration of the agreement, East Dubuque may be unable to extend the service under the terms of the existing agreement or renew the agreement on satisfactory terms, or at all. Any disruption in the supply of natural gas to our East Dubuque Facility could restrict our ability to continue to make products at the facility. In the event it need to obtain natural gas from another source, it would need to build a new connection from that source to the East Dubuque Facility and negotiate related easement rights, which would be costly, disruptive and/or unfeasible. As a result, any interruption in the supply of natural gas through Nicor could have a material adverse effect on our nitrogen fertilizer business' results of operations and financial condition.

Any decline in U.S. agricultural production or limitations on the use of nitrogen fertilizer for agricultural purposes could have a material adverse effect on the sales of nitrogen fertilizer, and on the nitrogen fertilizer business' results of operations, financial condition and cash flows.

Conditions in the U.S. agricultural industry significantly impact the operating results of the nitrogen fertilizer business. The U.S. agricultural industry can be affected by a number of factors, including weather patterns and field conditions, current and projected grain inventories and prices, domestic and international population changes, demand for U.S. agricultural products and U.S. and foreign policies regarding trade in agricultural products.

The Agricultural Act of 2014 (the "2014 Farm Bill") ended direct subsidies to agricultural producers for owning farmland, and funded a new crop insurance program in its place. As part of the conservation title of the 2014 Farm Bill, agricultural producers must meet a minimum standard of environmental protection in order to receive federal crop insurance on sensitive lands. The 2014 Farm Bill also discourages producers from converting native grasslands to farmland by limiting crop insurance subsidies for the first few years for newly converted lands. These changes may have a negative impact on fertilizer sales and on the nitrogen fertilizer business' results of operations, financial condition and cash flows.

State and federal governmental policies, including farm and biofuel subsidies and commodity support programs, as well as the prices of fertilizer products, may also directly or indirectly influence the number of acres planted, the mix of crops planted and the use of fertilizers for particular agricultural applications. Developments in crop technology, such as nitrogen fixation (the conversion of atmospheric nitrogen into compounds that plants can assimilate), could also reduce the use of chemical fertilizers and adversely affect the demand for nitrogen fertilizer. In addition, from time to time various state legislatures have considered limitations on the use and application of chemical fertilizers due to concerns about the impact of these products on the environment. Unfavorable state and federal governmental policies could negatively affect nitrogen fertilizer prices and therefore have a material adverse effect on the nitrogen fertilizer business' results of operations, financial condition and cash flows.

A major factor underlying the current high level of demand for nitrogen-based fertilizer products is the production of ethanol. A decrease in ethanol production, an increase in ethanol imports or a shift away from corn as a principal raw material used to produce ethanol could have a material adverse effect on the nitrogen fertilizer business' results of operations, financial condition and cash flows.

A major factor underlying the solid level of demand for nitrogen-based fertilizer products produced by the nitrogen fertilizer business is the production of ethanol in the United States and the use of corn in ethanol production. Ethanol production in the United States is highly dependent upon a myriad of federal statutes and regulations, and is made significantly more competitive by various federal and state incentives and mandated usage of renewable fuels pursuant to the RFS. To date, the RFS has been satisfied primarily with fuel ethanol blended into gasoline. However, a number of factors, including the continuing "food versus fuel" debate and studies showing that expanded ethanol usage may increase the level of greenhouse gases in the environment as well as be unsuitable for small engine use, have resulted in calls to reduce subsidies for ethanol, allow increased ethanol imports and to repeal or waive (in whole or in part) the current RFS, any of which could have an adverse effect on corn-based ethanol production, planted corn acreage and fertilizer demand. Therefore, ethanol incentive programs may not be renewed, or if renewed, they may be renewed on terms significantly less favorable to ethanol producers than current incentive programs.

Recently, the volume of ethanol required by the RFS standards to be blended into transportation fuel has approached the "blend wall." The blend wall refers to the point at which the amount of ethanol blended into the transportation fuel supply exceeds the demand for transportation fuel containing such levels of ethanol. The blend wall is generally considered to be reached when more than 10% ethanol by volume ("E10 gasoline") is blended into transportation fuel. On December 14, 2015, the EPA published in the Federal Register a final rule establishing the renewable fuel volume mandates for 2014, 2015 and 2016, and the biomass-based diesel mandate for 2017. On December 12, 2016, the EPA published in the Federal Register a final rule establishing the renewable fuel volume mandates for 2017 and the biomass-based diesel mandate for 2018. The volumes included in the EPA's final rule increase each year, but are lower, with the exception of the volumes for biomass-based diesel, than the volumes required by the Clean Air Act. The EPA used its waiver authorities to lower the volumes, but its decision to do so has been challenged in the U.S. Court of Appeals for the District of Columbia Circuit by corn growers and renewable fuels producers. The renewable fuel volume mandates for 2016 and 2017 are expected to result in renewable fuel being blended in volumes that breach the ethanol blend wall, forcing the use of higher ethanol fuel blends, including fuels with 15% or 85% ethanol, or non-ethanol renewable fuel that is not constrained by the blend wall. Information about the amount and type of renewable fuel actually blended in a particular year is reported at the end of March in the following year. In addition, in the final rules establishing the renewable volume obligations, the EPA articulated a policy to incentivize additional investments in renewable fuel blending and distribution infrastructure by increasing the price of RINs. Any substantial decrease in future volume obligations under RFS could have a material adverse effect on ethanol production in the United States, which could have a material adverse effect on the nitrogen fertilizer business' results of operations, financial condition and ability to make cash distributions.

Further, while most ethanol is currently produced from corn and other raw grains, such as milo or sorghum, the current RFS mandate requires a portion of the overall RFS mandate to come from advanced biofuels, including cellulose-based biomass, such as agricultural waste, forest residue, municipal solid waste and energy crops (plants grown for use to make biofuels or directly exploited for their energy content) and biomass-based diesel. In addition, there is a continuing trend to encourage the use of products other than corn and raw grains for ethanol production. If

this trend is successful, the demand for corn may decrease significantly, which could reduce demand for nitrogen fertilizer products and have an adverse effect on the nitrogen fertilizer business' results of operations, financial condition and cash flows. This potential impact on the demand for nitrogen fertilizer products, however, could be slightly offset by the potential market for nitrogen fertilizer product usage in connection with the production of cellulosic biofuels.

Nitrogen fertilizer products are global commodities, and the nitrogen fertilizer business faces intense competition from other nitrogen fertilizer producers.

The nitrogen fertilizer business is subject to intense price competition from both U.S. and foreign sources, including competitors operating in the Middle East, the Asia-Pacific region, the Caribbean, Russia and the Ukraine. Fertilizers are global commodities, with little or no product differentiation, and customers make their purchasing decisions principally on the basis of delivered price and availability of the product. Increased global supply may put downward pressure on fertilizer prices. Furthermore, in recent years the price of nitrogen fertilizer in the United States has been substantially driven by pricing in the global fertilizer market. The nitrogen fertilizer business competes with a number of U.S. producers and producers in other countries, including state-owned and government-subsidized entities. Some competitors have greater total resources and are less dependent on earnings from fertilizer sales, which makes them less vulnerable to industry downturns and better positioned to pursue new expansion and development opportunities. Increased domestic supply may put downward pressure on fertilizer prices. Additionally, the nitrogen fertilizer business' competitors utilizing different corporate structures may be better able to withstand lower cash flows than the nitrogen fertilizer business can as a limited partnership. The nitrogen fertilizer business' competitive position could suffer to the extent it is not able to expand its resources either through investments in new or existing operations or through acquisitions, joint ventures or partnerships. An inability to compete successfully could result in a loss of customers, which could adversely affect the sales, profitability and the cash flows of the nitrogen fertilizer business and therefore have a material adverse effect on the nitrogen fertilizer business' results of operations, financial condition and cash flows.

The nitrogen fertilizer business is seasonal, which may result in it carrying significant amounts of inventory and seasonal variations in working capital. Our inability to predict future seasonal nitrogen fertilizer demand accurately may result in excess inventory or product shortages.

Our nitrogen fertilizer business is seasonal. Farmers tend to apply nitrogen fertilizer during two short application periods, one in the spring and the other in the fall. In contrast, the nitrogen fertilizer business and other nitrogen fertilizer producers generally produce products throughout the year. As a result, our nitrogen fertilizer business and our customers generally build inventories during the low demand periods of the year in order to ensure timely product availability during the peak sales seasons. Variations in the proportion of product sold through prepaid sales contracts and variations in the terms of such contracts can increase the seasonal volatility of our nitrogen fertilizer business' cash flows and cause changes in the patterns of seasonal volatility from year-to-year.

In most instances, our nitrogen fertilizer business' East Dubuque customers take delivery of nitrogen products at the East Dubuque Facility. Customers arrange and pay to transport our nitrogen products to their final destinations. At our nitrogen fertilizer business' East Dubuque Facility, inventories are accumulated to allow for customer to take delivery to meet the seasonal demand, which require significant storage capacity. The accumulation of inventory to be available for seasonal sales creates significant seasonal working capital requirements.

Most of our nitrogen fertilizer business' Coffeyville Fertilizer Facility nitrogen products are delivered by railcar to its customer's storage facilities. Therefore, our nitrogen fertilizer business is less dependent on storage capacity at the Coffeyville Fertilizer Facility and, as a result, experiences lower seasonal fluctuations as compared to the East Dubuque Facility. At our nitrogen fertilizer business' Coffeyville Fertilizer Facility, the strongest demand for our products typically occurs during the spring planting season. The seasonality of nitrogen fertilizer demand results in our nitrogen fertilizer business' sales volumes and net sales being highest during the North American spring season and its working capital requirements typically being highest just prior to the start of the spring season.

If seasonal demand exceeds our nitrogen fertilizer business' projections, the nitrogen fertilizer business may not have enough product and its customers may acquire products from its competitors, which would negatively impact our nitrogen fertilizer business' profitability. If seasonal demand is less than expected, our nitrogen fertilizer business may be left with excess inventory and higher working capital and liquidity requirements.

The degree of seasonality of our nitrogen fertilizer business can change significantly from year to year due to conditions in the agricultural industry and other factors. As a consequence of this seasonality, it is expected that distributions we receive from our nitrogen fertilizer business will be volatile and will vary quarterly and annually.

Adverse weather conditions during peak fertilizer application periods may have a material adverse effect on the nitrogen fertilizer business' results of operations, financial condition and cash flows, because the agricultural customers of the nitrogen fertilizer business are geographically concentrated.

The nitrogen fertilizer business' sales to agricultural customers are concentrated in the Great Plains and Midwest states and are seasonal in nature. The nitrogen fertilizer business' quarterly results may vary significantly from one year to the next due largely to weather-related shifts in planting schedules and purchase patterns. For example, the nitrogen fertilizer business typically generates greater net sales and operating income in the first half of the year, which is referred to herein as the planting season, compared to the second half of the year. Accordingly, an adverse weather pattern affecting agriculture in these regions or during the planting season could have a negative effect on fertilizer demand, which could, in turn, result in a material decline in the nitrogen fertilizer business' net sales and margins and otherwise have a material adverse effect on the nitrogen fertilizer business' results of operations, financial condition and cash flows. The nitrogen fertilizer business' quarterly results may vary significantly from one year to the next due largely to weather-related shifts in planting schedules and purchase patterns. As a result, it is expected that the nitrogen fertilizer business' distributions to holders of its common units (including us) will be volatile and will vary quarterly and annually.

The nitrogen fertilizer business' operations are dependent on third-party suppliers, including the following: Linde, which owns an air separation plant that provides oxygen, nitrogen and compressed dry air to the Coffeyville Fertilizer Facility; the City of Coffeyville, which supplies the Coffeyville Fertilizer Facility with electricity; and Jo-Carroll Energy, Inc. ("Jo-Carroll Energy") which supplies the East Dubuque Facility with electricity. A deterioration in the financial condition of a third-party supplier, a mechanical problem with the air separation plant supplying the Coffeyville Fertilizer Facility, or the inability of a third-party supplier to perform in accordance with its contractual obligations could have a material adverse effect on the nitrogen fertilizer business' results of operations, financial condition and cash flows.

Operations of the nitrogen fertilizer business' Coffeyville Fertilizer Facility depend in large part on the performance of third-party suppliers, including Linde for the supply of oxygen, nitrogen and compressed dry air, and the City of Coffeyville for the supply of electricity. With respect to Linde, the operations of the Coffeyville Fertilizer Facility could be adversely affected if there were a deterioration in Linde's financial condition such that the operation of the air separation plant located adjacent to the Coffeyville Fertilizer Facility was disrupted. Additionally, this air separation plant in the past has experienced numerous short-term interruptions, causing interruptions in our gasifier operations. With respect to electricity, in 2010, our nitrogen fertilizer business entered into an amended and restated electric services agreement with the City of Coffeyville, Kansas, which allows for an option to extend the term of such agreement through June 30, 2024.

Our nitrogen fertilizer business' East Dubuque Facility operations also depend in large part on the performance of third-party suppliers, including, Jo-Carroll Energy for the purchase of electricity. We entered into a utility service agreement with Jo-Carroll Energy, which terminates on May 31, 2019 and will continue year-to-year thereafter unless either party provides 12-month advance written notice of termination.

Should Linde, the City of Coffeyville, Jo-Carroll Energy or any of our other third-party suppliers fail to perform in accordance with existing contractual arrangements, or should our nitrogen fertilizer business otherwise lose the service of any third-party suppliers, our nitrogen fertilizer business' operations (or a portion of our operations) could be forced to halt. Alternative sources of supply could be difficult to obtain. Any shutdown of our nitrogen fertilizer

business' operations (or a portion of our operations), even for a limited period, could have a material adverse effect on our nitrogen fertilizer business' results of operations, financial condition and ability to make cash distributions.

The nitrogen fertilizer business' results of operations, financial condition and ability to make cash distributions may be adversely affected by the supply and price levels of pet coke. Failure by the Refining Business to continue to supply the Coffeyville Fertilizer Facility with pet coke (to the extent third-party pet coke is unavailable only at higher prices), or the Refining Business imposition of an obligation to provide it with security for the Nitrogen Fertilizer business' payment obligations, could negatively impact results of operations

The profitability of the nitrogen fertilizer business' Coffeyville Fertilizer Facility is directly affected by the price and availability of pet coke obtained from the Refining Business' Coffeyville, Kansas crude oil refinery pursuant to a long-term agreement and pet coke purchased from third parties, both of which vary based on market prices. Pet coke is a key raw material used by the Coffeyville Fertilizer Facility in the manufacture of nitrogen fertilizer products. If pet coke costs increase, the nitrogen fertilizer business may not be able to increase its prices to recover these increased costs, because market prices for nitrogen fertilizer products are not correlated with pet coke prices.

Based on nitrogen fertilizer business current output, it obtains most (over 70% on average during the last five years) of the pet coke needed for the Coffeyville Fertilizer Facility from the Refining Business' adjacent crude oil refinery, and procure the remainder on the open market. The price that is paid to the Refining Business for pet coke is based on the lesser of a pet coke price derived from the price received for UAN (subject to a UAN-based price ceiling and floor) and a pet coke index price. In most cases, the price paid to the Refining Business will be lower than the price which would be otherwise paid to third parties. Pet coke prices could significantly increase in the future. Should the Refining Business fail to perform in accordance with the existing agreement, the fertilizer business would need to purchase pet coke from third parties on the open market, which could negatively impact its results of operations to the extent third-party pet coke is unavailable or available only at higher prices.

The Coffeyville Fertilizer Facility may not be able to maintain an adequate supply of pet coke. In addition, it could experience production delays or cost increases if alternative sources of supply prove to be more expensive or difficult to obtain. The nitrogen fertilizer business currently purchases 100% of the pet coke the Coffeyville refinery produces. Accordingly, if the nitrogen fertilizer business increases production, it will be more dependent on pet coke purchases from third-party suppliers at open market prices. The nitrogen fertilizer business is party to a pet coke supply agreement with HollyFrontier Corporation. The term of this agreement ends in December 2017. There is no assurance that the nitrogen fertilizer business would be able to purchase pet coke on comparable terms from third parties or at all.

Under the pet coke agreement with the Refining Business, we may become obligated to provide security for payment of obligations if, in the Refining business's sole judgment, there is a material adverse change in financial condition or liquidity position or in ability to pay for pet coke purchases. See Part III, Item 13 "Certain Relationships and Related Transactions, and Director Independence - Agreements with CVR Energy and CVR Refining - Coke Supply Agreement" of this Report.

The nitrogen fertilizer business relies on third-party providers of transportation services and equipment, which subjects it to risks and uncertainties beyond its control that may have a material adverse effect on the nitrogen fertilizer business' results of operations, financial condition and ability to make distributions.

The nitrogen fertilizer business relies on railroad and trucking companies to ship finished products to customers of the Coffeyville Fertilizer Facility. The nitrogen fertilizer business also lease railcars from railcar owners in order to ship its finished products. Additionally, although customers of the East Dubuque Facility generally pick up products at the facility, the facility occasionally rely on barge, truck and railroad companies to ship products to customers. These transportation operations, equipment and services are subject to various hazards, including extreme weather conditions, work stoppages, delays, spills, derailments and other accidents and other operating hazards. For example, barge transport can be impacted by lock closures resulting from inclement weather or surface conditions, including fog, rain, snow, wind, ice, strong currents, floods, droughts and other unplanned natural phenomena, lock malfunction, tow conditions and other conditions. Further, the limited number of towing

companies and of barges available for ammonia transport may also impact the availability of transportation for our nitrogen fertilizer business' products.

These transportation operations, equipment and services are also subject to environmental, safety and other regulatory oversight. Due to concerns related to terrorism or accidents, local, state and federal governments could implement new regulations affecting the transportation of the nitrogen fertilizer business' finished products. In addition, new regulations could be implemented affecting the equipment used to ship its finished products.

Any delay in the nitrogen fertilizer business' ability to ship its finished products as a result of these transportation companies' failure to operate properly, the implementation of new and more stringent regulatory requirements affecting transportation operations or equipment, or significant increases in the cost of these services or equipment could have a material adverse effect on the nitrogen fertilizer business' results of operations, financial condition and ability to make cash distributions.

Ammonia can be very volatile and extremely hazardous. Any liability for accidents involving ammonia or other products the nitrogen fertilizer business produces or transports that cause severe damage to property or injury to the environment and human health could have a material adverse effect on the nitrogen fertilizer business' results of operations, financial condition and ability to make cash distributions. In addition, the costs of transporting ammonia could increase significantly in the future.

The nitrogen fertilizer business manufactures, processes, stores, handles, distributes and transports ammonia, which can be very volatile and extremely hazardous. Major accidents or releases involving ammonia could cause severe damage or injury to property, the environment and human health, as well as a possible disruption of supplies and markets. Such an event could result in civil lawsuits, fines, penalties and regulatory enforcement proceedings, all of which could lead to significant liabilities. Any damage to persons, equipment or property or other disruption of the ability of the nitrogen fertilizer business to produce or distribute its products could result in a significant decrease in operating revenues and significant additional cost to replace or repair and insure its assets, which could have a material adverse effect on the nitrogen fertilizer business' results of operations, financial condition and ability to make cash distributions. The Coffeyville Fertilizer Facility and East Dubuque Facility periodically experiences minor releases of ammonia related to leaks from its equipment. Similar events may occur in the future.

In addition, the nitrogen fertilizer business may incur significant losses or costs relating to the operation of railcars used for the purpose of carrying various products, including ammonia. Due to the dangerous and potentially toxic nature of the cargo, in particular ammonia, on board railcars, a railcar accident may result in fires, explosions and pollution. These circumstances may result in sudden, severe damage or injury to property, the environment and human health. In the event of pollution, the nitrogen fertilizer business may be held responsible even if it is not at fault and it complied with the laws and regulations in effect at the time of the accident. Litigation arising from accidents involving ammonia and other products the nitrogen fertilizer business produces or transports may result in the nitrogen fertilizer business or us being named as a defendant in lawsuits asserting claims for large amounts of damages, which could have a material adverse effect on the nitrogen fertilizer business' results of operations, financial condition and ability to make cash distributions.

Given the risks inherent in transporting ammonia, the costs of transporting ammonia could increase significantly in the future. Ammonia is most typically transported by pipeline and railcar. A number of initiatives are underway in the railroad and chemical industries that may result in changes to railcar design in order to minimize railway accidents involving hazardous materials. In addition, in the future, laws may more severely restrict or eliminate the ability of the nitrogen fertilizer business to transport ammonia via railcar. If any railcar design changes are implemented, or if accidents involving hazardous freight increase the insurance and other costs of railcars, freight costs of the nitrogen fertilizer business could significantly increase.

Environmental laws and regulations on fertilizer end-use and application and numeric nutrient water quality criteria could have a material adverse impact on fertilizer demand in the future.

Future environmental laws and regulations on the end-use and application of fertilizers could cause changes in demand for the nitrogen fertilizer business' products. In addition, future environmental laws and regulations, or new interpretations of existing laws or regulations, could limit the ability of the nitrogen fertilizer business to market and sell its products to end users. From time to time, various state legislatures have proposed bans or other limitations on fertilizer products. The EPA is encouraging states to adopt state-wide numeric water quality criteria for total nitrogen and total phosphorus, which are present in the nitrogen fertilizer business' fertilizer products. A number of states have adopted or proposed numeric nutrient water quality criteria for nitrogen and phosphorus. The adoption of stringent state criteria for nitrogen and phosphorus could reduce the demand for nitrogen fertilizer products in those states. If such laws, rules, regulations or interpretations to significantly curb the end-use or application of fertilizers were promulgated in the nitrogen fertilizer business' marketing areas, it could result in decreased demand for its products and have a material adverse effect on the nitrogen fertilizer business' results of operations, financial condition and cash flows.

New regulations concerning the transportation, storage and handling of hazardous chemicals, risks of terrorism and the security of chemical manufacturing facilities could result in higher operating costs.

The costs of complying with future regulations relating to the transportation, storage and handling of hazardous chemicals and security associated with our operations may have a material adverse effect on our results of operations, financial condition and ability to make cash distributions. Targets such as chemical manufacturing facilities may be at greater risk of future terrorist attacks than other targets in the United States. The chemical industry has responded to the issues that arose in response to the terrorist attacks on September 11, 2001 by starting new initiatives relating to the security of chemical industry facilities and the transportation of hazardous chemicals in the United States. For example, in May 2015, the Department of Transportation promulgated a regulation setting standings for rail tanks carrying transporting flammable liquids. Future terrorist attacks could lead to even stronger, more costly initiatives that could result in a material adverse effect on our results of operations, financial condition and ability to make cash distributions. The 2013 fertilizer plant explosion in West, Texas has generated consideration of more restrictive measures in the storage, handling and transportation of crop production materials. In January 2017, the Federal Register published finalized amendments to the Clean Air Act's regulations implementing the Risk Management Program, which is designed to prevent and mitigate chemical releases and accidents at facilities that handle large quantities of hazardous chemicals. It is not yet known whether the rule will be challenged or otherwise affected by the incoming Trump administration.

If licensed technology were no longer available, the nitrogen fertilizer business may be adversely affected.

The nitrogen fertilizer business has licensed, and may in the future license, a combination of patent, trade secret and other intellectual property rights of third parties for use in its business. In particular, the gasification process used at the Coffeyville Fertilizer Facility to convert pet coke to high purity hydrogen for subsequent conversion to ammonia is licensed from an affiliate of General Electric Company. The license, which is fully paid, grants the nitrogen fertilizer business perpetual rights to use the pet coke gasification process on specified terms and conditions and is integral to the operations of the Coffeyville Fertilizer Facility. If this license or any other license agreements on which the nitrogen fertilizer business' operations rely, were to be terminated, licenses to alternative technology may not be available, or may only be available on terms that are not commercially reasonable or acceptable. In addition, any substitution of new technology for currently-licensed technology may require substantial changes to manufacturing processes or equipment and may have a material adverse effect on the nitrogen fertilizer business' results of operations, financial condition and cash flows.

The nitrogen fertilizer business may face third-party claims of intellectual property infringement, which if successful could result in significant costs.

Although there are currently no pending claims relating to the infringement of any third-party intellectual property rights, in the future the nitrogen fertilizer business may face claims of infringement that could interfere with its ability to use technology that is material to its business operations. Any litigation of this type, whether successful or unsuccessful, could result in substantial costs and diversions of resources, either of which could have a material adverse effect on the nitrogen fertilizer business' results of operations, financial condition and cash flows.

In the event a claim of infringement against the nitrogen fertilizer business is successful, it may be required to pay royalties or license fees for past or continued use of the infringing technology, or it may be prohibited from using the infringing technology altogether. If it is prohibited from using any technology as a result of such a claim, it may not be able to obtain licenses to alternative technology adequate to substitute for the technology it can no longer use, or licenses for such alternative technology may only be available on terms that are not commercially reasonable or acceptable. In addition, any substitution of new technology for currently licensed technology may require the nitrogen fertilizer business to make substantial changes to its manufacturing processes or equipment or to its products, and could have a material adverse effect on the nitrogen fertilizer business' results of operations, financial condition and cash flows.

There can be no assurance that the transportation costs of the nitrogen fertilizer business' competitors will not decline.

Our nitrogen fertilizer business' nitrogen fertilizer plants are located within the U.S. farm belt, where the majority of the end users of its nitrogen fertilizer products grow their crops. Many of our nitrogen fertilizer business' competitors produce fertilizer outside of this region and incur greater costs in transporting their products over longer distances via rail, ships and pipelines. There can be no assurance that competitors' transportation costs will not decline or that additional pipelines will not be built, lowering the price at which competitors can sell their products, which would have a material adverse effect on the nitrogen fertilizer business' results of operations, financial condition and cash flows.

Risks Related to Our Entire Business

Instability and volatility in the capital, credit and commodity markets in the global economy could negatively impact our business, financial condition, results of operations and cash flows.

Our business, financial condition and results of operations could be negatively impacted by difficult conditions and volatility in the capital, credit and commodities markets and in the global economy. For example:

- Although we believe the petroleum business has sufficient liquidity under its ABL credit facility and the intercompany credit facility to operate both the Coffeyville and Wynnewood refineries, and that the nitrogen fertilizer business has sufficient liquidity under its ABL credit facility to run the nitrogen fertilizer business, under extreme market conditions there can be no assurance that such funds would be available or sufficient, and in such a case, we may not be able to successfully obtain additional financing on favorable terms, or at all.
- Market volatility could exert downward pressure on the price of the Refining Partnership's or the Nitrogen Fertilizer Partnership's common units, which may make it more difficult for either or both of them to raise additional capital and thereby limit their ability to grow, which could in turn cause our stock price to drop.
- The petroleum business' and nitrogen fertilizer business' credit facilities contain various covenants that must be complied with, and if either business is not in compliance, there can be no assurance that either business would be able to successfully amend the agreement in the future. Further, any such amendment may be expensive. In addition, any new credit facility the petroleum business or nitrogen fertilizer business may enter into may require them to agree to additional covenants.
- Market conditions could result in significant customers experiencing financial difficulties. We are exposed to the credit risk of our customers, and their failure to meet their financial obligations when due because of bankruptcy, lack of liquidity, operational failure or other reasons could result in decreased sales and earnings for us.

The refineries and nitrogen fertilizer facilities face significant risks due to physical damage hazards, environmental liability risk exposure, and unplanned or emergency partial or total plant shutdowns resulting in business interruptions. We could incur potentially significant costs to the extent there are unforeseen events which cause property damage and a material decline in production which are not fully insured. The commercial insurance industry engaged in underwriting energy industry risk is specialized and there is finite capacity; therefore, the industry may limit or curtail coverage, may modify the coverage provided or may substantially increase premiums in the future.

If any of our production plants, logistics assets, key pipeline operations serving our plants, or key suppliers sustains a catastrophic loss and operations are shutdown or significantly impaired, it would have a material adverse impact on our operations, financial condition and cash flows. In addition, the risk exposures we have at the Coffeyville, Kansas plant complex are greater due to production facilities for refinery and fertilizer production, distribution and storage being in relatively close proximity and potentially exposed to damage from one incident, such as resulting damages from the perils of explosion, windstorm, fire, or flood. Operations at either or both of the refineries and the nitrogen fertilizer plant could be curtailed, limited or completely shut down for an extended period of time as the result of one or more unforeseen events and circumstances, which may not be within our control, including:

- major unplanned maintenance requirements;
- catastrophic events caused by mechanical breakdown, electrical injury, pressure vessel rupture, explosion, contamination, fire, or natural disasters, including, floods, windstorms and other similar events;
- labor supply shortages, or labor difficulties that result in a work stoppage or slowdown;
- cessation or suspension of a plant or specific operations dictated by environmental authorities; and
- an event or incident involving a large clean-up, decontamination, or the imposition of laws and ordinances regulating the cost and schedule of demolition or reconstruction, which can cause significant delays in restoring property to its pre-loss condition.

We have sustained losses over the past ten-year period at our plants, which are illustrative of the types of risks and hazards that exist. These losses or events resulted in costs assumed by us that were not fully insured due to policy retentions or applicable exclusions. These events included the flood at the Coffeyville refinery flood in June 2007; the Coffeyville nitrogen fertilizer plant secondary urea reactor rupture in September 2010; the fire in the Coffeyville refinery fluid catalytic cracking unit ("FCCU") in December 2010; a hydrocracker unit fire at the Wynnewood refinery in December 2010; a boiler explosion at the Wynnewood refinery in September 2012; a FCCU outage at the Coffeyville refinery in July/August 2013; and a isomerization unit fire at the Coffeyville refinery in July 2014.

We are insured under casualty, environmental, property and business interruption insurance policies. The property and business interruption coverage has a combined policy limit of \$1.25 billion for each occurrence. The property and business interruption insurance policies insure real and personal property, including property located at our Coffeyville and Wynnewood refineries and our related crude gathering and logistics assets. There is potential for a common occurrence to impact both the CVR Partners' nitrogen fertilizer plant in Coffeyville, Kansas and the Coffeyville refinery in which case the insurance limitations limits and applicable sub-limits would apply to all damages combined. Under this insurance program, there is a \$2.5 million property damage retention for property, except there is a \$10 million retention for refinery property. In addition, the insurance policies contain a schedule of sub-limits which apply to certain specific perils or areas of coverage. Sub-limits which may be of importance depending on the nature and extent of a particular insured occurrence are: flood, earthquake, contingent business interruption insuring key suppliers, pipelines and customers, debris removal, decontamination, demolition and increased cost of construction due to law and ordinance, and others. Policy conditions, limits and sub-limits could materially impact insurance recoveries and potentially cause us to assume losses which could impair earnings.

There is finite capacity in the commercial insurance industry engaged in underwriting energy industry risk, and there are risks associated with the commercial insurance industry reducing capacity, changing the scope of insurance coverage offered, and substantially increasing premiums resulting from highly adverse loss experience or other financial circumstances. Factors that impact insurance cost and availability include, but are not limited to: industry wide losses, natural disasters, specific losses incurred by us and low or inadequate investment returns earned by the insurance industry. If the supply of commercial insurance is curtailed due to highly adverse financial results, we may not be able to continue our present limits of insurance coverage or obtain sufficient insurance capacity to adequately insure our risks for property damage or business interruption.

Environmental laws and regulations could require us to make substantial capital expenditures to remain in compliance or to remediate current or future contamination that could give rise to material liabilities.

Our operations are subject to a variety of federal, state and local environmental laws and regulations relating to the protection of the environment, including those governing the emission or discharge of pollutants into the environment, product specifications and the generation, treatment, storage, transportation, disposal and remediation of solid and hazardous wastes. Violations of these laws and regulations or permit conditions can result in substantial penalties, injunctive orders compelling installation of additional controls, civil and criminal sanctions, permit revocations and/or facility shutdowns.

In addition, new environmental laws and regulations, new interpretations of existing laws and regulations, increased governmental enforcement of laws and regulations or other developments could require us to make additional unforeseen expenditures. Many of these laws and regulations are becoming increasingly stringent, and the cost of compliance with these requirements can be expected to increase over time. The requirements to be met, as well as the technology and length of time available to meet those requirements, continue to develop and change. These expenditures or costs for environmental compliance could have a material adverse effect on our business' results of operations, financial condition and profitability.

Our facilities operate under a number of federal and state permits, licenses and approvals with terms and conditions containing a significant number of prescriptive limits and performance standards in order to operate. All of these permits, licenses, approvals, limits and standards require a significant amount of monitoring, record keeping and reporting in order to demonstrate compliance with the underlying permit, license, approval, limit or standard. Non-compliance or incomplete documentation of our compliance status may result in the imposition of fines, penalties and injunctive relief. Additionally, due to the nature of our manufacturing and refining processes, there may be times when we are unable to meet the standards and terms and conditions of our permits, licenses and approvals due to operational upsets or malfunctions, which may lead to the imposition of fines and penalties or operating restrictions that may have a material adverse effect on our ability to operate our facilities and accordingly our financial performance. For a discussion of environmental laws and regulations and their impact on our business and operations, please see "Business — Environmental Matters."

We could incur significant cost in cleaning up contamination at our refineries, terminals, fertilizer plants and off-site locations.

Our businesses are subject to the occurrence of accidental spills, discharges or other releases of petroleum or hazardous substances into the environment. Past or future spills related to any of our current or former operations, including the refineries, pipelines, product terminals, fertilizer plants or transportation of products or hazardous substances from those facilities, may give rise to liability (including strict liability, or liability without fault, and potential clean-up responsibility) to governmental entities or private parties under federal, state or local environmental laws, as well as under common law. For example, we could be held strictly liable under CERCLA, and similar state statutes for past or future spills without regard to fault or whether our actions were in compliance with the law at the time of the spills. Pursuant to CERCLA and similar state statutes, we could be held liable for contamination associated with facilities we currently own or operate (whether or not such contamination occurred prior to our acquisition thereof), facilities we formerly owned or operated (if any) and facilities to which we transported or arranged for the transportation of wastes or byproducts containing hazardous substances for treatment, storage, or disposal.

The potential penalties and clean-up costs for past or future releases or spills, liability to third parties for damage to their property or exposure to hazardous substances, or the need to address newly discovered information or conditions that may require response actions could be significant and could have a material adverse effect on our results of operations, financial condition and cash flows. In addition, we may incur liability for alleged personal injury or property damage due to exposure to chemicals or other hazardous substances located at or released from our facilities. We may also face liability for personal injury, property damage, natural resource damage or for clean-up costs for the alleged migration of contamination or other hazardous substances from our facilities to adjacent and other nearby properties.

Four of our facilities, including the Coffeyville refinery, the now-closed Phillipsburg terminal (which operated as a refinery until 1991), the Wynnewood refinery and the Coffeyville nitrogen fertilizer plant, have environmental contamination. We have assumed Farmland's responsibilities under certain administrative orders under the RCRA related to contamination at or that originated from the Coffeyville refinery and the Phillipsburg terminal. The Coffeyville refinery has agreed to assume liability for contamination that migrated from the refinery onto the nitrogen fertilizer plant property while Farmland owned and operated the properties. At the Wynnewood refinery, known areas of contamination have been partially addressed but corrective action has not been completed (refer to "RCRA Compliance Matters" in Part II, Item 8, Note 14 ("Commitments and Contingencies") of this Report). If significant unknown liabilities are identified at or migrating from any of our facilities, that liability could have a material adverse effect on our results of operations, financial condition and cash flows and may not be covered by insurance.

We may incur future liability relating to the off-site disposal of hazardous wastes. Companies that dispose of, or arrange for the treatment, transportation or disposal of, hazardous substances at off-site locations may be held jointly and severally liable for the costs of investigation and remediation of contamination at those off-site locations, regardless of fault. We could become involved in litigation or other proceedings involving off-site waste disposal and the damages or costs in any such proceedings could be material.

We may be unable to obtain or renew permits necessary for our operations, which could inhibit our ability to do business.

Our businesses hold numerous environmental and other governmental permits and approvals authorizing operations at our facilities. Future expansion of our operations is predicated upon securing the necessary environmental or other permits or approvals. A decision by a government agency to deny or delay issuing a new or renewed material permit or approval, or to revoke or substantially modify an existing permit or approval, could have a material adverse effect on our ability to continue operations and on our financial condition, results of operations and cash flows.

Climate change laws and regulations could have a material adverse effect on our results of operations, financial condition and cash flows.

The EPA regulates GHG emissions under the Clean Air Act. In October 2009, the EPA finalized a rule requiring certain large emitters of GHGs to inventory and report their GHG emissions to the EPA. In accordance with the rule, we have begun monitoring and reporting our GHG emissions to the EPA. In May 2010, the EPA finalized the "Greenhouse Gas Tailoring Rule," which established new GHG emissions thresholds that determine when stationary sources, such as the refineries and the nitrogen fertilizer plant, must obtain permits under PSD and Title V programs of the federal Clean Air Act. Under the rule, facilities already subject to the PSD and Title V programs that increase their emissions of GHGs by a significant amount are required to undergo PSD review and to evaluate and implement air pollution control technology, known as "best available control technology," to reduce GHG emissions.

In the meantime, in December 2010, the EPA reached a settlement agreement with numerous parties under which it agreed to promulgate NSPS to regulate GHG emissions from petroleum refineries and electric utilities by November 2012. In September 2014, the EPA indicated that the petroleum refining sector risk rule, proposed in June 2014 to address air toxics and volatile organic compounds from refineries, may make it unnecessary for the EPA to

regulate GHG emissions from petroleum refineries at this time. The final rule, which was published in the Federal Register on December 1, 2015, places additional emission control requirements and work practice standards on FCCUs, storage tanks, flares, coking units and other equipment at petroleum refineries. Therefore, we expect that the EPA will not be issuing NSPS standards to regulate GHG from the refineries at this time but that it may do so in the future.

During the State of the Union address in each of the last four years, President Obama indicated that the United States should take action to address climate change. It is possible, however, that the Trump administration and/or the new Congress will implement a new or modified policy with respect to climate change. If efforts to address climate change continue, at the federal legislative level, this could mean Congressional passage of legislation adopting some form of federal mandatory GHG emission reduction, such as a nationwide cap-and-trade program. It is also possible that Congress may pass alternative climate change bills that do not mandate a nationwide cap-and-trade program and instead focus on promoting renewable energy and efficiency.

In addition to potential federal legislation, a number of states have adopted regional greenhouse gas initiatives to reduce carbon dioxide and other GHG emissions. In 2007, a group of Midwest states, including Kansas (where the Coffeyville refinery and the nitrogen fertilizer facility are located), formed the Midwestern Greenhouse Gas Reduction Accord, which calls for the development of a cap-and-trade system to control GHG emissions and for the inventory of such emissions. However, the individual states that have signed on to the accord must adopt laws or regulations implementing the trading scheme before it becomes effective. To date, Kansas has taken no meaningful action to implement the accord, and it's unclear whether Kansas intends to do so in the future.

Alternatively, the EPA may take further steps to regulate GHG emissions, although at this time it is unclear to what extent the EPA under its new Administrator will pursue climate change regulation. The implementation of EPA regulations and/or the passage of federal or state climate change legislation may result in increased costs to (i) operate and maintain our facilities, (ii) install new emission controls on our facilities and (iii) administer and manage any GHG emissions program. Increased costs associated with compliance with any current or future legislation or regulation of GHG emissions, if it occurs, may have a material adverse effect on our results of operations, financial condition and cash flows.

In addition, climate change legislation and regulations may result in increased costs not only for our business but also users of our refined and fertilizer products, thereby potentially decreasing demand for our products. Decreased demand for our products may have a material adverse effect on our results of operations, financial condition and cash flows.

We are subject to strict laws and regulations regarding employee and process safety, and failure to comply with these laws and regulations could have a material adverse effect on our results of operations, financial condition and profitability.

We are subject to the requirements of OSHA and comparable state statutes that regulate the protection of the health and safety of workers, and the proper design, operation and maintenance of our equipment. In addition, OSHA and certain environmental regulations require that we maintain information about hazardous materials used or produced in our operations and that we provide this information to employees and state and local governmental authorities. Failure to comply with these requirements, including general industry standards, record keeping requirements and monitoring and control of occupational exposure to regulated substances, may result in significant fines or compliance costs, which could have a material adverse effect on our results of operations, financial condition and cash flows.

We are subject to cybersecurity risks and other cyber incidents resulting in disruption.

Threats to information technology systems associated with cybersecurity risks and cyber incidents or attacks continue to grow. We depend on information technology systems. In addition, we collect, process and retain sensitive and confidential customer information in the normal course of business. Despite the security measures we have in place and any additional measures we may implement in the future, our facilities and systems, and those of

our third-party service providers, could be vulnerable to security breaches, computer viruses, lost or misplaced data, programming errors, human errors, acts of vandalism or other events. Any disruption of our systems or security breach or event resulting in the misappropriation, loss or other unauthorized disclosure of confidential information, whether by us directly or our third-party service providers, could damage our reputation, expose us to the risks of litigation and liability, disrupt our business or otherwise affect our results of operations.

Deliberate, malicious acts, including terrorism, could damage our facilities, disrupt our operations or injure employees, contractors, customers or the public and result in liability to us.

Intentional acts of destruction could hinder our sales or production and disrupt our supply chain. Our facilities could be damaged or destroyed, reducing our operational production capacity and requiring us to repair or replace our facilities at substantial cost. Employees, contractors and the public could suffer substantial physical injury for which we could be liable. Governmental authorities may impose security or other requirements that could make our operations more difficult or costly. The consequences of any such actions could adversely affect our operating results, financial condition and cash flows.

Both the petroleum and nitrogen fertilizer businesses depend on significant customers and the loss of several significant customers may have a material adverse impact on our results of operations, financial condition and cash flows.

The petroleum and nitrogen fertilizer businesses both have a significant concentration of customers. The five largest customers of the petroleum business represented 40% of its petroleum net sales for the year ended December 31, 2016. The five largest customers of the nitrogen fertilizer business also represented approximately 32% of its net sales for the year ended December 31, 2016. One significant petroleum customer accounts for approximately 15% of petroleum net sales and two significant nitrogen fertilizer customers each accounts for approximately 10% of nitrogen fertilizer net sales. Given the nature of our businesses, and consistent with industry practice, we do not have long-term minimum purchase contracts with our customers. The loss of several of these significant customers, or a significant reduction in purchase volume by several of them, could have a material adverse effect on our results of operations, financial condition and cash flows.

The acquisition and expansion strategy of the petroleum business and the nitrogen fertilizer business involves significant risks.

Both the petroleum business and the nitrogen fertilizer business will consider pursuing acquisitions and expansion projects in order to continue to grow and increase profitability. However, we may not be able to consummate such acquisitions or expansions, due to intense competition for suitable acquisition targets, the potential unavailability of financial resources necessary to consummate acquisitions and expansions, difficulties in identifying suitable acquisition targets and expansion projects or in completing any transactions identified on sufficiently favorable terms and the failure to obtain requisite regulatory or other governmental approvals. In addition, any future acquisitions and expansions may entail significant transaction costs and risks associated with entry into new markets and lines of business.

In addition to the risks involved in identifying and completing acquisitions described above, even when acquisitions are completed, integration of acquired entities can involve significant difficulties, such as: unforeseen difficulties in the integration of the acquired operations and disruption of the ongoing operations of our business; failure to achieve cost savings or other financial or operating objectives contributing to the accretive nature of an acquisition; strain on the operational and managerial controls and procedures of the petroleum business and the nitrogen fertilizer business, and the need to modify systems or to add management resources; difficulties in the integration and retention of customers or personnel and the integration and effective deployment of operations or technologies; assumption of unknown material liabilities or regulatory non-compliance issues; amortization of acquired assets, which would reduce future reported earnings; possible adverse short-term effects on our cash flows or operating results; and diversion of management's attention from the ongoing operations of our business.

In addition, in connection with any potential acquisition or expansion project, each of the Refining Partnership and the Nitrogen Fertilizer Partnership (as applicable) will need to consider whether a business it intends to acquire or expansion project it intends to pursue could affect its tax treatment as a partnership for federal income tax purposes. If the petroleum business or the nitrogen fertilizer business is otherwise unable to conclude that the activities of the business being acquired or the expansion project would not affect its treatment as a partnership for federal income tax purposes, it may elect to seek a ruling from the Internal Revenue Service ("IRS"). Seeking such a ruling could be costly or, in the case of competitive acquisitions, place the business in a competitive disadvantage compared to other potential acquirers who do not seek such a ruling. If the petroleum business or the nitrogen fertilizer business is unable to conclude that an activity would not affect its treatment as a partnership for federal income tax purposes, and is unable or unwilling to obtain an IRS ruling, the petroleum business or the nitrogen fertilizer business may choose to acquire such business or develop such expansion project in a corporate subsidiary, which would subject the income related to such activity to entity-level taxation, which would reduce the amount of cash available for distribution to its unitholders and would likely cause a substantial reduction in the value of its common units.

Failure to manage these acquisition and expansion growth risks could have a material adverse effect on our results of operations, financial condition and cash flows. There can be no assurance that we will be able to consummate any acquisitions or expansions, successfully integrate acquired entities, or generate positive cash flow at any acquired company or expansion project.

We are a holding company and depend upon our subsidiaries for our cash flow.

Our two principal subsidiaries are publicly traded partnerships, and a portion of their common units trade on the NYSE. We are a holding company, and these subsidiaries conduct all of our operations and own substantially all of our assets. Consequently, our cash flow and our ability to meet our obligations or to pay dividends or make other distributions in the future will depend upon the cash flow of our subsidiaries and the payment of funds by our subsidiaries to us in the form of distributions on their common units. The ability of the Refining Partnership and the Nitrogen Fertilizer Partnership to make any payments to us will depend on, among other things, their earnings, the terms of their indebtedness (including the terms of any debt facilities and instruments), tax considerations and legal restrictions. In particular, future debt facilities and instruments incurred at our subsidiaries may impose significant limitations on the ability of our subsidiaries to make distributions to us and consequently our ability to issue dividends to our stockholders.

Internally generated cash flows and other sources of liquidity may not be adequate for the capital needs of our businesses.

Our businesses are capital intensive, and working capital needs may vary significantly over relatively short periods of time. For instance, crude oil price volatility can significantly impact working capital on a week-to-week and month-to-month basis. If we cannot generate adequate cash flow or otherwise secure sufficient liquidity to meet our working capital needs or support our short-term and long-term capital requirements, we may be unable to meet our debt obligations, pursue our business strategies or comply with certain environmental standards, which would have a material adverse effect on our business and results of operations.

A substantial portion of our workforce is unionized and we are subject to the risk of labor disputes and adverse employee relations, which may disrupt our business and increase our costs.

As of December 31, 2016, approximately 70% of the employees at the Coffeyville refinery, 58% of the employees at the Wynnewood refinery and 32% of the employees who work in crude transportation were represented by labor unions under collective bargaining agreements. At Coffeyville, the collective bargaining agreement with five Metal Trades Unions (which covers union represented employees who work directly at the Coffeyville refinery) expires in March 2019. The collective bargaining agreement with the United Steelworkers (which covers unionized employees who work in crude transportation) expires in March 2019 and automatically renews on an annual basis thereafter unless a written notice is received sixty days in advance of the relevant expiration date. The collective bargaining agreement with the International Union of Operating Engineers with

respect to the Wynnewood refinery expires in June 2017. Approximately 61% of the employees at the East Dubuque Facility were represented by the International Union of United Automobile, Aerospace, and Agricultural Implement Workers under a collective bargaining agreement that expires in October 2019. We may not be able to renegotiate our collective bargaining agreements when they expire on satisfactory terms or at all. A failure to do so may increase our costs. In addition, our existing labor agreements may not prevent a strike or work stoppage at any of our facilities in the future, and any work stoppage could negatively affect our results of operations, financial condition and cash flows.

Our business may suffer if any of our key senior executives or other key employees unexpectedly discontinues employment with us. Furthermore, a shortage of skilled labor or disruptions in our labor force may make it difficult for us to maintain labor productivity.

Our future success depends to a large extent on the services of our key senior executives and key senior employees. Our business depends on our continuing ability to recruit, train and retain highly qualified employees in all areas of our operations, including accounting, business operations, finance and other key back-office and mid-office personnel. Furthermore, our operations require skilled and experienced employees with proficiency in multiple tasks. In particular, the nitrogen fertilizer facility relies on gasification technology that requires special expertise to operate efficiently and effectively. The competition for these employees is intense, and the loss of these executives or employees could harm our business. If any of these executives or other key personnel resign unexpectedly or become unable to continue in their present roles and are not adequately replaced, our business operations could be materially adversely affected. We do not maintain any "key man" life insurance for any executives.

New regulations concerning the transportation, storage and handling of hazardous chemicals, risks of terrorism and the security of chemical manufacturing facilities could result in higher operating costs.

The costs of complying with future regulations relating to the transportation, storage and handling of hazardous chemicals and security associated with the refining and nitrogen fertilizer facilities may have a material adverse effect on our results of operations, financial condition and cash flows. Targets such as refining and chemical manufacturing facilities may be at greater risk of future terrorist attacks than other targets in the United States. As a result, the petroleum and chemical industries have responded to the issues that arose due to the terrorist attacks on September 11, 2001 by starting new initiatives relating to the security of petroleum and chemical industry facilities and the transportation of hazardous chemicals in the United States. Future terrorist attacks could lead to even stronger, more costly initiatives that could result in a material adverse effect on our results of operations, financial condition and cash flows. The 2013 fertilizer plant explosion in West, Texas has generated consideration of more restrictive measures in storage, handling and transportation of crop production materials, including fertilizers.

Compliance with and changes in the tax laws could adversely affect our performance.

We are subject to extensive tax liabilities, including United States and state income taxes and transactional taxes such as excise, sales/use, payroll, franchise and withholding taxes. New tax laws and regulations are continuously being enacted or proposed that could result in increased expenditures for tax liabilities in the future.

The Refining Partnership's and the Nitrogen Fertilizer Partnership's level of indebtedness may affect their ability to operate their businesses, and may have a material adverse effect on their financial condition and results of operations.

The Refining Partnership and the Nitrogen Fertilizer Partnership have incurred indebtedness and they may be able to incur significant additional indebtedness in the future. If new indebtedness is added to their current indebtedness, the risks described below could increase. Their level of indebtedness could have important consequences, such as:

- limiting their ability to obtain additional financing to fund their working capital needs, capital expenditures, debt service requirements, acquisitions or other purposes;

- requiring them to utilize a significant portion of their cash flows to service their indebtedness, thereby reducing available cash and their ability to make distributions on their common units (including distributions to us);
- limiting their ability to use operating cash flow in other areas of their business because they must dedicate a substantial portion of these funds to service debt;
- limiting their ability to compete with other companies who are not as highly leveraged, as they may be less capable of responding to adverse economic and industry conditions;
- restricting them from making strategic acquisitions, introducing new technologies or exploiting business opportunities;
- restricting the way in which they conduct their business because of financial and operating covenants in the agreements governing their and their respective subsidiaries' existing and future indebtedness, including, in the case of certain indebtedness of subsidiaries, certain covenants that restrict the ability of subsidiaries to pay dividends or make other distributions to them;
- exposing them to potential events of default (if not cured or waived) under financial and operating covenants contained in their or their respective subsidiaries' debt instruments that could have a material adverse effect on their business, financial condition and operating results;
- increasing their vulnerability to a downturn in general economic conditions or in pricing of their products; and
- limiting their ability to react to changing market conditions in their respective industries and in their respective customers' industries.

In addition to their debt service obligations, the operations of the Refining Partnership and the Nitrogen Fertilizer Partnership require substantial investments on a continuing basis. Their ability to make scheduled debt payments, to refinance their obligations with respect to their indebtedness and to fund capital and non-capital expenditures necessary to maintain the condition of their operating assets, properties and systems software, as well as to provide capacity for the growth of their business, depends on their financial and operating performance, which, in turn, is subject to prevailing economic conditions and financial, business, competitive, legal and other factors.

In addition, the Refining Partnership and the Nitrogen Fertilizer Partnership are and will be subject to covenants contained in agreements governing their present and future indebtedness. These covenants include, and will likely include, restrictions on certain payments (including restrictions on distributions to their unitholders), the granting of liens, the incurrence of additional indebtedness, dividend restrictions affecting subsidiaries, asset sales, transactions with affiliates and mergers and consolidations. Any failure to comply with these covenants could result in a default under their current credit agreements or debt instruments or future credit agreements.

The Refining Partnership and the Nitrogen Fertilizer Partnership may not be able to generate sufficient cash to service all of their indebtedness and may be forced to take other actions to satisfy their debt obligations that may not be successful.

The Refining Partnership's and the Nitrogen Fertilizer Partnership's ability to satisfy their debt obligations will depend upon, among other things:

- their future financial and operating performance, which will be affected by prevailing economic conditions and financial, business, regulatory and other factors, many of which are beyond their control; and

- their future ability to obtain other financing.

We cannot offer any assurance that our businesses will generate sufficient cash flow from operations, that the Refining Partnership will be able to draw under its Amended and Restated ABL Credit Facility, the intercompany credit facility or otherwise, or that the Nitrogen Fertilizer Partnership will be able to draw under its ABL credit facility or otherwise, or from other sources of financing, in an amount sufficient to fund their respective liquidity needs.

If cash flows and capital resources are insufficient to service their indebtedness, the Refining Partnership or the Nitrogen Fertilizer Partnership may be forced to reduce or delay capital expenditures, sell assets, seek additional capital or restructure or refinance their indebtedness or seek bankruptcy protection. These alternative measures may not be successful and may not permit them to meet their scheduled debt service obligations. Their ability to restructure or refinance debt will depend on the condition of the capital markets and their financial condition at such time. Any refinancing of their debt could be at higher interest rates and may require them to comply with more onerous covenants, which could further restrict their business operations, and the terms of existing or future debt agreements may restrict us from adopting some of these alternatives. In addition, in the absence of adequate cash flows or capital resources, they could face substantial liquidity problems and might be required to dispose of material assets or operations, or sell equity, and/or negotiate with lenders to restructure the applicable debt in order to meet their debt service and other obligations. They may not be able to consummate those dispositions for fair market value or at all. Market or business conditions may limit their ability to avail themselves of some or all of these options. Furthermore, any proceeds that they realize from any such dispositions may not be adequate to meet their debt service obligations when due. None of the Company's stockholders or any of their respective affiliates has any continuing obligation to provide us with debt or equity financing.

The borrowings under the Refining Partnership's Amended and Restated ABL Credit Facility and intercompany credit facility and the Nitrogen Fertilizer Partnership's ABL credit facility bear interest at variable rates and other debt we or they incur could likewise be variable-rate debt. If market interest rates increase, variable-rate debt will create higher debt service requirements, which could adversely affect their respective distributions to us. The Refining Partnership or the Nitrogen Fertilizer Partnership may enter into agreements limiting their exposure to higher interest rates, but any such agreements may not offer complete protection from this risk.

The debt agreements of the Refining Partnership and the Nitrogen Fertilizer Partnership contain restrictions that limit their flexibility in operating their respective businesses and their ability to make distributions to their unitholders.

The debt facilities and instruments of the Refining Partnership and the Nitrogen Fertilizer Partnership contain, and any instruments governing their future indebtedness would likely contain, a number of covenants that impose significant operating and financial restrictions on them, including restrictions on their and their respective subsidiaries' ability to, among other things:

- incur additional indebtedness or issue certain preferred units;
- pay distributions in respect of our units or make other restricted payments;
- make certain payments on debt that is subordinated or secured on a junior basis;
- make certain investments;
- sell certain assets;
- create liens on certain assets;
- consolidate, merge, sell or otherwise dispose of all or substantially all of our assets;

- enter into certain transactions with our affiliates; and
- designate our subsidiaries as unrestricted subsidiaries.

Any of these restrictions could limit their ability to plan for or react to market conditions and could otherwise restrict partnership activities. Any failure to comply with these covenants could result in a default under their debt facilities and instruments. Upon a default, unless waived, the lenders under such debt facilities and instruments would have all remedies available to a secured lender, and could elect to terminate their commitments, cease making further loans, institute foreclosure proceedings against their assets, and force them into bankruptcy or liquidation, subject to any applicable intercreditor agreements. In addition, a default under their debt facilities and instruments would trigger a cross default under their other agreements and could trigger a cross default under the agreements governing their future indebtedness. The Refining Partnership's or Nitrogen Fertilizer Partnership's operating results may not be sufficient to service their indebtedness or to fund their other expenditures and they may not be able to obtain financing to meet these requirements.

Despite their indebtedness, the Refining Partnership and the Nitrogen Fertilizer Partnership may still be able to incur significantly more debt, including secured indebtedness. This could intensify the risks described above.

The Refining Partnership and the Nitrogen Fertilizer Partnership may be able to incur substantially more debt in the future, including secured indebtedness. Although the Refining Partnership's Amended and Restated ABL Credit Facility and the Nitrogen Fertilizer Partnership's ABL credit facility contain restrictions on the incurrence of additional indebtedness, these restrictions are subject to a number of qualifications and exceptions and, under certain circumstances, indebtedness incurred in compliance with these restrictions could be substantial. Also, these restrictions may not prevent them from incurring obligations that do not constitute indebtedness. To the extent such new debt or new obligations are added to their existing indebtedness, the risks described above could substantially increase.

Mr. Carl C. Icahn exerts significant influence over the Company and his interests may conflict with the interest of the Company's other stockholders.

Mr. Carl C. Icahn indirectly controls approximately 82% of the voting power of the Company's capital stock and, by virtue of such stock ownership, is able to control or exert substantial influence over the Company, including:

- the election and appointment of directors;
- business strategy and policies;
- mergers or other business combinations;
- acquisition or disposition of assets;
- future issuances of common stock, common units or other securities;
- incurrence of debt or obtaining other sources of financing; and
- the payment of dividends on the Company's common stock and distributions on the common units of the Refining Partnership and the Nitrogen Fertilizer Partnership.

The existence of a controlling stockholder may have the effect of making it difficult for, or may discourage or delay, a third party from seeking to acquire a majority of the Company's outstanding common stock, which may adversely affect the market price of the Company's common stock.

Mr. Icahn's interests may not always be consistent with the Company's interests or with the interests of the Company's other stockholders. Mr. Icahn and entities controlled by him may also pursue acquisitions or business

opportunities in industries in which we compete, and there is no requirement that any additional business opportunities be presented to us. We also have and may in the future enter into transactions to purchase goods or services with affiliates of Mr. Icahn. To the extent that conflicts of interest may arise between the Company and Mr. Icahn and his affiliates, those conflicts may be resolved in a manner adverse to the Company or its other stockholders.

In addition, if Mr. Icahn were to sell, or otherwise transfer, some or all of his interests in us to an unrelated party or group, a change of control could be deemed to have occurred under the terms of the indentures governing the Refining Partnership's 6.5% senior notes, which would require it to offer to repurchase all outstanding notes at 101% of their principal amount plus accrued interest to the date of repurchase, and an event of default could be deemed to have occurred under the Refining Partnership's Amended and Restated ABL Credit Facility, which would allow lenders to accelerate indebtedness owed to them. However, it is possible that the Refining Partnership will not have sufficient funds at the time of the change of control to make the required repurchase of notes or repay amounts outstanding under the Refining Partnership's Amended and Restated ABL Credit Facility, if any.

The Company's common stock price may decline due to sales of shares by Mr. Carl C. Icahn.

Sales of substantial amounts of the Company's common stock, or the perception that these sales may occur, may adversely affect the price of the Company's common stock and impede its ability to raise capital through the issuance of equity securities in the future. Mr. Icahn could elect in the future to request that the Company file a registration statement to enable him to sell shares of the Company's common stock. If Mr. Icahn were to sell a large number of shares into the public markets, Mr. Icahn could cause the price of the Company's common stock to decline.

We are a "controlled company" within the meaning of the NYSE rules and, as a result, qualify for, and are relying on, exemptions from certain corporate governance requirements.

A company of which more than 50% of the voting power is held by an individual, a group or another company is a "controlled company" within the meaning of the NYSE rules and may elect not to comply with certain corporate governance requirements of the NYSE, including:

- the requirement that a majority of our board of directors consist of independent directors;
- the requirement that we have a nominating/corporate governance committee that is composed entirely of independent directors; and
- the requirement that we have a compensation committee that is composed entirely of independent directors.

We are relying on all of these exemptions as a controlled company. Accordingly, you may not have the same protections afforded to stockholders of companies that are subject to all of the corporate governance requirements of the NYSE. In addition, both the Refining Partnership and the Nitrogen Fertilizer Partnership are relying on exemptions from the same NYSE corporate governance requirements described above.

We may be subject to the pension liabilities of our affiliates.

Mr. Icahn, through certain affiliates, owns approximately 82% of the Company's capital stock. Applicable pension and tax laws make each member of a "controlled group" of entities, generally defined as entities in which there is at least an 80% common ownership interest, jointly and severally liable for certain pension plan obligations of any member of the controlled group. These pension obligations include ongoing contributions to fund the plan, as well as liability for any unfunded liabilities that may exist at the time the plan is terminated. In addition, the failure to pay these pension obligations when due may result in the creation of liens in favor of the pension plan or the Pension Benefit Guaranty Corporation ("PBG") against the assets of each member of the controlled group.

As a result of the more than 80% ownership interest in us by Mr. Icahn's affiliates, we are subject to the pension liabilities of all entities in which Mr. Icahn has a direct or indirect ownership interest of at least 80%. Two such entities, ACF Industries LLC ("ACF") and Federal-Mogul, are the sponsors of several pension plans. All the minimum funding requirements of the Code and the Employee Retirement Income Security Act of 1974, as amended by the Pension Protection Act of 2006, for these plans have been met as of December 31, 2016. If the ACF and Federal-Mogul plans were voluntarily terminated, they would be collectively underfunded by approximately \$613.4 million and \$589.2 million as of December 31, 2016 and 2015, respectively. These results are based on the most recent information provided to us by Mr. Icahn's affiliates based on information from the plans' actuaries. These liabilities could increase or decrease, depending on a number of factors, including future changes in benefits, investment returns, and the assumptions used to calculate the liability. As members of the controlled group, we would be liable for any failure of ACF and Federal-Mogul to make ongoing pension contributions or to pay the unfunded liabilities upon a termination of their respective pension plans. In addition, other entities now or in the future within the controlled group that includes us may have pension plan obligations that are, or may become, underfunded, and we would be liable for any failure of such entities to make ongoing pension contributions or to pay the unfunded liabilities upon a termination of such plans. The current underfunded status of the ACF and Federal-Mogul pension plans requires such entities to notify the PBGC of certain "reportable events," such as if we cease to be a member of the controlled group, or if we make certain extraordinary dividends or stock redemptions. The obligation to report could cause us to seek to delay or reconsider the occurrence of such reportable events.

Risks Related to Our Common Stock

We have various mechanisms in place to discourage takeover attempts, which may reduce or eliminate our stockholders' ability to sell their shares for a premium in a change of control transaction.

Various provisions of our certificate of incorporation and bylaws and of Delaware corporate law may discourage, delay or prevent a change in control or takeover attempt of our Company by a third party that our management and board of directors determines is not in the best interest of our Company and its stockholders. Public stockholders who might desire to participate in such a transaction may not have the opportunity to do so. These anti-takeover provisions could substantially impede the ability of public stockholders to benefit from a change of control or change in our management and board of directors. These provisions include:

- preferred stock that could be issued by our board of directors to make it more difficult for a third party to acquire, or to discourage a third party from acquiring, a majority of our outstanding voting stock;
- limitations on the ability of stockholders to call special meetings of stockholders;
- limitations on the ability of stockholders to act by written consent in lieu of a stockholders' meeting; and
- advance notice requirements for nominations of candidates for election to our board of directors or for proposing matters that can be acted upon by our stockholders at stockholder meetings.

We are authorized to issue up to a total of 350 million shares of common stock and 50 million shares of preferred stock, potentially diluting equity ownership of current holders and the share price of our common stock.

We believe that it is necessary to maintain a sufficient number of available authorized shares of our common stock and preferred stock in order to provide us with the flexibility to issue common stock or preferred stock for business purposes that may arise as deemed advisable by our board of directors. These purposes could include, among other things, (i) future stock dividends or stock splits, which may increase the liquidity of our shares; (ii) the sale of stock to obtain additional capital or to acquire other companies or businesses, which could enhance our growth strategy or allow us to reduce debt if needed; (iii) for use in additional stock incentive programs and (iv) for other bona fide purposes. Our board of directors may authorize the Company to issue the available authorized shares of common stock or preferred stock without notice to, or further action by, our stockholders, unless stockholder

approval is required by law or the rules of the NYSE. The issuance of additional shares of common stock or preferred stock may significantly dilute the equity ownership of the current holders of our common stock.

Our ability to pay dividends on our common stock is subject to market conditions and numerous other factors.

In January 2013, our board of directors adopted a quarterly dividend policy. We began paying regular quarterly dividends in the second quarter of 2013. Dividends are subject to change at the discretion of the board of directors and may change from quarter to quarter. Our ability to continue paying dividends is subject to our ability to continue to generate sufficient cash flow, and the amount of dividends we are able to pay each year may vary, possibly substantially, based on market conditions, crack spreads, our capital expenditure and other business needs, covenants contained in any debt agreements we may enter into in the future, covenants contained in the debt agreements of CVR Partners and CVR Refining, and the amount of distributions we receive from CVR Partners and CVR Refining. We may not be able to continue paying dividends at the rate we currently pay dividends, or at all. If the amount of our dividends decreases, the trading price of our common stock could be materially adversely affected as a result.

Risks Inherent In the Limited Partnership Structures Through Which We Currently Hold Our Interests in the Refinery Business and the Nitrogen Fertilizer Business

Both the Refining Partnership and the Nitrogen Fertilizer Partnership have in place policies to distribute an amount equal to the "available cash" each generates each quarter, which could limit their ability to grow and make acquisitions.

The current policies of both the board of directors of the Refining Partnership's general partner and the Nitrogen Fertilizer Partnership's general partner is to distribute an amount equal to the available cash generated by each partnership each quarter to their respective unitholders. As a result of their respective cash distribution policies, the Refining Partnership and the Nitrogen Fertilizer Partnership will rely primarily upon external financing sources, including commercial bank borrowings and the issuance of debt and equity securities, to fund acquisitions and expansion capital expenditures. As such, to the extent they are unable to finance growth externally, their respective cash distribution policies will significantly impair their ability to grow. The board of directors of the general partner of either the Refining Partnership or the Nitrogen Fertilizer Partnership may modify or revoke its cash distribution policy at any time at its discretion, including in such a manner that would result in an elimination of cash distributions regardless of the amount of available cash they generate. Each board of directors will determine the cash distribution policy it deems advisable for them on an independent basis.

In addition, because of their respective distribution policies, their growth, if any, may not be as robust as that of businesses that reinvest their available cash to expand ongoing operations. To the extent either issues additional units in connection with any acquisitions or expansion capital expenditures or as in-kind distributions, current unitholders will experience dilution and the payment of distributions on those additional units will decrease the amount each distributes in respect of each of its outstanding units. There are no limitations in their respective partnership agreements on either the Refining Partnership's or the Nitrogen Fertilizer Partnership's ability to issue additional units, including units ranking senior to the outstanding common units. The incurrence of additional commercial borrowings or other debt to finance their growth strategy would result in increased interest expense, which, in turn, would reduce the available cash they have to distribute to unitholders (including us).

Each of the Refining Partnership and the Nitrogen Fertilizer Partnership may not have sufficient available cash to pay any quarterly distribution on their respective common units. Furthermore, neither is required to make distributions to holders of its common units on a quarterly basis or otherwise, and both may elect to distribute less than all of their respective available cash.

Either or both of the Refining Partnership or the Nitrogen Fertilizer Partnership may not have sufficient available cash each quarter to enable the payment of distributions to common unitholders. The Refining Partnership and the Nitrogen Fertilizer Partnership are separate public companies, and available cash generated by one of them will not be used to make distributions to common unitholders of the other. Furthermore, their respective partnership

agreements do not require either to pay distributions on a quarterly basis or otherwise. The board of directors of the general partner of either the Refining Partnership or the Nitrogen Fertilizer Partnership may at any time, for any reason, change its cash distribution policy or decide not to make any distribution. The amount of cash they will be able to distribute in respect of their common units principally depends on the amount of cash they generate from operations, which is directly dependent upon the margins each business generates. Please see "— Risks Related to the Petroleum Business — The price volatility of crude oil and other feedstocks, refined products and utility services may have a material adverse effect on our profitability and our ability to pay distributions to unitholders" and "— Risks Related to the Nitrogen Fertilizer Business — The nitrogen fertilizer business is, and nitrogen fertilizer prices are, cyclical and highly volatile, and the nitrogen fertilizer business has experienced substantial downturns in the past. Cycles in demand and pricing could potentially expose the nitrogen fertilizer business to significant fluctuations in its operating and financial results and have a material adverse effect on our results of operations, financial condition and cash flows."

If either the Refining Partnership or the Nitrogen Fertilizer Partnership were to be treated as a corporation, rather than as a partnership, for U.S. federal income tax purposes or if either partnership were otherwise subject to entity-level taxation, such entity's cash available for distribution to its common unitholders, including to us, would be reduced, likely causing a substantial reduction in the value of such entity's common units, including the common units held by us.

Current law requires the Refining Partnership and the Nitrogen Fertilizer Partnership to derive at least 90% of their respective annual gross income from certain specified activities in order to continue to be treated as a partnership, rather than as a corporation, for U.S. federal income tax purposes. One or both of them may not find it possible to meet this qualifying income requirement, or may inadvertently fail to meet this qualifying income requirement.

In addition, on January 24, 2017, final regulations regarding which activities give rise to qualifying income within the meaning of Section 7704 of the Code (the "Final Regulations") were published in the Federal Register. The Final Regulations are effective as of January 19, 2017, and apply to taxable years beginning on or after January 19, 2017. We do not believe the Final Regulations affect the Refining Partnership and the Nitrogen Fertilizer Partnership's ability to be treated as a partnership for U.S. federal income tax purposes. However, there are no assurances that the Final Regulations will not be revised to take a position that is contrary to our interpretation of the current law.

If either the Refining Partnership or the Nitrogen Fertilizer Partnership were to be treated as a corporation for U.S. federal income tax purposes, they would pay U.S. federal income tax on all of their taxable income at the corporate tax rate, which is currently a maximum of 35%, they would likely pay additional state and local income taxes at varying rates, and distributions to their common unitholders, including to us, would generally be taxed as corporate distributions.

Increases in interest rates could adversely impact the price of the Refining Partnership's or the Nitrogen Fertilizer Partnership's common units and the Refining Partnership's or the Nitrogen Fertilizer Partnership's ability to issue additional equity to make acquisitions, incur debt or for other purposes.

We expect that the price of the Refining Partnership's or the Nitrogen Fertilizer Partnership's common units will be impacted by the level of the Refining Partnership's or the Nitrogen Fertilizer Partnership's quarterly cash distributions and implied distribution yield. The distribution yield is often used by investors to compare and rank related yield-oriented securities for investment decision-making purposes. Therefore, changes in interest rates may affect the yield requirements of investors who invest in the Refining Partnership's or the Nitrogen Fertilizer Partnership's common units, and a rising interest rate environment could have a material adverse impact on the price of the Refining Partnership's or the Nitrogen Fertilizer Partnership's common units (and therefore the value of our investment in the Refining Partnership and/or the Nitrogen Fertilizer Partnership) as well as the Refining Partnership's or the Nitrogen Fertilizer Partnership's ability to issue additional equity to make acquisitions or to incur debt.

We may have liability to repay distributions that are wrongfully distributed to us.

Under certain circumstances, we may, as a holder of common units in the Refining Partnership and the Nitrogen Fertilizer Partnership, have to repay amounts wrongfully returned or distributed to us. Under the Delaware Revised Uniform Limited Partnership Act, a partnership may not make distributions to its unitholders if the distribution would cause its liabilities to exceed the fair value of its assets. Delaware law provides that for a period of three years from the date of an impermissible distribution, limited partners who received the distribution and who knew at the time of the distribution that it violated Delaware law will be liable to the company for the distribution amount.

Public investors own approximately 66% of the nitrogen fertilizer business through the Nitrogen Fertilizer Partnership and approximately 34% of the petroleum business through the Refining Partnership. Although we own the general partner of both the Refining Partnership and the Nitrogen Fertilizer Partnership, the general partners owe a duty of good faith to public unitholders, which could cause them to manage their respective businesses differently than if there were no public unitholders.

Public investors own approximately 66% of the Nitrogen Fertilizer Partnership's common units and approximately 34% of the Refining Partnership's common units. We are not entitled to receive all of the cash generated by the nitrogen fertilizer business or the petroleum business or freely transfer money from the nitrogen fertilizer business to finance operations at the petroleum business or vice versa. Furthermore, although we own the general partner of both the Refining Partnership and the Nitrogen Fertilizer Partnership, the general partners are subject to certain fiduciary duties, which may require the general partners to manage their respective businesses in a way that may differ from our best interests.

The general partners of the Refining Partnership and the Nitrogen Fertilizer Partnership have limited their liability, replaced default fiduciary duties and restricted the remedies available to common unitholders, including us, for actions that, without these limitations and reductions might otherwise constitute breaches of fiduciary duty.

The respective partnership agreements of the Refining Partnership and the Nitrogen Fertilizer Partnership limit the liability and replace the fiduciary duties of their respective general partner, while also restricting the remedies available to each partnership's common unitholders, including us, for actions that, without these limitations and reductions, might constitute breaches of fiduciary duty. Delaware partnership law permits such contractual reductions of fiduciary duty. The partnership agreements contain provisions that replace the standards to which each general partner would otherwise be held by state fiduciary duty law. For example:

- The partnership agreements permit each partnership's general partner to make a number of decisions in its individual capacity, as opposed to its capacity as general partner. This entitles its general partner to consider only the interests and factors that it desires, and means that it has no duty or obligation to give any consideration to any interest of, or factors affecting, any limited partner.
- The partnership agreements provide that each partnership's general partner will not have any liability to unitholders for decisions made in its capacity as general partner so long as (i) in the case of the Nitrogen Fertilizer Partnership, it acted in good faith, meaning it believed that the decision was in the best interest of the Nitrogen Fertilizer Partnership and (ii) in the case of the Refining Partnership, it did not make such decisions in bad faith, meaning it believed that the decisions were adverse to the Refining Partnership's interests.
- The partnership agreements provide that each partnership's general partner and the officers and directors of its general partner will not be liable for monetary damages to common unitholders, including us, for any acts or omissions unless there has been a final and non-appealable judgment entered by a court of competent jurisdiction determining that (i) in the case of the Nitrogen Fertilizer Partnership, the general partner or its officers or directors acted in bad faith or engaged in fraud or willful misconduct, or in, the case of a criminal matter, acted with knowledge that the conduct was criminal and (ii) in the case of the Refining Partnership, such losses or liabilities were the result of the

conduct of our general partner or such officer or director engaged in by it in bad faith or with respect to any criminal conduct, with the knowledge that its conduct was unlawful.

In addition, the Refining Partnership's partnership agreement provides that its general partner will not be in breach of its obligations thereunder or its duties to the Refining Partnership or its limited partners if a transaction with an affiliate or the resolution of a conflict of interest is either (i) approved by the conflicts committee of its board of directors of the general partner, although the general partner is not obligated to seek such approval; or (ii) approved by the vote of a majority of the outstanding units, excluding any units owned by the general partner and its affiliates. In addition, the Nitrogen Fertilizer Partnership's partnership agreement (i) generally provides that affiliated transactions and resolutions of conflicts of interest not approved by the conflicts committee of the board of directors of its general partner and not involving a vote of unitholders must be on terms no less favorable to the Nitrogen Fertilizer Partnership than those generally being provided to or available from unrelated third parties or be "fair and reasonable" to the Nitrogen Fertilizer Partnership, as determined by its general partner in good faith, and that, in determining whether a transaction or resolution is "fair and reasonable," the general partner may consider the totality of the relationships between the parties involved, including other transactions that may be particularly advantageous or beneficial to affiliated parties, including us and (ii) provides that in resolving conflicts of interest, it will be presumed that in making its decision, the general partner or its conflicts committee acted in good faith, and in any proceeding brought by or on behalf of any holder of common units, the person bringing or prosecuting such proceeding will have the burden of overcoming such presumption.

With respect to the common units that we own, we have agreed to be bound by the provisions set forth in each partnership agreement, including the provisions described above.

The Refining Partnership and the Nitrogen Fertilizer Partnership are managed by the executive officers of their general partners, some of whom are employed by and serve as part of the senior management team of the Company. Conflicts of interest could arise as a result of this arrangement.

The Refining Partnership and the Nitrogen Fertilizer Partnership is each managed by the executive officers of their general partners, some of whom are employed by and serve as part of the senior management team of the Company. Furthermore, although both the Refining Partnership and the Nitrogen Fertilizer Partnership have entered into services agreements with the Company under which they compensate the Company for the services of its management, the Company's management is not required to devote any specific amount of time to the petroleum business or the nitrogen fertilizer business and may devote a substantial majority of their time to the business of the Company. Moreover the Company may terminate the services agreement with the Refining Partnership and/or the Nitrogen Fertilizer Partnership at any time, in each case subject to a 180-day notice period. In addition, key executive officers of the Company, including its president and chief executive officer, chief financial officer and general counsel, will face conflicts of interest if decisions arise in which the Refining Partnership or the Nitrogen Fertilizer Partnership and the Company have conflicting points of view or interests.

Item 1B. *Unresolved Staff Comments*

There are no material unresolved written comments that were received from the SEC staff 180 days or more before the end of our fiscal year relating to our periodic or current reports under the Exchange Act.

Item 2. *Properties*

The following table contains certain information regarding our principal properties:

<u>Location</u>	<u>Acres</u>	<u>Own/Lease</u>	<u>Use</u>
Coffeyville, KS	440	Own	Refining Partnership: oil refinery and office buildings Nitrogen Fertilizer Partnership: fertilizer plant
Wynnewood, OK.	400	Own	Refining Partnership: oil refinery, office buildings, refined oil storage Nitrogen Fertilizer Partnership: fertilizer plant and fertilizer storage
East Dubuque, IL.	210	Own	
Montgomery County, KS (Coffeyville Station)	20	Own	Refining Partnership: crude oil storage
Montgomery County, KS (Broome Station)	20	Own	Refining Partnership: crude oil storage
Cowley County, KS (Hooser Station).	80	Own	Refining Partnership: crude oil storage
Cushing, OK	138	Own	Refining Partnership: crude oil storage

We also lease property for our executive office which is located at 2277 Plaza Drive in Sugar Land, Texas. Additionally, other administrative office space is leased in Kansas City, Kansas.

As of December 31, 2016, the petroleum business owns crude oil storage capacity of approximately (i) 1.5 million barrels that supports the gathering system and the Coffeyville refinery, (ii) 0.9 million barrels at the Wynnewood refinery and (iii) 1.5 million barrels in Cushing. The petroleum business leases additional crude oil storage capacity of approximately (iv) 2.2 million barrels in Cushing, (v) 0.2 million barrels in Duncan, Oklahoma and (vi) 0.1 million barrels at the Wynnewood refinery. In addition to crude oil storage, the petroleum business owns over 4.5 million barrels of combined refined products and feedstocks storage capacity. The nitrogen fertilizer business has the capacity to store approximately 160,000 tons of UAN and 80,000 tons of ammonia. We believe that our owned and leased facilities are sufficient for our operating needs.

Item 3. *Legal Proceedings*

We are, and will continue to be, subject to litigation from time to time in the ordinary course of our business, including matters such as those described under "Business — Environmental Matters." We also incorporate by reference into this Part I, Item 3 of this Report, the information regarding the lawsuits and proceedings described and referenced in Note 14 ("Commitments and Contingencies") to our Consolidated Financial Statements as set forth in Part II, Item 8 of this Report. In accordance with the U.S. Generally Accepted Accounting Principles ("GAAP"), we record a liability when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. These provisions are reviewed at least quarterly and adjusted to reflect the impacts of negotiations, settlements, rulings, advice of legal counsel, and other information and events pertaining to a particular case. Although we cannot predict with certainty the ultimate resolution of lawsuits, investigations or claims asserted against us, we do not believe that any currently pending legal proceeding or proceedings to which we are a party will have a material adverse effect on our business, financial condition or results of operations.

Item 4. *Mine Safety Disclosures*

Not applicable.

PART II

Item 5. *Market For Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities*

Market Information

Our common stock, which is listed on the NYSE under the symbol "CVI" commenced trading on October 23, 2007. The table below sets forth, for the quarter indicated, the high and low sales prices per share of our common stock for our most recent fiscal years:

<u>2016</u>	<u>High</u>	<u>Low</u>
First Quarter	\$ 38.98	\$ 22.05
Second Quarter	26.57	14.87
Third Quarter	16.39	13.01
Fourth Quarter	25.41	12.03

<u>2015</u>	<u>High</u>	<u>Low</u>
First Quarter	\$ 43.21	\$ 33.02
Second Quarter	43.46	36.43
Third Quarter	43.63	36.02
Fourth Quarter	48.37	38.45

Holder of Record

As of February 14, 2017, there were 126 holders of record of our common stock. Because many of our shares of common stock are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of beneficial owners represented by these record holders.

CVR Energy, Inc. Dividend Policy

On January 24, 2013, the board of directors of the Company adopted a quarterly cash dividend policy. Dividends are subject to change at the discretion of the board of directors. The Company began paying regular quarterly dividends in the second quarter of 2013. Additionally, the Company declared and paid one special cash dividend during the year ended December 31, 2014.

The following is a summary of the quarterly and special dividends paid to stockholders during the years ended December 31, 2016 and 2015:

	<u>December 31, 2015</u>	<u>March 31, 2016</u>	<u>June 30, 2016</u>	<u>September 30, 2016</u>	<u>Total Dividends Paid in 2016</u>
	(in millions, except per share data)				
Dividend type	Quarterly	Quarterly	Quarterly	Quarterly	
Amount paid to IEP	\$ 35.6	\$ 35.6	\$ 35.6	\$ 35.6	\$ 142.4
Amounts paid to public stockholders	7.8	7.8	7.8	7.8	31.2
Total amount paid	<u>\$ 43.4</u>	<u>\$ 43.4</u>	<u>\$ 43.4</u>	<u>\$ 43.4</u>	<u>\$ 173.6</u>
Per common share	<u>\$ 0.50</u>	<u>\$ 0.50</u>	<u>\$ 0.50</u>	<u>\$ 0.50</u>	<u>\$ 2.00</u>
Shares outstanding	<u>86.8</u>	<u>86.8</u>	<u>86.8</u>	<u>86.8</u>	

	December 31, 2014	March 31, 2015	June 30, 2015	September 30, 2015	Total Dividends Paid in 2015
	(in millions, except per share data)				
Dividend type	Quarterly	Quarterly	Quarterly	Quarterly	
Amount paid to IEP	\$ 35.6	\$ 35.6	\$ 35.6	\$ 35.6	\$ 142.4
Amounts paid to public stockholders	7.8	7.8	7.8	7.8	31.3
Total amount paid	<u>\$ 43.4</u>	<u>\$ 43.4</u>	<u>\$ 43.4</u>	<u>\$ 43.4</u>	<u>\$ 173.7</u>
Per common share	<u>\$ 0.50</u>	<u>\$ 0.50</u>	<u>\$ 0.50</u>	<u>\$ 0.50</u>	<u>\$ 2.00</u>
Shares outstanding	<u>86.8</u>	<u>86.8</u>	<u>86.8</u>	<u>86.8</u>	

On February 15, 2017, the board of directors of the Company declared a cash dividend for the fourth quarter of 2016 to the Company's stockholders of \$0.50 per share, or \$43.4 million in aggregate. The dividend will be paid on March 6, 2017 to stockholders of record at the close of business on February 27, 2017.

Our ability to pay cash dividends is dependent on the ability of our subsidiaries to make distributions to us. The cash distribution policies of the Nitrogen Fertilizer Partnership and the Refining Partnership are described below. Furthermore, the ability of the Nitrogen Fertilizer Partnership and the Refining Partnership to make distributions to us is limited by the Refining Partnership's Amended and Restated ABL Credit Facility and the indenture governing the 2022 Notes and the Nitrogen Fertilizer Partnership's indenture governing the 2023 Notes and the ABL Credit Facility. See Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources" for a discussion of those limitations.

CVR Partners, LP Cash Distribution Policy

The current policy of the board of directors of the Nitrogen Fertilizer Partnership's general partner is to distribute all available cash the Nitrogen Fertilizer Partnership generates each quarter. Cash distributions will be made to the common unitholders of record on the applicable record date, generally within 60 days after the end of each quarter. Available cash for each quarter is determined by the board of directors of the Nitrogen Fertilizer Partnership's general partner following the end of such quarter, subject to the limitations discussed below. The board of directors of the Nitrogen Fertilizer Partnership's general partner calculates available cash for distribution starting with Adjusted Nitrogen Fertilizer EBITDA reduced for cash needed for (i) net cash interest expense (excluding capitalized interest) and debt service and other contractual obligations, (ii) maintenance capital expenditures, (iii) to the extent applicable, major scheduled turnaround expenses and reserves for future operating or capital needs that the board of directors of the Nitrogen Fertilizer Partnership's general partner deems necessary or appropriate, and (iv) expenses associated with the East Dubuque Merger, if any. Available cash for distribution may be increased by the release of previously established cash reserves, if any, at the discretion of the board of directors of the Nitrogen Fertilizer Partnership's general partner and available cash is increased by the business interruption insurance proceeds and the impact of purchase accounting. Actual distributions are set by the Nitrogen Fertilizer Partnership's general partner. The board of directors of the Nitrogen Fertilizer Partnership may modify the cash distribution policy at any time, and the partnership agreement does not require the Nitrogen Fertilizer Partnership to make distributions at all. Adjusted EBITDA is defined as EBITDA (net income before interest expense, net, income tax expense, depreciation and amortization) further adjusted for the impact of non-cash share-based compensation, and, where applicable, major scheduled turnaround expenses, gain or loss on extinguishment of debt, loss on disposition of assets, expenses associated with the East Dubuque Merger and business interruption insurance recovery.

The following is a summary of cash distributions paid by the Nitrogen Fertilizer Partnership to unitholders during the years ended December 31, 2016 and 2015 for the respective quarters to which the distributions relate:

	December 31, 2015	March 31, 2016	June 30, 2016	September 30, 2016	Total Cash Distributions Paid in 2016
	(in millions, except per common unit data)				
Amount paid to CRLLC	\$ 10.5	\$ 10.5	\$ 6.6	\$ —	\$ 27.6
Amounts paid to public unitholders	9.2	20.1	12.6	—	41.9
Total amount paid	<u>\$ 19.7</u>	<u>\$ 30.6</u>	<u>\$ 19.2</u>	<u>\$ —</u>	<u>\$ 69.5</u>
Per common unit	<u>\$ 0.27</u>	<u>\$ 0.27</u>	<u>\$ 0.17</u>	<u>\$ —</u>	<u>\$ 0.71</u>
Common units outstanding	<u>73.1</u>	<u>113.3</u>	<u>113.3</u>	<u>113.3</u>	

	December 31, 2014	March 31, 2015	June 30, 2015	September 30, 2015	Total Cash Distributions Paid in 2015
	(in millions, except per common unit data)				
Amount paid to CRLLC	\$ 16.0	\$ 17.5	\$ 15.2	\$ —	\$ 48.7
Amounts paid to public unitholders	14.0	15.4	13.3	—	42.7
Total amount paid	<u>\$ 30.0</u>	<u>\$ 32.9</u>	<u>\$ 28.5</u>	<u>\$ —</u>	<u>\$ 91.4</u>
Per common unit	<u>\$ 0.41</u>	<u>\$ 0.45</u>	<u>\$ 0.39</u>	<u>\$ —</u>	<u>\$ 1.25</u>
Common units outstanding	<u>73.1</u>	<u>73.1</u>	<u>73.1</u>	<u>73.1</u>	

CVR Refining, LP Cash Distribution Policy

The current policy of the board of directors of the Refining Partnership's general partner is to distribute all of the available cash the Refining Partnership generates each quarter. Available cash for each quarter will be determined by the board of directors of the Refining Partnership's general partner following the end of such quarter and will generally equal Adjusted Petroleum EBITDA reduced for (i) cash needed for debt service, (ii) reserves for environmental and maintenance capital expenditures, (iii) reserves for future major scheduled turnaround expenses and, (iv) to the extent applicable, reserves for future operating or capital needs that the board of directors of the Refining Partnership's general partner deems necessary or appropriate, if any. Available cash for distributions may be increased by the release of previously established cash reserves, if any, and other excess cash, at the discretion of the board of directors of the Refining Partnership's general partner. The Refining Partnership does not intend to maintain excess distribution coverage for the purpose of maintaining stability or growth in its quarterly distribution or otherwise to reserve cash for distributions, nor do they intend to incur debt to pay quarterly distributions. Further, it is the Refining Partnership's intent, subject to market conditions, to finance growth capital externally, and not to reserve cash for unspecified potential future needs. As of the date of this Report, we own approximately 66% of the Refining Partnership's common units, and are entitled to a pro rata percentage of the Refining Partnership's distributions in respect of its common units. The board of directors of the Refining Partnership's general partner may modify the cash distribution policy at any time, and the partnership agreement does not require the Refining Partnership to make distributions at all.

The following is a summary of cash distributions paid by the Refining Partnership to unitholders during the year ended December 31, 2015 for the respective quarters to which the distributions relate:

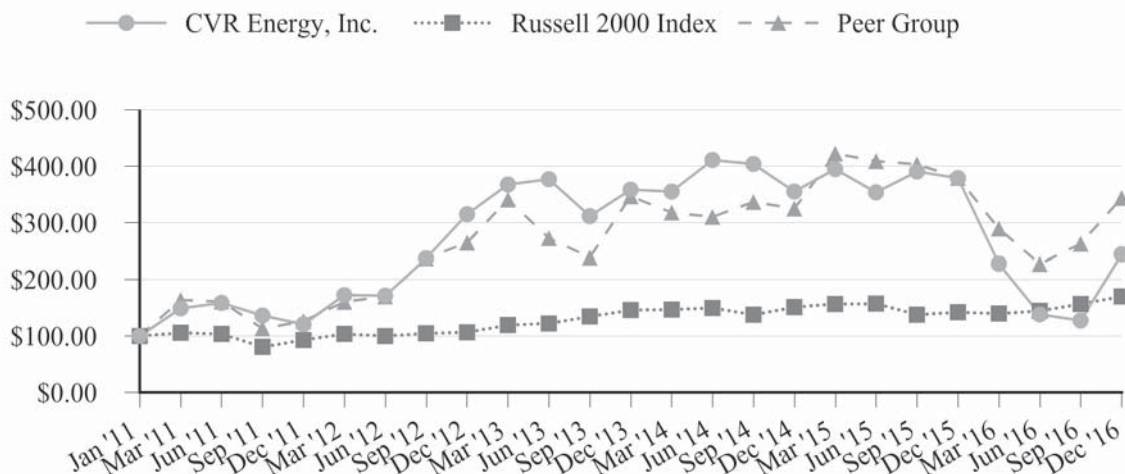
	December 31, 2014	March 31, 2015	June 30, 2015	September 30, 2015	Total Cash Distributions Paid in 2015
	(in millions, except per common unit data)				
Amount paid to CVR Refining Holdings, LLC	\$ 36.0	\$ 74.0	\$ 95.4	\$ 98.3	\$ 303.7
Amounts paid to public unitholders	18.6	38.2	49.2	50.8	156.8
Total amount paid.	<u>\$ 54.6</u>	<u>\$ 112.2</u>	<u>\$ 144.6</u>	<u>\$ 149.1</u>	<u>\$ 460.5</u>
Per common unit	<u>\$ 0.37</u>	<u>\$ 0.76</u>	<u>\$ 0.98</u>	<u>\$ 1.01</u>	<u>\$ 3.12</u>
Common units outstanding.	<u>147.6</u>	<u>147.6</u>	<u>147.6</u>	<u>147.6</u>	

No cash distributions were paid during 2016.

Stock Performance Graph

The following graph sets forth the cumulative return on our common stock between January 1, 2011 and December 31, 2016, as compared to the cumulative return of the Russell 2000 Index and an industry peer group consisting of Alon USA Energy, Inc., Delek US Holdings, Inc., HollyFrontier Corporation, Tesoro Corporation, Valero Energy Corporation and Western Refining, Inc. The graph assumes an investment of \$100 on January 1, 2011 in our common stock, the Russell 2000 Index and the industry peer group, and assumes the reinvestment of dividends where applicable. The closing market price for our common stock on the last trading day of the year ended December 31, 2016 was \$25.39. The stock price performance shown on the graph is not intended to forecast and does not necessarily indicate future price performance.

**COMPARISON OF CUMULATIVE TOTAL RETURN
BETWEEN JANUARY 1, 2011 AND DECEMBER 31, 2016
among CVR Energy, Inc., Russell 2000 Index and a peer group**



This performance graph shall not be deemed "filed" for purposes of Section 18 of the Exchange Act, or otherwise subject to the liabilities under that Section, and shall not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended (the "Securities Act"), or the Exchange Act.

	<u>Jan '11</u>	<u>Mar '11</u>	<u>Jun '11</u>	<u>Sep '11</u>	<u>Dec '11</u>	<u>Mar '12</u>	<u>Jun '12</u>	<u>Sep '12</u>	<u>Dec '12</u>	<u>Mar '13</u>	<u>Jun '13</u>
CVR Energy, Inc.	100.00	149.32	158.74	136.30	120.76	172.47	171.37	236.94	314.57	367.19	376.65
Russell 2000 Index	100.00	105.63	103.62	80.67	92.78	103.97	99.99	104.87	106.36	119.16	122.41
Peer Group	100.00	163.79	160.94	113.17	126.61	160.27	170.08	236.91	264.52	340.64	272.72

	<u>Sep '13</u>	<u>Dec '13</u>	<u>Mar '14</u>	<u>Jun '14</u>	<u>Sep '14</u>	<u>Dec '14</u>	<u>Mar '15</u>	<u>Jun '15</u>	<u>Sep '15</u>	<u>Dec '15</u>
CVR Energy, Inc.	311.10	358.04	354.65	410.78	403.40	354.60	394.66	353.48	390.39	378.31
Russell 2000 Index	134.47	145.72	146.89	149.39	137.96	150.86	156.88	157.03	137.83	142.24
Peer Group	238.60	346.24	317.43	309.92	336.54	324.45	421.99	408.97	402.89	378.74

	<u>Mar '16</u>	<u>Jun '16</u>	<u>Sep '16</u>	<u>Dec '16</u>
CVR Energy, Inc..	227.67	138.43	127.30	244.10
Russell 2000 Index	139.50	144.25	156.74	169.95
Peer Group	289.13	227.10	262.55	343.43

Purchases of Equity Securities by the Issuer

We did not repurchase any of our common stock during the fiscal quarter ended December 31, 2016.

Item 6. Selected Financial Data

You should read the selected historical consolidated financial data presented below in conjunction with, and the selected historical consolidated and combined financial data presented below is qualified in its entirety by reference to, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the related notes included elsewhere in this Report.

The selected consolidated financial information presented below under the captions "Statements of Operations Data" and "Cash Flow Data" for the years ended December 31, 2016, 2015 and 2014 and the selected consolidated financial information presented below under the caption "Balance Sheet Data" as of December 31, 2016 and 2015 has been derived from our audited consolidated financial statements included elsewhere in this Report, which financial statements have been audited by Grant Thornton LLP, our independent registered public accounting firm. The selected consolidated financial information presented below under the captions "Statements of Operations Data" and "Cash Flow Data" for the years ended December 31, 2013 and 2012 and the selected consolidated financial information presented below under the caption "Balance Sheet Data" at December 31, 2014, 2013 and 2012 is derived from our audited consolidated financial statements that are not included in this Report.

Year Ended December 31,

	2016	2015	2014	2013	2012
	(in millions, except per share data)				
Statements of Operations Data					
Net sales	\$ 4,782.4	\$ 5,432.5	\$ 9,109.5	\$ 8,985.8	\$ 8,567.3
Operating costs and expenses:					
Cost of materials and other	3,847.5	4,190.4	8,066.0	7,563.2	6,696.9
Direct operating expenses(1)	541.8	584.7	515.1	455.8	522.1
Depreciation and amortization	184.5	156.4	148.1	139.5	127.8
Cost of sales	4,573.8	4,931.5	8,729.2	8,158.5	7,346.8
Flood insurance recovery	—	(27.3)	—	—	—
Selling, general and administrative expenses(1)	109.1	99.0	109.7	113.5	183.4
Depreciation and amortization	8.6	7.7	6.3	3.3	2.2
Operating income	\$ 90.9	\$ 421.6	\$ 264.3	\$ 710.5	\$ 1,034.9
Interest expense and other financing costs	(83.9)	(48.4)	(40.0)	(50.5)	(75.4)
Interest income	0.7	1	0.9	1.2	0.9
Gain (loss) on derivatives, net	(19.4)	(28.6)	185.6	57.1	(285.6)
Loss on extinguishment of debt	(4.9)	—	—	(26.1)	(37.5)
Other income (expense), net	5.7	36.7	(3.7)	13.5	0.9
Income (loss) before income tax expense	\$ (10.9)	\$ 382.3	\$ 407.1	\$ 705.7	\$ 638.2
Income tax expense (benefit)	(19.8)	84.5	97.7	183.7	225.6
Net income	8.9	297.8	309.4	522.0	412.6
Less: Net income (loss) attributable to noncontrolling interest	(15.8)	128.2	135.5	151.3	34.0
Net income attributable to CVR Energy stockholders	\$ 24.7	\$ 169.6	\$ 173.9	\$ 370.7	\$ 378.6
Basic and Diluted earnings per share	\$ 0.28	\$ 1.95	\$ 2.00	\$ 4.27	\$ 4.36
Dividends declared per share	\$ 2.00	\$ 2.00	\$ 5.00	\$ 14.25	\$ —
Weighted-average common shares outstanding:					
Basic and Diluted	86.8	86.8	86.8	86.8	86.8

	Year Ended December 31,				
	2016	2015	2014	2013	2012
	(in millions)				
Balance Sheet Data					
Cash and cash equivalents	\$ 735.8	\$ 765.1	\$ 753.7	\$ 842.1	\$ 896.0
Working capital(2)	749.6	789.0	1,031.3	1,228.5	1,132.8
Total assets(2)	4,050.2	3,299.4	3,454.3	3,655.9	3,595.9
Total debt, including current portion(2) . .	1,164.6	667.1	666.7	666.3	883.2
Total CVR stockholders' equity	858.1	984.1	988.1	1,188.6	1,525.1
Cash Flow Data					
Net cash flow provided by (used in):					
Operating activities	\$ 267.5	\$ 536.8	\$ 640.3	\$ 440.1	\$ 762.6
Investing activities	(201.4)	(150.6)	(296.6)	(250.3)	(210.7)
Financing activities	(95.4)	(374.8)	(432.1)	(243.7)	(44.2)
Net cash flow	<u>\$ (29.3)</u>	<u>\$ 11.4</u>	<u>\$ (88.4)</u>	<u>\$ (53.9)</u>	<u>\$ 507.7</u>
Capital expenditures for property, plant and equipment	\$ 132.7	\$ 218.7	\$ 218.4	\$ 256.5	\$ 212.2

(1) Amounts are shown exclusive of depreciation and amortization.

(2) Prior period amounts have been retrospectively adjusted for Accounting Standard Update No. 2015-03, which requires that costs incurred to issue debt be presented in the balance sheet as a direct reduction from the carrying value of the debt.

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

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with our consolidated financial statements and related notes included elsewhere in this Report.

Forward-Looking Statements

This Report, including, without limitation, the sections captioned "Business" and "Management's Discussion and Analysis of Financial Condition and Results of Operations," contains "forward-looking statements" as defined by the SEC, including statements concerning contemplated transactions and strategic plans, expectations and objectives for future operations. Forward-looking statements include, without limitation:

- statements, other than statements of historical fact, that address activities, events or developments that we expect, believe or anticipate will or may occur in the future;
- statements relating to future financial or operational performance, future dividends, future capital sources and capital expenditures; and
- any other statements preceded by, followed by or that include the words "anticipates," "believes," "expects," "plans," "intends," "estimates," "projects," "could," "should," "may," or similar expressions.

Although we believe that our plans, intentions and expectations reflected in or suggested by the forward-looking statements we make in this Report, including this Management's Discussion and Analysis of Financial Condition and Results of Operations, are reasonable, we can give no assurance that such plans, intentions or expectations will be achieved. These statements are based on assumptions made by us based on our experience and perception of historical trends, current conditions, expected future developments and other factors that we believe are appropriate in the circumstances. Such statements are subject to a number of risks and uncertainties, many of which are beyond our control. You are cautioned that any such statements are not guarantees of future performance and that actual results or developments may differ materially from those projected in the forward-looking statements as a result of various factors, including but not limited to those set forth under the section captioned "Risk Factors" and contained elsewhere in this Report. Such factors include, among others:

- volatile margins in the refining industry and exposure to the risks associated with volatile crude oil prices;
- the availability of adequate cash and other sources of liquidity for the capital needs of our businesses;
- the ability to forecast future financial condition or results of operations and future revenues and expenses of our businesses;
- the effects of transactions involving forward and derivative instruments;
- disruption of the petroleum business' ability to obtain an adequate supply of crude oil;
- changes in laws, regulations and policies with respect to the export of crude oil or other hydrocarbons;
- interruption of the pipelines supplying feedstock and in the distribution of the petroleum business' products;
- competition in the petroleum and nitrogen fertilizer businesses;
- capital expenditures and potential liabilities arising from environmental laws and regulations;
- changes in ours or the Refining Partnership's or Nitrogen Fertilizer Partnership's credit profile;

- the cyclical nature of the nitrogen fertilizer business;
- the seasonal nature of the petroleum business;
- the supply and price levels of essential raw materials of our businesses;
- the risk of a material decline in production at our refineries and nitrogen fertilizer plants;
- potential operating hazards from accidents, fire, severe weather, floods or other natural disasters;
- the risk associated with governmental policies affecting the agricultural industry;
- the volatile nature of ammonia, potential liability for accidents involving ammonia that cause interruption to the nitrogen fertilizer business, severe damage to property and/or injury to the environment and human health and potential increased costs relating to the transport of ammonia;
- the dependence of the nitrogen fertilizer business on a few third-party suppliers, including providers of transportation services and equipment;
- new regulations concerning the transportation of hazardous chemicals, risks of terrorism and the security of chemical manufacturing facilities;
- the risk of security breaches;
- the petroleum business' and the nitrogen fertilizer business' dependence on significant customers;
- the potential loss of the nitrogen fertilizer business' transportation cost advantage over its competitors;
- the potential inability to successfully implement our business strategies, including the completion of significant capital programs;
- our ability to continue to license the technology used in the petroleum business and nitrogen fertilizer business operations;
- our petroleum business' ability to purchase RINs on a timely and cost effective basis;
- our petroleum business' continued ability to secure environmental and other governmental permits necessary for the operation of its business;
- existing and proposed environmental laws and regulations, including those relating to climate change, alternative energy or fuel sources, and existing and future regulations related to the end-use and application of fertilizers;
- refinery and nitrogen fertilizer facilities' operating hazards and interruptions, including unscheduled maintenance or downtime, and the availability of adequate insurance coverage;
- instability and volatility in the capital and credit markets; and
- potential exposure to underfunded pension obligations of affiliates as a member of the controlled group of Mr. Icahn.

All forward-looking statements contained in this Report only speak as of the date of this Report. We undertake no obligation to publicly update or revise any forward-looking statements to reflect events or circumstances that

occur after the date of this Report, or to reflect the occurrence of unanticipated events, except to the extent required by law.

Overview and Executive Summary

We are a diversified holding company primarily engaged in the petroleum refining and nitrogen fertilizer manufacturing industries through our holdings in the Refining Partnership and the Nitrogen Fertilizer Partnership. The Refining Partnership is an independent petroleum refiner and marketer of high value transportation fuels. The Nitrogen Fertilizer Partnership produces nitrogen fertilizers in the form of UAN and ammonia. We own the general partner and approximately 66% and 34%, respectively, of the outstanding common units representing limited partner interests in each of the Refining Partnership and the Nitrogen Fertilizer Partnership.

We operate under two business segments: petroleum and nitrogen fertilizer. For the fiscal years ended December 31, 2016, 2015 and 2014, we generated consolidated net sales of \$4.8 billion, \$5.4 billion and \$9.1 billion, respectively, and operating income of \$90.9 million, \$421.6 million and \$264.3 million, respectively. The petroleum business generated net sales of \$4.4 billion, \$5.2 billion and \$8.8 billion, and the nitrogen fertilizer business generated net sales of \$356.3 million, \$289.2 million and \$298.7 million, in each case, for the years ended December 31, 2016, 2015 and 2014, respectively. The petroleum business generated operating income of \$77.8 million, \$361.7 million and \$207.2 million for the years ended December 31, 2016, 2015 and 2014, respectively. The nitrogen fertilizer business generated operating income of \$26.8 million, \$68.7 million and \$82.8 million for the years ended December 31, 2016, 2015 and 2014, respectively.

Refer to Part I, Item 1, Business, of this Report for a detailed discussion of our business and the petroleum and nitrogen fertilizer segments.

East Dubuque Merger

On April 1, 2016, the Nitrogen Fertilizer Partnership completed the East Dubuque Merger as contemplated by the Agreement and Plan of Merger, dated as of August 9, 2015 (the "Merger Agreement"), whereby the Nitrogen Fertilizer Partnership acquired CVR Nitrogen and CVR Nitrogen GP. Pursuant to the East Dubuque Merger, the Nitrogen Fertilizer Partnership acquired the East Dubuque Facility. The primary reasons for the East Dubuque Merger were to expand the Nitrogen Fertilizer Partnership's geographical footprint, diversify its raw material feedstocks, widen its customer reach and increase its potential for cash-flow generation. In accordance with accounting principles generally accepted in the United States and in accordance with the Financial Accounting Standards Board's Accounting Standards Codification Topic 805 - Business Combinations, the Nitrogen Fertilizer Partnership accounted for the East Dubuque Merger as an acquisition of a business with the Nitrogen Fertilizer Partnership as the acquirer. Refer to Part II, Item 8, Note 3 ("Acquisition") of this Report for further discussion of the East Dubuque Merger.

Refining Partnership Initial Public Offering

On January 23, 2013, the Refining Partnership completed the Refining Partnership IPO. The Refining Partnership sold 24,000,000 common units at a price of \$25.00 per unit, resulting in gross proceeds of \$600.0 million. Of the common units issued, 4,000,000 units were purchased by an affiliate of Icahn Enterprises L.P. ("IEP"). Additionally, on January 30, 2013, the underwriters closed their option to purchase an additional 3,600,000 common units at a price of \$25.00 per unit resulting in gross proceeds of \$90.0 million. The common units, which are listed on the NYSE, began trading on January 17, 2013 under the symbol "CVRR." In connection with the Refining Partnership IPO, the Refining Partnership paid approximately \$32.5 million in underwriting fees and incurred approximately \$3.9 million of other offering costs.

Prior to the Refining Partnership IPO, CVR owned 100% of the Refining Partnership and net income earned during this period was fully attributable to the Company. Immediately following the Refining Partnership IPO and through May 19, 2013, CVR Energy indirectly owned approximately 81% of the Refining Partnership's outstanding

common units and 100% of the Refining Partnership's general partner, which holds a non-economic general partner interest.

Refining Partnership Underwritten Offering

On May 20, 2013, the Refining Partnership completed the Underwritten Offering by selling 12,000,000 common units to the public at a price of \$30.75 per unit. American Entertainment Properties Corporation ("AEPC"), an affiliate of IEP, also purchased an additional 2,000,000 common units at the public offering price in a privately negotiated transaction with a subsidiary of CVR Energy, which was completed on May 29, 2013. In connection with the Underwritten Offering, on June 10, 2013, the Refining Partnership sold an additional 1,209,236 common units to the public at a price of \$30.75 per unit in connection with the exercise by the underwriters of their option to purchase additional common units. The transactions described in this paragraph are collectively referred to as the "Transactions."

The Refining Partnership utilized net proceeds of approximately \$394.0 million from the Underwritten Offering (including the underwriters' option) to redeem 13,209,236 common units from CVR Refining Holdings, LLC ("CVR Refining Holdings"), an indirect wholly-owned subsidiary of CVR Energy. The net proceeds to a subsidiary of CVR Energy from the sale of 2,000,000 common units to AEPC were approximately \$61.5 million. The Refining Partnership did not receive any of the proceeds from the sale of common units by CVR Energy to AEPC.

Immediately following the closing of the Transactions and prior to June 30, 2014, public security holders held approximately 29% of total Refining Partnership common units (including units owned by affiliates of IEP, representing approximately 4% of total Refining Partnership common units), and CVR Refining Holdings held approximately 71% of total Refining Partnership common units.

Refining Partnership Second Underwritten Offering

On June 30, 2014, the Refining Partnership completed a second underwritten offering (the "Second Underwritten Offering") by selling 6,500,000 common units to the public at a price of \$26.07 per unit. The Refining Partnership paid approximately \$5.3 million in underwriting fees and approximately \$0.5 million in offering costs. The Refining Partnership utilized net proceeds of approximately \$164.1 million from the Second Underwritten Offering to redeem 6,500,000 common units from CVR Refining Holdings. Immediately subsequent to the closing of the Second Underwritten Offering and through July 23, 2014, public security holders held approximately 33% of the total Refining Partnership common units, and CVR Refining Holdings held approximately 67% of the total Refining Partnership common units.

On July 24, 2014, the Refining Partnership sold an additional 589,100 common units to the public at a price of \$26.07 per unit in connection with the underwriters' exercise of their option to purchase additional common units. The Refining Partnership utilized net proceeds of approximately \$14.9 million from the underwriters' exercise of their option to purchase additional common units to redeem an equal amount of common units from CVR Refining Holdings. Additionally, on July 24, 2014, CVR Refining Holdings sold 385,900 common units to the public at a price of \$26.07 per unit in connection with the underwriters' exercise of their remaining option to purchase additional common units. CVR Refining Holdings received net proceeds of \$9.7 million.

IEP Sale of Refining Partnership Units

On August 2, 2016, an affiliate of IEP sold 250,000 common units of Refining Partnership. As a result of this transaction, CVR Refining GP and its affiliates collectively own 69.99% of Refining Partnership's outstanding common units. Pursuant to the Refining Partnership's agreement, in certain circumstances, CVR Refining GP has the right to purchase all, but not less than all, of Refining Partnership common units held by unaffiliated unit holders at a price not less than their then-current market price, as calculated pursuant to the terms of such partnership agreement (the "Call Right"). Pursuant to the terms of the partnership agreement, because CVR Refining GP and its affiliates' holdings were reduced to less than 70.0% of Refining Partnership's outstanding common units, the ownership threshold for the application of such Call Right was permanently reduced from 95% to 80%. Accordingly,

if at any time CVR Refining GP and its affiliates own more than 80% of Refining Partnership common units, it will have the right, but not the obligation, to exercise such Call Right.

As of December 31, 2016, public security holders held approximately 34% of all outstanding limited partner interests of the Refining Partnership (including common units owned by affiliates of IEP, representing approximately 3.9% of all outstanding limited partner interests), and CVR Refining Holdings held approximately 66% of all outstanding limited partner interests of the Refining Partnership. In addition, CVR Refining Holdings owns 100% of the Refining Partnership's general partner, CVR Refining GP, which holds a non-economic general partner interest.

Nitrogen Fertilizer Partnership Secondary Offering

On May 28, 2013, Coffeyville Resources, LLC ("CRLLC"), a wholly-owned subsidiary of CVR Energy, completed the Secondary Offering in which it sold 12,000,000 Nitrogen Fertilizer Partnership common units to the public at a price of \$25.15 per unit. The net proceeds to CRLLC from the Secondary Offering were approximately \$292.6 million, after deducting approximately \$9.2 million in underwriting discounts and commissions. The Nitrogen Fertilizer Partnership did not receive any of the proceeds from the sale of common units by CRLLC.

Immediately following the closing of the Secondary Offering and through March 31, 2016, public security holders held approximately 47% of total Nitrogen Fertilizer Partnership common units, and CRLLC held approximately 53% of total Nitrogen Fertilizer Partnership common units in addition to owning 100% of the Nitrogen Fertilizer Partnership's general partner.

Immediately following the closing of the East Dubuque Merger and as of December 31, 2016, public security holders held approximately 66% of total Nitrogen Fertilizer Partnership common units, and CRLLC held approximately 34% of total Nitrogen Fertilizer Partnership common units in addition to owning 100% of the Nitrogen Fertilizer Partnership's general partner.

Major Influences on Results of Operations

Petroleum Business

The earnings and cash flows of the petroleum business are primarily affected by the relationship between refined product prices and the prices for crude oil and other feedstocks that are processed and blended into refined products. The cost to acquire crude oil and other feedstocks and the price for which refined products are ultimately sold depend on factors beyond the petroleum business' control, including the supply of and demand for crude oil, as well as gasoline and other refined products which, in turn, depend on, among other factors, changes in domestic and foreign economies, weather conditions, domestic and foreign political affairs, production levels, the availability of imports, the marketing of competitive fuels and the extent of government regulation. Because the petroleum business applies FIFO accounting to value its inventory, crude oil price movements may impact net income in the short term because of changes in the value of its unhedged on-hand inventory. The effect of changes in crude oil prices on our results of operations is influenced by the rate at which the prices of refined products adjust to reflect these changes.

The prices of crude oil and other feedstocks and refined product prices are also affected by other factors, such as product pipeline capacity, local market conditions and the operating levels of competing refineries. Crude oil costs and the prices of refined products have historically been subject to wide fluctuations. Widespread expansion or upgrades of competitors' facilities, price volatility, international political and economic developments and other factors are likely to continue to play an important role in refining industry economics. These factors can impact, among other things, the level of inventories in the market, resulting in price volatility and a reduction in product margins. Moreover, the refining industry typically experiences seasonal fluctuations in demand for refined products, such as increases in the demand for gasoline during the summer driving season and for home heating oil during the winter, primarily in the Northeast. In addition to current market conditions, there are long-term factors that may impact the demand for refined products. These factors include mandated renewable fuels standards, proposed

climate change laws and regulations, and increased mileage standards for vehicles. The petroleum business is also subject to RFS, which requires it to either blend "renewable fuels" in with its transportation fuels or purchase RINs, in lieu of blending.

Refer to Part I, Item 1A, Risk Factors, *If sufficient RINs are unavailable for purchase, if the petroleum business has to pay a significantly higher price for RINs or if the petroleum business is otherwise unable to meet RFS mandates, the petroleum business' financial condition and results of operations could be materially adversely affected*, and Part II, Item 8, Note 14 ("Commitments and Contingencies"), "Environmental, Health and Safety ("EHS") Matters" of this Report for further discussion of RFS.

The cost of RINs for the years ended December 31, 2016, 2015 and 2014 was approximately \$205.9 million, \$123.9 million and \$127.2 million, respectively. The price of RINs has been extremely volatile and has increased over the last year. The future cost of RINs for the petroleum business is difficult to estimate. Additionally, the cost of RINs is dependent upon a variety of factors, which include EPA regulations, the availability of RINs for purchase, the price at which RINs can be purchased, transportation fuel production levels, the mix of the petroleum business' petroleum products, as well as the fuel blending performed at its refineries and downstream terminals, all of which can vary significantly from period to period.

In order to assess the operating performance of the petroleum business, we compare net sales, less cost of materials and other, or the refining margin, against an industry refining margin benchmark. The industry refining margin benchmark is calculated by assuming that two barrels of benchmark light sweet crude oil are converted into one barrel of conventional gasoline and one barrel of distillate. This benchmark is referred to as the 2-1-1 crack spread. Because we calculate the benchmark margin using the market value of NYMEX gasoline and heating oil against the market value of NYMEX WTI, we refer to the benchmark as the NYMEX 2-1-1 crack spread, or simply, the 2-1-1 crack spread. The 2-1-1 crack spread is expressed in dollars per barrel and is a proxy for the per barrel margin that a sweet crude oil refinery would earn assuming it produced and sold the benchmark production of gasoline and distillate.

Although the 2-1-1 crack spread is a benchmark for the refining margin, because the refineries have certain feedstock costs and logistical advantages as compared to a benchmark refinery and their product yield is less than total refinery throughput, the crack spread does not account for all the factors that affect refining margin. The Coffeyville refinery is able to process a blend of crude oil that includes quantities of heavy and medium sour crude oil that has historically cost less than WTI. The Wynnewood refinery has the capability to process blends of a variety of crude oil ranging from medium sour to light sweet crude oil, although isobutene, gasoline components, and normal butane are also typically used. We measure the cost advantage of the crude oil slate by calculating the spread between the price of the delivered crude oil and the price of WTI. The spread is referred to as the consumed crude oil differential. The refining margin can be impacted significantly by the consumed crude oil differential. The consumed crude oil differential will move directionally with changes in the WTS differential to WTI and the WCS differential to WTI as both these differentials indicate the relative price of heavier, more sour, slate to WTI. The correlation between the consumed crude oil differential and published differentials will vary depending on the volume of light medium sour crude oil and heavy sour crude oil the petroleum business purchases as a percent of its total crude oil volume and will correlate more closely with such published differentials the heavier and more sour the crude oil slate. The consumed crude oil cost discount to WTI for 2016 was \$1.58 per barrel compared to consumed crude oil cost discounts of \$1.12 per barrel in 2015 and \$0.54 per barrel in 2014.

The petroleum business produces a high volume of high value products, such as gasoline and distillates. The fact that the actual product specifications used to determine the NYMEX 2-1-1 crack spread are different from the actual production in its refineries is because the prices the petroleum business realizes are different than those used in determining the 2-1-1 crack spread. The difference between its price and the price used to calculate the 2-1-1 crack spread is referred to as gasoline PADD II, Group 3 vs. NYMEX basis, or gasoline basis, and Ultra-Low Sulfur Diesel PADD II, Group 3 vs. NYMEX basis, or Ultra-Low Sulfur Diesel basis. If both gasoline and Ultra-Low Sulfur Diesel basis are greater than zero, this means that prices in its marketing area exceed those used in the 2-1-1 crack spread.

The petroleum business is significantly affected by developments in the markets in which it operates. For example, numerous pipeline expansions in recent years expanding the connectivity of Cushing and Permian Basin markets to the gulf coast, along with lifting the crude oil export ban has resulted in a decrease in the domestic crude advantage. The refining industry is directly impacted by these events and could see a downward movement in refining margins as a result.

The direct operating expense structure is also important to the petroleum business' profitability. Major direct operating expenses include energy, employee labor, maintenance, contract labor, and environmental compliance. The predominant variable cost is energy, which is comprised primarily of electrical cost and natural gas. The petroleum business is therefore sensitive to the movements of natural gas prices. Assuming the same rate of consumption of natural gas for the year ended December 31, 2016, a \$1.00 change in natural gas prices would have increased or decreased the petroleum business' natural gas costs by approximately \$11.7 million.

Because crude oil and other feedstocks and refined products are commodities, the petroleum business has no control over the changing market. Therefore, the lower target inventory it is able to maintain significantly reduces the impact of commodity price volatility on its petroleum product inventory position relative to other refiners. This target inventory position is generally not hedged. To the extent its inventory position deviates from the target level, the petroleum business considers risk mitigation activities usually through the purchase or sale of futures contracts on the NYMEX. Its hedging activities carry customary time, location and product grade basis risks generally associated with hedging activities. Because most of its titled inventory is valued under the FIFO costing method, price fluctuations on its target level of titled inventory have a major effect on the petroleum business' financial results.

Safe and reliable operations at the refineries are key to the petroleum business' financial performance and results of operations. Unplanned downtime at the refineries may result in lost margin opportunity, increased maintenance expense and a temporary increase in working capital investment and related inventory position. The petroleum business seeks to mitigate the financial impact of planned downtime, such as major turnaround maintenance, through a diligent planning process that takes into account the margin environment, the availability of resources to perform the needed maintenance, feedstock logistics and other factors. The refineries generally require a facility turnaround every four to five years. The length of the turnaround is contingent upon the scope of work to be completed. During the outage at the Coffeyville refinery in the third quarter of 2014 as discussed further below, the petroleum business accelerated certain planned 2015 turnaround activities and incurred approximately \$5.5 million of turnaround expenses for the year ended December 31, 2014. The first phase of the Coffeyville refinery's most recent turnaround was completed in mid-November 2015 at a total cost of approximately \$102.2 million. The second phase of the Coffeyville turnaround was completed during the first quarter of 2016 and we incurred \$31.5 million of major scheduled turnaround expenses for the Coffeyville turnaround during 2016. During the outage at the Wynnewood refinery in the fourth quarter of 2014 as discussed further below, we accelerated certain planned turnaround activities and incurred approximately \$1.3 million in turnaround expenses for the year ended December 31, 2014. The next turnaround scheduled for the Wynnewood refinery will be performed as a two-phase turnaround. The first phase is scheduled to begin in the second half of 2017, with the second phase to begin in the second half of 2018. Turnaround expenses associated with the first and second phase of the Wynnewood turnaround are estimated to be approximately \$80.0 million to \$100.0 million. Additionally, we expect to accelerate certain planned turnaround activities in the first quarter of 2017 on the hydrocracker unit for a catalyst change-out. Turnaround expenses associated with the hydrocracker are estimated to be approximately \$15.0 million.

On July 29, 2014, the Coffeyville refinery experienced a fire at its isomerization unit. Four employees were injured in the fire, including one employee who was fatally injured. The fire was extinguished, and the refinery was subsequently shut down due to a failure of its plant-wide Distributed Control System, which was directly caused by the fire. The Coffeyville refinery returned to operations in mid-August, with all units except the isomerization unit in operation by August 23, 2014. The isomerization unit started operating on October 12, 2014. This interruption adversely impacted production of refined products for the petroleum business in the third quarter of 2014. Total gross repair and other costs recorded related to the incident for the year ended December 31, 2014 were approximately \$6.3 million.

The Refining Partnership is covered by property damage insurance policies at the time of the incident, which had an associated deductible of \$5.0 million for the Coffeyville refinery. The Refining Partnership anticipates amounts in excess of the \$5.0 million deductible related to the isomerization unit fire incident will be recoverable under the property insurance policies. The Consolidated Balance Sheets as of December 31, 2015 and 2014 included an insurance receivable related to prior year claims of approximately \$1.2 million and \$1.3 million, respectively, included in prepaid expenses and other current assets. The recording of the receivable resulted in a reduction of direct operating expenses (exclusive of depreciation and amortization). The Partnership received the \$1.2 million of insurance proceeds during the first quarter of 2016.

During the fourth quarter of 2014, the FCCU at the Wynnewood refinery was offline for approximately 16 days for necessary repairs. As a result of the FCCU outage, crude throughput and production at the Wynnewood refinery was significantly reduced. Additionally, the Refining Partnership incurred approximately \$8.5 million in costs to repair the FCCU for the year ended December 31, 2014, which were included in direct operating expenses (exclusive of depreciation and amortization) in the Consolidated Statements of Operations.

Nitrogen Fertilizer Business

In the nitrogen fertilizer business, earnings and cash flows from operations are primarily affected by the relationship between nitrogen fertilizer product prices, on-stream factors and operating expenses. The price at which nitrogen fertilizer products are ultimately sold depends on numerous factors, including the global supply and demand for nitrogen fertilizer products which, in turn, depends on, among other factors, world grain demand and production levels, changes in world population, the cost and availability of fertilizer transportation infrastructure, weather conditions, the availability of imports, and the extent of government intervention in agriculture markets.

Nitrogen fertilizer prices are also affected by local factors, including local market conditions and the operating levels of competing facilities. An expansion or upgrade of competitors' facilities, new facility development, political and economic developments and other factors are likely to continue to play an important role in nitrogen fertilizer industry economics. These factors can impact, among other things, the level of inventories in the market, resulting in price volatility and a reduction in product margins. Moreover, the industry typically experiences seasonal fluctuations in demand for nitrogen fertilizer products.

As a result of a favorable global demand environment for grains, nitrogen fertilizer prices rose to near historic levels beginning in 2011. In addition, North American producers began to benefit from lower natural gas prices due to the significant increase in shale basin and other non-conventional production in the region. The combination of higher nitrogen fertilizer prices globally and a feedstock cost advantage led to high margins for North American nitrogen fertilizer producers. This resulted in numerous announcements for expansion plans for existing plants as well as new facility development in the corn belt and the gulf coast. The substantial majority of the additional supply from this expansion phase in North America is projected to come online in early 2017. The nitrogen fertilizer business expects product pricing may experience volatility as the new supply displaces imports into the U.S.. However, over the longer-term the U.S. is expected to remain a net importer of nitrogen fertilizer with domestic prices influenced by the higher cost of imported tons into the U.S.

Since mid-2013, global nitrogen fertilizer prices have trended down as global grain supply increased and growth in grain demand slowed due to more challenging worldwide economic considerations. There have been announced transactions for further consolidation in the North American nitrogen fertilizer market.

While there is risk of shorter-term volatility given the inherent nature of the commodity cycle, the longer-term fundamentals for the U.S. nitrogen fertilizer industry remain intact. The nitrogen fertilizer business views the anticipated combination of (i) increasing global population, (ii) decreasing arable land per capita, (iii) continued evolution to more protein-based diets in developing countries, (iv) sustained use of corn as feedstock for the domestic production of ethanol and (v) positioning at the lower end of the global cost curve will continue to provide a solid foundation for nitrogen fertilizer producers in the U.S.

In order to assess the operating performance of the nitrogen fertilizer business, the nitrogen fertilizer business calculates the product pricing at gate as an input to determine its operating margin. Product pricing at gate represents net sales less freight revenue divided by product sales volume in tons. The nitrogen fertilizer business believes product pricing at gate is a meaningful measure because it sells products at its plant gate and terminal locations' gates ("sold gate") and delivered to the customer's designated delivery site ("sold delivered"). The relative percentage of sold gate versus sold delivered can change period to period. The product pricing at gate provides a measure that is consistently comparable period to period.

The nitrogen fertilizer business and other competitors in the U.S. farm belt share a significant transportation cost advantage when compared to out-of-region competitors in serving the U.S. farm belt agricultural market; therefore, the nitrogen fertilizer business is able to cost-effectively sell substantially all of its products in the higher margin agricultural market. Further, the nitrogen fertilizer business believes that a significant portion of many of its competitors' revenues are derived from the lower margin industrial market.

The nitrogen fertilizer business' products leave the Coffeyville Fertilizer Facility either in railcars for destinations located principally on the Union Pacific Railroad or in trucks for direct shipment to customers. The nitrogen fertilizer business does not currently incur significant intermediate transfer, storage, barge freight or pipeline freight charges; however, it does incur costs to maintain and repair its railcar fleet. Selling products to customers within economic rail transportation limits of the nitrogen fertilizer plant and keeping transportation costs low are keys to maintaining profitability.

The East Dubuque Facility is located in northwest Illinois, in the corn belt. The East Dubuque Facility primarily sells its product to customers located within 200 miles of the facility. In most instances, customers take delivery of nitrogen products at the plant and arrange and pay to transport them to their final destinations by truck. The East Dubuque Facility has direct access to a barge dock on the Mississippi River as well as a nearby rail spur serviced by the Canadian National Railway Company.

The nitrogen fertilizer business upgrades substantially all of its ammonia production at the Coffeyville Fertilizer Facility into UAN and will continue to do so for as long as it makes economic sense. For the years ended December 31, 2016, 2015 and 2014, the nitrogen fertilizer business upgraded approximately 93%, 96% and 97%, respectively, of its ammonia production into UAN, a product that presently generates greater profit than ammonia. The East Dubuque Facility has the flexibility to significantly vary its product mix. This enables us to upgrade our ammonia production into varying amounts of UAN, nitric acid and liquid and granulated urea each season, depending on market demand, pricing and storage availability. Product sales at our East Dubuque Facility are heavily weighted toward sales of ammonia and UAN. For the post acquisition period ended December 31, 2016, approximately 44% of our East Dubuque Facility produced ammonia tons were upgraded to other products.

The high fixed cost of the Coffeyville Fertilizer Facility is direct operating expense structure also directly affects its profitability. Using a pet coke gasification process, the Coffeyville Fertilizer Facility has a significantly higher percentage of fixed costs than a natural gas-based fertilizer plant. In addition, while less than our Coffeyville Fertilizer Facility, our East Dubuque Facility has a significant amount of fixed costs. Major fixed operating expenses include a large portion of electrical energy, employee labor, maintenance, including contract labor, and outside services. The nitrogen fertilizer business estimates fixed costs averaged approximately 80% of direct operating expenses at our Coffeyville Fertilizer Facility over the 24 months ended December 31, 2016.

The nitrogen fertilizer business' largest raw material expense used in the production of ammonia at our Coffeyville Fertilizer Facility is pet coke, which it purchases from the petroleum business and third parties. For the years ended December 31, 2016, 2015 and 2014, the nitrogen fertilizer business incurred approximately \$7.8 million, \$11.9 million and \$13.6 million, respectively, for pet coke, which equaled an average cost per ton of \$15, \$25 and \$28, respectively.

Our largest raw material expense used in the production of ammonia at our East Dubuque Facility is natural gas, which we purchase from third parties. Our East Dubuque Facility's natural gas process results in a higher percentage of variable costs as compared to the Coffeyville Fertilizer Facility. For the year ended December 31, 2016, we incurred approximately \$13.3 million for feedstock natural gas, which equaled an average cost of \$2.87 per MMBtu.

Consistent, safe and reliable operations at the nitrogen fertilizer plants are critical to its financial performance and results of operations. Unplanned downtime of the nitrogen fertilizer plants may result in lost margin opportunity, increased maintenance expense and a temporary increase in working capital investment and related inventory position. The financial impact of planned downtime, such as major turnaround maintenance, is mitigated through a diligent planning process that takes into account margin environment, the availability of resources to perform the needed maintenance, feedstock logistics and other factors.

Historically, the Coffeyville Fertilizer Facility has undergone a full facility turnaround approximately every two to three years. The Coffeyville Fertilizer Facility underwent a full facility turnaround in the third quarter of 2015, and the gasifier, ammonia and UAN units were down for between 17 to 20 days each at a cost, exclusive of the impacts due to the lost production during the downtime, of approximately \$7.0 million for the year ended December 31, 2015. The Coffeyville Fertilizer Facility is planning to undergo the next scheduled full facility turnaround in the second half of 2017, which is expected to last approximately 15 days.

Historically, the East Dubuque Facility has also undergone a full facility turnaround every two to three years. The East Dubuque Facility underwent a full facility turnaround in the second quarter of 2016, at a cost of approximately \$6.6 million, exclusive of the impacts due to the lost production during the downtime.

Agreements With the Refining Partnership and the Nitrogen Fertilizer Partnership

We are party to several agreements with the Nitrogen Fertilizer Partnership that govern the business relations among the Nitrogen Fertilizer Partnership and its affiliates on the one hand and us and our other affiliates on the other hand. In connection with the Refining Partnership IPO in January 2013, some of our subsidiaries party to these agreements became subsidiaries of the Refining Partnership.

These intercompany agreements include (i) the pet coke supply agreement mentioned above, under which the petroleum business sells pet coke to the nitrogen fertilizer business; (ii) a services agreement, pursuant to which we provide certain services to the nitrogen fertilizer business; (iii) a feedstock and shared services agreement, which governs the provision of feedstocks, including, but not limited to, hydrogen, high-pressure steam, nitrogen, instrument air, oxygen and natural gas; (iv) a raw water and facilities sharing agreement, which allocates raw water resources between the two businesses; (v) an easement agreement; (vi) an environmental agreement; and (vii) a lease agreement pursuant to which the petroleum business leases office space and laboratory space to the Nitrogen Fertilizer Partnership. These agreements were not the result of arm's-length negotiations and the terms of these agreements are not necessarily at least as favorable to the parties to these agreements as terms which could have been obtained from unaffiliated third parties.

In connection with the Refining Partnership IPO, we entered into a number of agreements with the Refining Partnership, including (i) a \$250.0 million intercompany credit facility between CRLLC and the Refining Partnership and (ii) a services agreement, pursuant to which we provide certain services to the petroleum business.

On February 9, 2016, CRLLC and the Nitrogen Fertilizer Partnership entered into a guaranty, pursuant to which CRLLC agreed to guaranty the indebtedness outstanding under the Nitrogen Fertilizer Partnership's credit facility. Simultaneously with the execution of the Merger Agreement discussed in Part II, Item 8, Note 1 ("Organization and History of the Company") of this Report, the Nitrogen Fertilizer Partnership entered into a commitment letter (the "commitment letter") with CRLLC and a \$300.0 million senior term loan credit facility (the "CRLLC Facility") with CRLLC. Refer to Part II, Item 7, "Liquidity and Capital Resources" of this Report for further discussion of the CRLLC Facility.

Crude Oil Supply Agreement

On August 31, 2012, CRRM and Vitol entered into the Vitol Agreement. Under the Vitol Agreement, Vitol supplies the petroleum business with crude oil and intermediation logistics, which helps the petroleum business to reduce its inventory position and mitigate crude oil pricing risk. The Vitol Agreement will automatically renew for successive one-year terms (each such term, a "Renewal Term") unless either party provides the other with notice of nonrenewal at least 180 days prior to expiration of any Renewal Term. The Vitol Agreement currently extends through December 31, 2017.

Joint Venture with Velocity

On September 19, 2016, CRPLLC, an indirect wholly-owned subsidiary of the Refining Partnership, entered into an agreement with Velocity related to their joint ownership of VPP. VPP will construct, own and operate a 12-inch crude oil pipeline with design capacity of approximately 65,000 barrel per day and with an estimated length of 25 miles with a connection to the Refining Partnership's Wynnewood refinery and a trucking terminal at Lowrance, Oklahoma. CRPLLC holds a 40% interest in VPP and expects to contribute approximately \$9.3 million to VPP during the pipeline construction, which is expected to be completed in the second quarter of 2017. Velocity holds a 60% interest in VPP, serves as the day-to-day operator of VPP and expects to contribute approximately \$14.0 million. As of December 31, 2016, CRPLLC has contributed \$5.6 million to VPP. On September 19, 2016, the Refining Partnership also entered into a transportation agreement with VPP for an initial term of 20 years under which VPP will provide the Refining Partnership with crude oil transportation services for crude oil purchased within a defined geographic area, and the Refining Partnership entered into a terminalling services agreement with Velocity under which the Refining Partnership will receive access to Velocity's terminal in Lowrance, OK to unload and pump crude oil into VPP's pipeline for an initial term of 20 years.

Factors Affecting Comparability

Our historical results of operations for the periods presented may not be comparable with prior periods or to our results of operations in the future for the reasons presented and discussed below.

	Year Ended December 31,		
	2016	2015	2014
	(in millions)		
Loss on extinguishment of debt(1)	\$ 4.9	\$ —	\$ —
(Gain) loss on derivatives, net	19.4	28.6	(185.6)
Major scheduled turnaround expenses(2)	38.1	109.2	6.8
Flood insurance recovery(3)	—	(27.3)	—

- (1) Represents a loss on extinguishment of debt incurred by CVR Partners in June 2016 in connection with the repurchase of senior notes assumed in the East Dubuque Merger, which includes a prepayment premium and write-off of the unamortized purchase accounting adjustment.
- (2) Represents expense associated with major scheduled turnaround activities performed at the Coffeyville refinery (\$31.5 million in 2016, \$102.2 million in 2015 and \$5.5 million in 2014), the Wynnewood refinery (1.3 million in 2014), the East Dubuque Facility (\$6.6 million in 2016) and the Coffeyville nitrogen fertilizer facility (\$7.0 million in 2015).
- (3) Represents an insurance recovery from environmental insurance carriers as a result of the flood and crude oil discharge at the Coffeyville refinery on June/July 2007. Refer to Part II, Item 8, Note 14 ("Commitments and Contingencies") of this Report for further details.

Noncontrolling Interest

Prior to the Refining Partnership IPO on January 23, 2013, the noncontrolling interest reflected in our consolidated financial statements represented the approximately 30% interest in the Nitrogen Fertilizer Partnership held by public common unitholders. The non-controlling interest reflected on our Consolidated Balance Sheets is impacted by the net income of, and distributions from, the Nitrogen Fertilizer Partnership and Refining Partnership.

As a result of the Refining Partnership IPO on May 20, 2013, CVR Energy recorded an additional noncontrolling interest for the Refining Partnership common units sold to the public, which represented an approximately 19% interest of the Refining Partnership.

As a result of the Refining Partnership's closing of the Underwritten Offering, the noncontrolling interest related to the Refining Partnership reflected in our consolidated financial statements subsequent to the completion of the offering in the second quarter of 2013 and prior to June 30, 2014 was approximately 29%.

Upon completion of the Second Underwritten Offering on June 30, 2014 and upon exercise of the underwriters' option associated with the Second Underwritten Offering on July 24, 2014, the non-controlling interest reflected in our consolidated financial statements was approximately 34%.

Additionally, as a result of the Nitrogen Fertilizer Partnership's Secondary Offering, the noncontrolling interest related to the Nitrogen Fertilizer Partnership reflected in our consolidated financial statements subsequent to the completion of the Secondary Offering on May 28, 2013 and through March 31, 2016 was approximately 47%.

Immediately following the closing of the East Dubuque Merger and as of December 31, 2016, the noncontrolling interest related to the Nitrogen Fertilizer Partnership reflected in our consolidated financial statements is approximately 66%.

The revenue and expenses from the Refining Partnership and Nitrogen Fertilizer Partnership are consolidated with CVR Energy's Consolidated Statements of Operations because each of the general partners is owned by CVR Refining Holdings and CRLLC, respectively, wholly-owned subsidiaries of CVR Energy. Therefore, CVR Energy has the ability to control the activities of the Refining Partnership and Nitrogen Fertilizer Partnership. However, the percentage of ownership held by the public unitholders for the Refining Partnership and the Nitrogen Fertilizer Partnership is reflected as net income attributable to noncontrolling interest in our Consolidated Statements of Operations and reduces consolidated net income to derive net income attributable to CVR Energy.

Distributions to CVR Partners Unitholders

Refer to Part II, Item 5, "CVR Partners, LP Cash Distribution Policy," of this Report for a summary of CVR Partners' distribution policy and the cash distributions paid to the Nitrogen Fertilizer Partnership unitholders during the years ended December 31, 2016 and 2015.

Distributions to CVR Refining Unitholders

Refer to Part II, Item 5, "CVR Refining, LP Cash Distribution Policy," of this Report for a summary of CVR Refining's distribution policy and the cash distributions paid to the Refining Partnership unitholders during the years ended December 31, 2016 and 2015.

CVR Energy Dividends

Refer to Part II, Item 5, "CVR Energy, Inc. Dividend Policy," of this Report for a summary of our dividend policy and the cash dividends paid to our stockholders during the years ended December 31, 2016 and 2015.

Industry Factors

Petroleum Business

Earnings for the petroleum business depend largely on its refining margins, which have been and continue to be volatile. Refining margins are impacted primarily by the relationship or spread between crude oil and refined product prices. The petroleum business' refineries reside in the Group 3 marketing region and are supplied with advantaged domestic and Canadian crudes.

Crude oil discounts are a major contributor to the petroleum business earnings. Canadian heavy sour crude oil production continues to grow and with limited export capacity provides an advantaged crude to the mid-continent refiners. As a result of an expansion project, the petroleum business increased its ability to process higher volumes of heavy sour crude oil and take advantage of this opportunity.

Additionally, the relationship between current spot prices and future prices can impact profitability. As such, the petroleum business believes that its approximately 6.4 million barrels of crude oil storage in Cushing, Oklahoma and other locations allows it to take advantage of the contango market when such conditions exist. Contango markets are generally characterized by prices for future delivery that are higher than the current, or spot, price of a commodity. This condition provides economic incentive to hold or carry a commodity in inventory.

Nitrogen Fertilizer Business

Nutrients are depleted in soil over time and therefore must be replenished through fertilizer use. Nitrogen is the most quickly depleted nutrient and must be replenished every year, whereas phosphate and potassium can be retained in soil for up to three years. Plants require nitrogen in the largest amounts and it accounts for approximately 61% of primary fertilizer consumption on a nutrient ton basis, per the International Fertilizer Industry Association.

Global demand for fertilizers is driven primarily by grain demand and prices, which, in turn, are driven by population growth, farmland per capita, dietary changes in the developing world and increased consumption of bio-fuels. According to the International Fertilizer Industry Association, from 1974 to 2014, global fertilizer demand grew 2.1% annually. Global fertilizer use, consisting of nitrogen, phosphate and potassium, is projected to increase by 34% between 2010 and 2030 to meet global food demand according to a study funded by the Food and Agricultural Organization of the United Nations. Currently, the developed world uses fertilizer more intensively than the developing world, but sustained economic growth in emerging markets is increasing food demand and fertilizer use. In addition, populations in developing countries are shifting to more protein-rich diets as their incomes increase, with such consumption requiring more grain for animal feed. As an example, China's wheat and coarse grains production is estimated to have increased 48% between 2006 and 2016, but still failed to keep pace with increases in demand, prompting China to grow its wheat and coarse grain imports by more than 500% over the same period, according to the United States Department of Agriculture ("USDA").

The United States is the world's largest exporter of coarse grains, accounting for 32% of world exports and 29% of world production for the fiscal year ended September 30, 2016, according to the USDA. A substantial amount of nitrogen is consumed in production of these crops to increase yield. Based on Fertecon's 2016 estimates, the United States is the world's third largest consumer of nitrogen fertilizer and the world's second largest importer of nitrogen fertilizer. Fertecon estimates indicate that the United States represented 11% of total global nitrogen fertilizer consumption for 2016, with China and India as the top consumers representing 28% and 16% of total global nitrogen fertilizer consumption, respectively. Additionally, Fertecon estimates the United States represented 12% of total global nitrogen fertilizer imports for 2015, with India as the top importer representing 15% of total global nitrogen fertilizer imports.

North American nitrogen fertilizer producers predominantly use natural gas as their primary feedstocks. Over the last five years, U.S. oil and natural gas reserves have increased significantly due to, among other factors, advances in extracting shale oil and gas as well as relatively high oil and gas prices. More recently, global demand has slowed with production staying steady even as oil and gas prices have declined substantially over the past two

years. This has led to significantly reduced natural gas and oil prices as compared to historical prices. As a result, North America has become a low-cost region for nitrogen fertilizer production.

The three primary forms of nitrogen fertilizer used in the U.S. are ammonia, urea and UAN. Unlike ammonia and urea, UAN can be applied throughout the growing season and can be applied in tandem with pesticides and herbicides, providing farmers with flexibility and cost savings. As a result of these factors, UAN typically commands a premium price to urea and ammonia, on a nitrogen equivalent basis.

The decline of natural gas prices have led to existing and new producers considering construction of new or expanding existing nitrogen fertilizer production facilities. The substantial majority of the incremental fertilizer supply associated with the construction of the additional production facilities is expected to be online in early 2017. Once the increased production comes on-stream, Blue, Johnson & Associates, Inc. expects the United States will continue to require net imports into the United States to meet domestic demand for nitrogen fertilizers.

Results of Operations

In this "Results of Operations" section, we first review our business on a consolidated basis, and then separately review the results of operations of each of our petroleum and nitrogen fertilizer businesses on a standalone basis.

Consolidated Results of Operations

The period to period comparisons of our results of operations have been prepared using the historical periods included in our consolidated financial statements. This "Results of Operations" section compares the year ended December 31, 2016 with the year ended December 31, 2015 and the year ended December 31, 2015 with the year ended December 31, 2014.

Net sales consist principally of sales of refined fuel and nitrogen fertilizer products. For the petroleum business, net sales are mainly affected by crude oil and refined product prices, changes to the input mix and volume changes caused by operations. Product mix refers to the percentage of production represented by higher value light products, such as gasoline, rather than lower value finished products, such as pet coke. In the nitrogen fertilizer business, net sales are primarily impacted by manufactured tons and nitrogen fertilizer prices.

Industry-wide petroleum results are driven and measured by the relationship, or margin, between refined products and the prices for crude oil referred to as crack spreads. See " — Major Influences on Results of Operations." We discuss the results of the petroleum business in the context of per barrel consumed crack spreads and the relationship between net sales and cost of materials and other.

Our consolidated results of operations include certain other unallocated corporate activities and the elimination of intercompany transactions and therefore do not equal the sum of the operating results of the petroleum and nitrogen fertilizer businesses.

The following table provides an overview of our results of operations during the past three fiscal years:

	Year Ended December 31,		
	2016	2015	2014
	(in millions, except per share data)		
Statements of Operations Data			
Net sales	\$ 4,782.4	\$ 5,432.5	\$ 9,109.5
Operating costs and expenses:			
Cost of materials and other	3,847.5	4,190.4	8,066.0
Direct operating expenses(1)	541.8	584.7	515.1
Depreciation and amortization	184.5	156.4	148.1
Cost of sales	4,573.8	4,931.5	8,729.2
Flood insurance recovery	—	(27.3)	—
Selling, general and administrative expenses(1)	109.1	99.0	109.7
Depreciation and amortization	8.6	7.7	6.3
Operating income	90.9	421.6	264.3
Interest expense and other financing costs	(83.9)	(48.4)	(40.0)
Interest income	0.7	1.0	0.9
Gain (loss) on derivatives, net	(19.4)	(28.6)	185.6
Loss on extinguishment of debt	(4.9)	—	—
Other income (expense), net	5.7	36.7	(3.7)
Income (loss) before income tax expense	(10.9)	382.3	407.1
Income tax expense (benefit)	(19.8)	84.5	97.7
Net income	8.9	297.8	309.4
Less: Net income (loss) attributable to noncontrolling interest	(15.8)	128.2	135.5
Net income attributable to CVR Energy stockholders	\$ 24.7	\$ 169.6	\$ 173.9
Basic earnings per share	\$ 0.28	\$ 1.95	\$ 2.00
Diluted earnings per share	\$ 0.28	\$ 1.95	\$ 2.00
Dividends declared per share	\$ 2.00	\$ 2.00	\$ 5.00
Adjusted EBITDA(2)	\$ 181.6	\$ 498.8	\$ 473.5
Weighted-average common shares outstanding:			
Basic	86.8	86.8	86.8
Diluted	86.8	86.8	86.8

(1) Amounts are shown exclusive of depreciation and amortization.

- (2) EBITDA and Adjusted EBITDA. EBITDA represents net income attributable to CVR Energy stockholders before consolidated (i) interest expense and other financing costs, net of interest income, (ii) income tax expense (benefit) and (iii) depreciation and amortization, less the portion of these adjustments attributable to non-controlling interest. Adjusted EBITDA represents EBITDA adjusted for consolidated (i) FIFO impact (favorable) unfavorable, (ii) loss on extinguishment of debt, (iii) major scheduled turnaround expenses (that many of our competitors capitalize and thereby exclude from their measures of EBITDA and Adjusted EBITDA), (iv) gain (loss) on derivatives, net, (v) current period settlements on derivative contracts, (vi) flood insurance recovery, (vii) business interruption insurance recovery and (viii) transaction expenses associated with the East Dubuque Merger, less the portion of these adjustments attributable to non-controlling interest. EBITDA and Adjusted EBITDA are not recognized terms under GAAP and should not be substituted for net income or cash flow from operations. Management believes that EBITDA and Adjusted EBITDA enable investors to better understand and evaluate our ongoing operating results and allows for greater transparency in reviewing our overall financial, operational and economic performance. EBITDA and Adjusted EBITDA presented by other companies may not be comparable to our presentation, since each company may define these terms differently. EBITDA and Adjusted EBITDA represent EBITDA and Adjusted EBITDA that is attributable to CVR Energy stockholders.

EBITDA for the years ended December 31, 2015 and 2014 was also adjusted for share-based compensation expense in calculating Adjusted EBITDA. Beginning in 2016, share-based compensation expense is no longer utilized as an adjustment to derive Adjusted EBITDA as no equity-settled awards remain outstanding for CVR Energy or any of its subsidiaries, and CVR Partners and CVR Refining are responsible for reimbursing CVR Energy for their allocated portion of all outstanding awards. Management believes, based on the nature, classification and cash settlement feature of the currently outstanding awards, that it is no longer necessary to adjust EBITDA for share-based compensation expense to derive Adjusted EBITDA. For comparison purposes we have also provided Adjusted EBITDA for the years ended December 31, 2015 and 2014 without adjusting for share-based compensation expense in order to provide a comparison to Adjusted EBITDA for the quarter and year ended December 31, 2016.

Below is a reconciliation of net income to EBITDA and EBITDA to Adjusted EBITDA for the years ended December 31, 2016, 2015 and 2014:

	Year Ended December 31,		
	2016	2015	2014
	(in millions, unaudited)		
Net income attributable to CVR Energy stockholders . . .	\$ 24.7	\$ 169.6	\$ 173.9
Add:			
Interest expense and other financing costs, net of interest income	83.2	47.4	39.1
Income tax expense (benefit)	(19.8)	84.5	97.7
Depreciation and amortization	193.1	164.1	154.4
Adjustments attributable to noncontrolling interest . . .	(127.3)	(75.2)	(65.2)
EBITDA	<u>153.9</u>	<u>390.4</u>	<u>399.9</u>
Add:			
FIFO impact (favorable) unfavorable	(52.1)	60.3	160.8
Share-based compensation(a)	—	12.8	12.3
Loss on extinguishment of debt(b)	4.9	—	—
Major scheduled turnaround expenses	38.1	109.2	6.8
(Gain) loss on derivatives, net	19.4	28.6	(185.6)
Current period settlement on derivative contracts(c) . . .	36.4	(26.0)	122.2
Flood insurance recovery(d)	—	(27.3)	—
Expenses associated with the East Dubuque Merger(e) . . .	3.1	2.3	—
Insurance recovery - business interruption(f)	(2.1)	—	—
Adjustments attributable to noncontrolling interest . . .	(20.0)	(51.5)	(42.9)
Adjusted EBITDA	<u>\$ 181.6</u>	<u>\$ 498.8</u>	<u>\$ 473.5</u>

(a) Adjusted EBITDA for the years ended December 31, 2015 and 2014 would have been \$486.0 million and \$461.2 million, respectively, without adjusting for share-based compensation expense of \$12.8 million and \$12.3 million, respectively.

(b) Represents a loss on extinguishment of debt incurred by CVR Partners in June 2016 in connection with the repurchase of senior notes assumed in the East Dubuque Merger, which includes a prepayment premium and write-off of the unamortized purchase accounting adjustment.

(c) Represents the portion of gain (loss) on derivatives, net related to contracts that matured during the respective periods and settled with counterparties. There are no premiums paid or received at inception of the derivative contracts and upon settlement, there is no cost recovery associated with these contracts.

(d) Represents an insurance recovery from environmental insurance carriers as a result of the flood and crude oil discharge at the Coffeyville refinery on June/July 2007. Refer to Part II, Item 8, Note 14 ("Commitments and Contingencies") of this Report for further details.

(e) Represents legal and other professional fees and other merger related expenses that are referred to herein as transaction expenses associated with the East Dubuque Merger, which are included in selling, general and administrative expenses.

(f) Represents business interruption insurance recovery of \$2.1 million received by CVR Partners during the third quarter of 2016.

Year Ended December 31, 2016 Compared to the Year Ended December 31, 2015 (Consolidated)

Net Sales. Consolidated net sales were \$4,782.4 million for the year ended December 31, 2016, compared to \$5,432.5 million for the year ended December 31, 2015. The decrease of \$650.1 million was largely the result of a decrease in our petroleum segment's net sales of \$730.6 million due to significantly lower sales prices, partially offset by an increased net sales in our nitrogen fertilizer segment. The petroleum segment's average sales price per gallon for the year ended December 31, 2016 of \$1.34 for gasoline and \$1.36 for distillate decreased by 16.8% and 16.0%, respectively, as compared to the year ended December 31, 2015. The nitrogen fertilizer segment net sales increased by \$67.1 million primarily attributable to increased sales volume associated with the inclusion of the nine months of the East Dubuque Facility, an increase in UAN and ammonia sales volume due to the major scheduled turn around at the Coffeyville Fertilizer Facility in 2015, partially offset by lower UAN and ammonia sales prices attributable to pricing fluctuation in the market.

Cost of Materials and Other. Consolidated cost of materials and other was \$3,847.5 million for the year ended December 31, 2016, as compared to \$4,190.4 million for the year ended December 31, 2015. The decrease of \$342.9 million primarily resulted from a decrease of \$384.4 million in cost of materials and other at the petroleum segment, partially offset by an increase of \$28.5 million in cost of materials and other at the nitrogen fertilizer segment. The decrease at the petroleum segment was due to a decrease in the cost of consumed crude and purchased products for resale. The decrease in consumed crude oil costs was due to decrease in crude oil prices. The increase of \$28.5 million at the nitrogen fertilizer segment was primarily due to the inclusion of the nine months of the East Dubuque Facility, partially offset by cost decreases as a result of lower freight and distribution costs as well as lower consumption and pet coke pricing.

Direct Operating Expenses (Exclusive of Depreciation and Amortization). Consolidated direct operating expenses (exclusive of depreciation and amortization) were \$541.8 million for the year ended December 31, 2016, as compared to \$584.7 million for the year ended December 31, 2015. The decrease of \$42.9 million was primarily due to a decrease of \$85.1 million at the petroleum segment, partially offset by an increase of \$42.2 million at the nitrogen fertilizer segment. The petroleum segment decreased as a result of lower costs for the second phase of major scheduled turnaround activities performed at the Coffeyville refinery in 2016 as compared to the first phase completed in 2015, lower insurance expense, environmental expense and production chemicals, partially offset by an increase in labor costs. The nitrogen fertilizer segment increased primarily attributable to the inclusion of the nine months of the East Dubuque Facility.

Selling, General and Administrative Expenses (Exclusive of Depreciation and Amortization). Consolidated selling, general and administrative expenses (exclusive of depreciation and amortization) were \$109.1 million for the year ended December 31, 2016, as compared to \$99.0 million for the year ended December 31, 2015. The increase of \$10.1 million was primarily attributable to the inclusion of the nine months of the East Dubuque Facility.

Operating Income. Consolidated operating income was \$90.9 million for the year ended December 31, 2016, as compared to operating income of \$421.6 million for the year ended December 31, 2015, a decrease of \$330.7 million. Petroleum segment operating income decreased \$283.9 million primarily as a result of a decrease in the refining margin in 2016 and the 2015 flood insurance recovery, partially offset by decreases in direct operating expenses, depreciation and amortization and selling, general and administrative expenses. Nitrogen fertilizer segment operating income decreased \$41.9 million primarily as a result of increases in direct operating expenses, depreciation and amortization, cost of materials and other and selling, general and administrative expenses, partially offset by increases in net sales.

Interest Expense. Consolidated interest expense for the year ended December 31, 2016 was \$83.9 million as compared to \$48.4 million for the year ended December 31, 2015. The increase of \$35.5 million resulted primarily from the debt assumed by the Nitrogen fertilizer segment in the East Dubuque Merger, issuance of the 2023 Notes and increased LIBOR rates during 2016 as compared to 2015.

Gain (Loss) on Derivatives, Net. For the year ended December 31, 2016, the petroleum segment recorded a \$19.4 million net loss on derivatives compared to a \$28.6 million net loss on derivatives for the year ended December 31, 2015. This change was primarily due to changes in crack spreads during the period. The petroleum segment enters into over-the-counter commodity swap contracts to fix the margin on a portion of its future gasoline and distillate production.

Income Tax Expense (Benefit). Income tax benefit for the year ended December 31, 2016 was \$19.8 million or 181.7% of loss before income taxes, as compared to income tax expense for the year ended December 31, 2015 of \$84.5 million or 22.1% of income before income taxes. This is in comparison to a combined federal and state expected statutory rate of 39.3% for 2016 and 39.5% for 2015. Our 2016 effective tax rate varies from the expected statutory rate primarily due to the reduction of income subject to tax associated with the noncontrolling ownership interests in CVR Refining's and CVR Partners' earnings (loss), the benefits related to the domestic production activities deduction (Section 199) and certain state income tax items.

Net Income Attributable to Noncontrolling Interest. Net income attributable to noncontrolling interest represents the 47% interest in the Nitrogen Fertilizer Partnership held by public unitholders for the year ended December 31, 2015 and through March 31, 2016 and the 66% interest held by public unitholders from April 1, 2016 through December 31, 2016. Additionally, it represents the 34% interest in the Refining Partnership held by public unitholders as of and for the years ended December 31, 2016 and 2015.

Net Income Attributable to CVR Stockholders. For the year ended December 31, 2016, net income attributable to CVR stockholders decreased to \$24.7 million as compared to net income attributable to CVR stockholders of \$169.6 million for the year ended December 31, 2015.

Year Ended December 31, 2015 Compared to the Year Ended December 31 2014 (Consolidated)

Net Sales. Consolidated net sales were \$5,432.5 million for the year ended December 31, 2015, compared to \$9,109.5 million for the year ended December 31, 2014. The decrease of \$3,677.0 million was largely the result of a decrease in our petroleum segment's net sales of \$3,667.8 million due to significantly lower sales prices. The petroleum segment's average sales price per gallon for the year ended December 31, 2015 of \$1.61 for gasoline and \$1.62 for distillate decreased by 36.4% and 42.3%, respectively, as compared to the year ended December 31, 2014. The nitrogen fertilizer segment net sales decreased by \$9.5 million due to lower UAN sales prices and volumes, partially offset by higher ammonia sales volumes.

Cost of Materials and Other. Consolidated cost of materials and other was \$4,190.4 million for the year ended December 31, 2015, as compared to \$8,066.0 million for the year ended December 31, 2014. The decrease of \$3,875.6 million primarily resulted from a decrease of \$3,869.8 million in cost of materials and other at the petroleum segment. The decrease at the petroleum segment was due to a decrease in the cost of consumed crude and purchased products for resale. The decrease in consumed crude oil costs was due to a 47.5% decrease in crude oil prices. The nitrogen fertilizer segment cost of materials and other also decreased by \$6.8 million primarily as a result of lower freight and distribution costs and lower consumption and lower pricing of pet coke.

Direct Operating Expenses (Exclusive of Depreciation and Amortization). Consolidated direct operating expenses (exclusive of depreciation and amortization) were \$584.7 million for the year ended December 31, 2015, as compared to \$515.1 million for the year ended December 31, 2014. The increase of \$69.6 million was primarily due to an increase of \$62.5 million at the petroleum segment as a result of the major scheduled turnaround activities performed at the Coffeyville refinery, partially offset by decreases in repair and maintenance and energy and utility costs. The nitrogen fertilizer segment also had an increase in direct operating expenses (exclusive of depreciation and amortization), which was primarily the result of higher major scheduled turnaround expenses.

Selling, General and Administrative Expenses (Exclusive of Depreciation and Amortization). Consolidated selling, general and administrative expenses (exclusive of depreciation and amortization) were \$99.0 million for the year ended December 31, 2015, as compared to \$109.7 million for the year ended December 31, 2014. The decrease

of \$10.7 million was primarily the result of lower legal expenses, IT-related costs and consulting costs, partially offset by higher personnel costs.

Operating Income. Consolidated operating income was \$421.6 million for the year ended December 31, 2015, as compared to operating income of \$264.3 million for the year ended December 31, 2014, an increase of \$157.3 million. Petroleum segment operating income increased \$154.5 million primarily due to higher refining margins and the flood insurance recovery, partially offset by increased direct operating expenses. Nitrogen fertilizer segment operating income decreased \$14.1 million primarily as a result of lower net sales and higher direct operating expenses, partially offset by lower cost of materials and other.

Interest Expense. Consolidated interest expense for the year ended December 31, 2015 was \$48.4 million as compared to \$40.0 million for the year ended December 31, 2014. The increase of \$8.4 million resulted primarily from lower capitalized interest for the year ended December 31, 2015 as compared to the year ended December 31, 2014, following the completion of several larger capital projects in late 2014.

Gain (Loss) on Derivatives, Net. For the year ended December 31, 2015, the petroleum segment recorded a \$28.6 million net loss on derivatives compared to a \$185.6 million net gain on derivatives for the year ended December 31, 2014. This change was primarily due to changes in crack spreads during the period. The petroleum segment enters into over-the-counter commodity swap contracts to fix the margin on a portion of its future gasoline and distillate production.

Income Tax Expense. Income tax expense for the year ended December 31, 2015 was \$84.5 million or 22.1% of income before income taxes, as compared to income tax expense for the year ended December 31, 2014 of \$97.7 million or 24.0% of income before income taxes. This is in comparison to a combined federal and state expected statutory rate of 39.5% for 2015 and 39.6% for 2014. Our 2015 effective tax rate is lower than the expected statutory rate primarily due to the reduction of income subject to tax associated with the noncontrolling ownership interests in CVR Refining's and CVR Partners' earnings and the benefits related to the domestic production activities deduction and state income tax credits.

Net Income Attributable to Noncontrolling Interest. Net income attributable to noncontrolling interest represents the 47% interest in the Nitrogen Fertilizer Partnership held by public unitholders as of and for the years ended December 31, 2015 and 2014. Additionally, it represents the 34% interest in the Refining Partnership held by public unitholders from July 24, 2014 through December 31, 2015, the 33% interest held by public unitholders from June 30, 2014 through July 23, 2014 and the 29% interest held by public unitholders from May 20, 2013 through June 29, 2014.

Net Income Attributable to CVR Stockholders. For the year ended December 31, 2015, net income attributable to CVR stockholders decreased to \$169.6 million as compared to net income of \$173.9 million for the year ended December 31, 2014.

Petroleum Business Results of Operations

The petroleum business includes the operations of both the Coffeyville and Wynnewood refineries. The following tables below provide an overview of the petroleum business' results of operations, relevant market indicators and its key operating statistics for the years ended December 31, 2016, 2015 and 2014:

	Year Ended December 31,		
	2016	2015	2014
	(in millions)		
<u>Consolidated Petroleum Business Financial Results</u>			
Net sales	\$ 4,431.3	\$ 5,161.9	\$ 8,829.7
Operating costs and expenses:			
Cost of materials and other	3,759.2	4,143.6	8,013.4
Direct operating expenses(1)(2)	361.9	376.3	409.2
Major scheduled turnaround expenses	31.5	102.2	6.8
Depreciation and amortization	126.3	128.0	120.9
Cost of sales	4,278.9	4,750.1	8,550.3
Flood insurance recovery	—	(27.3)	—
Selling, general and administrative expenses(1)	71.9	75.2	70.6
Depreciation and amortization	2.7	2.2	1.6
Operating income	77.8	361.7	207.2
Interest expense and other financing costs	(43.4)	(42.6)	(34.2)
Interest income	0.1	0.4	0.3
Gain (loss) on derivatives, net	(19.4)	(28.6)	185.6
Other income (expense), net	0.2	0.3	(0.2)
Income before income tax expense	15.3	291.2	358.7
Income tax expense	—	—	—
Net income	\$ 15.3	\$ 291.2	\$ 358.7
Gross profit(3)	\$ 152.4	\$ 439.1	\$ 279.4
Refining margin(4)	\$ 672.1	\$ 1,018.3	\$ 816.3
Adjusted Petroleum EBITDA(5)	\$ 222.8	\$ 602.0	\$ 621.6

	Year Ended December 31,					
	2016		2015		2014	
	(dollars per barrel)					
Key Operating Statistics						
Per crude oil throughput barrel:						
Gross profit(3)	\$	2.10	\$	6.23	\$	3.90
Refining margin(4)	\$	9.27	\$	14.45	\$	11.38
Direct operating expenses and major scheduled turnaround expenses(1)(2)	\$	5.43	\$	6.79	\$	5.80
Direct operating expenses and major scheduled turnaround expenses per barrel sold(1)(6)	\$	5.08	\$	6.40	\$	5.44
Barrels sold (barrels per day)(6)		211,643		204,708		209,669

	Year Ended December 31,					
	2016		2015		2014	
	%		%		%	
Refining Throughput and Production Data (bpd)						
Throughput:						
Sweet	177,256	84.8	176,097	86.0	179,059	86.2
Medium	2,525	1.2	2,460	1.2	2,022	1.0
Heavy sour	18,261	8.7	14,520	7.1	15,464	7.4
Total crude oil throughput	198,042	94.7	193,077	94.3	196,545	94.6
All other feedstocks and blendstocks	11,077	5.3	11,672	5.7	11,284	5.4
Total throughput	209,119	100.0	204,749	100.0	207,829	100.0
Production:						
Gasoline	108,762	51.9	99,961	48.5	102,275	48.9
Distillate	85,092	40.6	85,953	41.7	87,639	41.9
Other (excluding internally produced fuel)	15,751	7.5	20,074	9.8	19,149	9.2
Total refining production (excluding internally produced fuel)	209,605	100.0	205,988	100.0	209,063	100.0
Product price (dollars per gallon):						
Gasoline	\$	1.34	\$	1.61	\$	2.53
Distillate		1.36		1.62		2.81

	Year Ended December 31,		
	2016	2015	2014
<u>Market Indicators (dollars per barrel)</u>			
West Texas Intermediate (WTI) NYMEX.	\$ 43.47	\$ 48.76	\$ 92.91
Crude Oil Differentials:			
WTI less WTS (light/medium sour)	0.85	(0.28)	5.95
WTI less WCS (heavy sour)	13.95	13.20	18.48
NYMEX Crack Spreads:			
Gasoline	15.42	19.89	17.29
Heating Oil	13.89	20.93	23.59
NYMEX 2-1-1 Crack Spread	14.66	20.41	20.44
PADD II Group 3 Product Basis:			
Gasoline	(3.62)	(2.12)	(4.45)
Ultra-Low Sulfur Diesel	(0.92)	(2.02)	0.75
PADD II Group 3 Product Crack Spread:			
Gasoline	11.82	17.76	12.84
Ultra-Low Sulfur Diesel	12.96	18.91	24.34
PADD II Group 3 2-1-1	12.39	18.34	18.59

- (1) Amounts are shown exclusive of depreciation and amortization.
- (2) Direct operating expense is presented on a per crude oil throughput barrel basis. In order to derive the direct operating expenses per crude oil throughput barrel, we utilize the total direct operating expenses, which do not include depreciation or amortization expense, and divide by the applicable number of crude oil throughput barrels for the period.
- (3) Gross profit, a GAAP measure, is calculated as the difference between net sales and cost of materials and other, direct operating expenses (exclusive of depreciation and amortization), major scheduled turnaround expenses, flood insurance recovery and depreciation and amortization. Each of the components used in this calculation are taken directly from the petroleum business' financial results. In order to derive the gross profit per crude oil throughput barrel, we utilize the total dollar figures for gross profit as derived above and divide by the applicable number of crude oil throughput barrels for the period.
- (4) Refining margin per crude oil throughput barrel is a measurement calculated as the difference between net sales and cost of materials and other. Refining margin is a non-GAAP measure that we believe is important to investors in evaluating the refineries' performance as a general indication of the amount above the cost of materials and other that it is able to sell refined products. Each of the components used in this calculation (net sales and cost of materials and other are taken directly from the petroleum business' financial results. Our calculation of refining margin may differ from similar calculations of other companies in the industry, thereby limiting its usefulness as a comparative measure. In order to derive the refining margin per crude oil throughput barrel, we utilize the total dollar figures for refining margin as derived above and divide by the applicable number of crude oil throughput barrels for the period. We believe that refining margin and refining margin per crude oil throughput barrel is important to enable investors to better understand and evaluate the petroleum business' ongoing operating results and allow for greater transparency in the review of our overall financial, operational and economic performance.

The calculation of refining margin and refining margin per crude oil throughput barrel for the years ended December 31, 2016, 2015 and 2014 is as follows:

	Year Ended December 31,		
	2016	2015	2014
	(in millions)		
Net Sales	\$ 4,431.3	\$ 5,161.9	\$ 8,829.7
Cost of materials and other	3,759.2	4,143.6	8,013.4
Direct operating expenses (exclusive of depreciation and amortization as reflected below)	361.9	376.3	409.2
Major scheduled turnaround expenses	31.5	102.2	6.8
Flood insurance recovery	—	(27.3)	—
Depreciation and amortization	126.3	128.0	120.9
Gross profit	152.4	439.1	279.4
Add:			
Direct operating expenses (exclusive of depreciation and amortization)	361.9	376.3	409.2
Major scheduled turnaround expenses	31.5	102.2	6.8
Flood insurance recovery	—	(27.3)	—
Depreciation and amortization	126.3	128.0	120.9
Refining Margin	<u>\$ 672.1</u>	<u>\$ 1,018.3</u>	<u>\$ 816.3</u>

	Year Ended December 31,		
	2016	2015	2014
Total crude oil throughput barrels per day	198,042	193,077	196,545
Days in the period	366	365	365
Total crude oil throughput barrels	<u>72,483,372</u>	<u>70,473,105</u>	<u>71,738,925</u>

	Year Ended December 31,		
	2016	2015	2014
	(in millions, except for \$ per barrel data)		
Refining Margin	\$ 672.1	\$ 1,018.3	\$ 816.3
Divided by: crude oil throughput barrels	72.5	70.5	71.7
Refining Margin per crude oil throughput barrel	<u>\$ 9.27</u>	<u>\$ 14.45</u>	<u>\$ 11.38</u>

- (5) Petroleum EBITDA represents net income for the petroleum segment before (i) interest expense and other financing costs, net of interest income, (ii) income tax expense and (iii) depreciation and amortization. Adjusted Petroleum EBITDA represents Petroleum EBITDA adjusted for (i) FIFO impact (favorable) unfavorable, (ii) share-based compensation, non-cash, (iii) loss on extinguishment of debt, (iv) major scheduled turnaround expenses (that many of our competitors capitalize and thereby exclude from their measures of EBITDA and Adjusted EBITDA), (v) (gain) loss on derivatives, net, (vi) flood insurance recovery and (vii) current period settlements on derivative contracts.

We present Adjusted Petroleum EBITDA because it is the starting point for the Refining Partnership's determination of available cash for distribution. Petroleum EBITDA and Adjusted Petroleum EBITDA are not recognized terms under GAAP and should not be substituted for net income as a measure of performance. Management believes that Petroleum EBITDA and Adjusted Petroleum EBITDA enable investors to better understand the Refining Partnership's ability to make distributions to its common unitholders, help investors evaluate the petroleum segment's ongoing operating results and allow for greater transparency in reviewing our overall financial, operational and economic performance. Petroleum EBITDA and Adjusted Petroleum EBITDA presented by other companies may not be comparable to our presentation, since each company may define these terms differently.

Below is a reconciliation of net income for the petroleum segment to Petroleum EBITDA and Petroleum EBITDA to Adjusted Petroleum EBITDA for the years ended December 31, 2016, 2015 and 2014:

	Year Ended December 31,		
	2016	2015	2014
	(in millions)		
Petroleum:			
Petroleum net income	\$ 15.3	\$ 291.2	\$ 358.7
Add:			
Interest expense and other financing costs, net of interest income	43.3	42.2	33.9
Income tax expense	—	—	—
Depreciation and amortization	129.0	130.2	122.5
Petroleum EBITDA	<u>187.6</u>	<u>463.6</u>	<u>515.1</u>
Add:			
FIFO impact (favorable) unfavorable(a)	(52.1)	60.3	160.8
Share-based compensation, non-cash	—	0.6	2.3
Loss on extinguishment of debt	—	—	—
Major scheduled turnaround expenses(b)	31.5	102.2	6.8
(Gain) loss on derivatives, net	19.4	28.6	(185.6)
Current period settlements on derivative contracts(c)	36.4	(26.0)	122.2
Flood insurance recovery(d)	—	(27.3)	—
Adjusted Petroleum EBITDA	<u>\$ 222.8</u>	<u>\$ 602.0</u>	<u>\$ 621.6</u>

(a) FIFO is the petroleum business' basis for determining inventory value on a GAAP basis. Changes in crude oil prices can cause fluctuations in the inventory valuation of crude oil, work in process and finished goods, thereby resulting in a favorable FIFO impact when crude oil prices increase and an unfavorable FIFO impact when crude oil prices decrease. The FIFO impact is calculated based upon inventory values at the beginning of the accounting period and at the end of the accounting period.

(b) Represents expense associated with major scheduled turnaround activities performed at the Coffeyville refinery (\$31.5 million in 2016, \$102.2 million in 2015 and \$5.5 million in 2014) and the Wynnewood refinery (1.3 million in 2014).

(c) Represents the portion of gain (loss) on derivatives, net related to contracts that matured during the respective periods and settled with counterparties. There are no premiums paid or received at the inception of the derivative contracts and upon settlement, there is no cost recovery associated with these contracts.

- (d) Represents an insurance recovery from environmental insurance carriers as a result of the flood and crude oil discharge at the Coffeyville refinery on June/July 2007. Refer to Part II, Item 8, Note 14 ("Commitments and Contingencies") of this Report for further details.
- (6) Direct operating expense is presented on a per barrel sold basis. Barrels sold are derived from the barrels produced and shipped from the refineries. We utilize total direct operating expenses, which does not include depreciation or amortization expense, and divide by the applicable number of barrels sold for the period to derive the metric.

	Year Ended December 31,		
	2016	2015	2014
	(in millions)		
<u>Coffeyville Refinery Financial Results</u>			
Net sales	\$ 2,948.9	\$ 3,220.6	\$ 5,755.5
Cost of materials and other	2,513.9	2,626.1	5,254.9
Direct operating expenses (exclusive of depreciation and amortization as reflected below)	196.4	209.1	223.6
Major scheduled turnaround expenses	31.5	102.2	5.5
Depreciation and amortization	69.7	72.1	73.6
Flood insurance recovery	—	(27.3)	—
Gross profit	\$ 137.4	\$ 238.4	\$ 197.9
Plus:			
Direct operating expenses and major scheduled turnaround expenses (exclusive of depreciation and amortization)	227.9	311.3	229.1
Flood insurance recovery	—	(27.3)	—
Depreciation and amortization	69.7	72.1	73.6
Refining margin(1)	\$ 435.0	\$ 594.5	\$ 500.6

	Year Ended December 31,		
	2016	2015	2014
	(dollars per barrel)		
<u>Coffeyville Refinery Key Operating Statistics</u>			
Per crude oil throughput barrel:			
Gross profit	\$ 3.03	\$ 5.77	\$ 4.53
Refining margin(1)	\$ 9.57	\$ 14.37	\$ 11.46
Direct operating expenses and major scheduled turnaround expenses (exclusive of depreciation and amortization)	\$ 5.02	\$ 7.53	\$ 5.24
Direct operating expenses and major scheduled turnaround expenses (exclusive of depreciation and amortization) per barrel sold	\$ 4.54	\$ 6.92	\$ 4.73
Barrels sold (barrels per day)	137,047	123,279	132,791

	Year Ended December 31,					
	2016		2015		2014	
		%		%		%
Coffeyville Refinery Throughput and Production Data (bpd)						
Throughput:						
Sweet	104,679	78.9	96,727	79.5	103,018	80.0
Medium	1,229	0.9	2,058	1.7	1,222	1.0
Heavy sour	18,261	13.8	14,520	11.9	15,464	12.0
Total crude oil throughput	124,169	93.6	113,305	93.1	119,704	93.0
All other feedstocks and blendstocks	8,453	6.4	8,400	6.9	9,047	7.0
Total throughput	132,622	100.0	121,705	100.0	128,751	100.0
Production:						
Gasoline	69,303	51.4	57,815	46.5	64,002	48.6
Distillate	55,790	41.4	53,136	42.7	56,381	42.8
Other (excluding internally produced fuel)	9,756	7.2	13,503	10.8	11,314	8.6
Total refining production (excluding internally produced fuel)	134,849	100.0	124,454	100.0	131,697	100.0

(1) The calculation of refining margin per crude oil throughput barrel for the years ended December 31, 2016, 2015 and 2014 is as follows:

	Year Ended December 31,		
	2016	2015	2014
Total crude oil throughput barrels per day	124,169	113,305	119,704
Days in the period	366	365	365
Total crude oil throughput barrels	45,445,854	41,356,325	43,691,960

	Year Ended December 31,		
	2016	2015	2014
(in millions, except for \$ per barrel data)			
Refining Margin	\$ 435.0	\$ 594.5	\$ 500.6
Divided by: crude oil throughput barrels	45.4	41.4	43.7
Refining Margin per crude oil throughput barrel	\$ 9.57	\$ 14.37	\$ 11.46

	Year Ended December 31,		
	2016	2015	2014
	(in millions)		
<u>Wynnewood Refinery Financial Results</u>			
Net sales	\$ 1,478.0	\$ 1,936.9	\$ 3,069.8
Cost of materials and other	1,245.4	1,516.3	2,758.1
Direct operating expenses (exclusive of depreciation and amortization as reflected below)	165.5	166.2	185.5
Major scheduled turnaround expenses	—	—	1.3
Depreciation and amortization	50.7	50.2	41.8
Gross profit	\$ 16.4	\$ 204.2	\$ 83.1
Plus:			
Direct operating expenses and major scheduled turnaround expenses (exclusive of depreciation and amortization)	165.5	166.2	186.8
Depreciation and amortization	50.7	50.2	41.8
Refining margin(1)	\$ 232.6	\$ 420.6	\$ 311.7

	Year Ended December 31,		
	2016	2015	2014
	(dollars per barrel)		
<u>Wynnewood Refinery Key Operating Statistics</u>			
Per crude oil throughput barrel:			
Gross profit	\$ 0.61	\$ 7.01	\$ 2.96
Refining margin(1)	\$ 8.60	\$ 14.44	\$ 11.11
Direct operating expenses and major scheduled turnaround expenses (exclusive of depreciation and amortization)	\$ 6.12	\$ 5.71	\$ 6.66
Direct operating expenses and major scheduled turnaround expenses (exclusive of depreciation and amortization) per barrel sold	\$ 6.06	\$ 5.59	\$ 6.66
Barrels sold (barrels per day)	74,596	81,429	76,878

	Year Ended December 31,					
	2016		2015		2014	
		%		%		%
Wynnewood Refinery						
Throughput and Production						
Data (bpd)						
Throughput:						
Sweet	72,577	94.9	79,370	95.6	76,041	96.2
Medium	1,296	1.7	402	0.5	800	1.0
Heavy sour	—	—	—	—	—	—
Total crude oil throughput . . .	73,873	96.6	79,772	96.1	76,841	97.2
All other feedstocks and blendstocks	2,624	3.4	3,272	3.9	2,237	2.8
Total throughput	76,497	100.0	83,044	100.0	79,078	100.0
Production:						
Gasoline	39,459	52.8	42,146	51.7	38,273	49.5
Distillate	29,302	39.2	32,817	40.2	31,258	40.4
Other (excluding internally produced fuel)	5,995	8.0	6,571	8.1	7,835	10.1
Total refining production (excluding internally produced fuel)	74,756	100.0	81,534	100.0	77,366	100.0

(1) The calculation of refining margin per crude oil throughput barrel for the years ended December 31, 2016, 2015 and 2014 is as follows:

	Year Ended December 31,		
	2016	2015	2014
Total crude oil throughput barrels per day	73,873	79,772	76,841
Days in the period	366	365	365
Total crude oil throughput barrels	27,037,518	29,116,780	28,046,965
	Year Ended December 31,		
	2016	2015	2014
(in millions, except for \$ per barrel data)			
Refining Margin	\$ 232.6	\$ 420.6	\$ 311.7
Divided by: crude oil throughput barrels	27.0	29.1	28.0
Refining Margin per crude oil throughput barrel	\$ 8.60	\$ 14.44	\$ 11.11

Year Ended December 31, 2016 Compared to the Year Ended December 31, 2015 (Petroleum Business)

Net Sales. Petroleum net sales were \$4,431.3 million for the year ended December 31, 2016, compared to \$5,161.9 million for the year ended December 31, 2015. The decrease of \$730.6 million was largely the result of lower sales prices for transportation fuels and by-products. The average sales price per gallon for the year ended December 31, 2016 for gasoline of \$1.34 and distillate of \$1.36 decreased by approximately 16.8% and 16.0%, respectively, as compared to the year ended December 31, 2015. Overall sales volume decreased approximately 2.3% for the year ended December 31, 2016 compared to the year ended December 31, 2015. Sales volumes for 2015 were more significantly impacted by decreased production as a result of the first phase of major scheduled turnaround completed at the Coffeyville refinery in the fourth quarter of 2015 than the second phase of major scheduled turnaround completed at the Coffeyville refinery in the first quarter of 2016.

The following table demonstrates the impact of changes in sales volumes and sales prices for gasoline and distillates for the year ended December 31, 2016 compared to the year ended December 31, 2015:

	Year Ended December 31, 2016			Year Ended December 31, 2015			Total Variance			
	Volume (1)	\$ per barrel	Sales \$(2)	Volume (1)	\$ per barrel	Sales \$(2)	Volume (1)	Sales \$(2)	Price Variance	Volume Variance
	(in millions)									
Gasoline	42.6	\$ 56.16	\$ 2,390.8	40.1	\$ 67.52	\$2,708.4	2.5	\$ (317.6)	\$ (483.2)	\$ 165.6
Distillate	32.4	\$ 56.99	\$ 1,844.3	33.1	\$ 68.01	\$2,248.2	(0.7)	\$ (403.9)	\$ (356.8)	\$ (47.1)

(1) Barrels in millions

(2) Sales dollars in millions

Cost of Materials and Other. Cost of materials and other includes cost of crude oil, other feedstocks, blendstocks, purchased refined products, RINs and transportation and distribution costs. Petroleum cost of materials and other was \$3,759.2 million for the year ended December 31, 2016, compared to \$4,143.6 million for the year ended December 31, 2015. The decrease of \$384.4 million was primarily the result of a decrease in the cost of consumed crude and purchased products for resale. The decrease in consumed crude oil cost was due to a decrease in crude oil prices. The WTI benchmark crude oil price decreased approximately 10.8% from the year ended December 31, 2016 as compared to the year ended December 31, 2015. The petroleum business' average cost per barrel of crude oil consumed for the year ended December 31, 2016 was \$41.99 compared to \$47.86 for the year ended December 31, 2015, a decrease of approximately 12.3%. Crude oil throughput volume increased by approximately 2.9% for the year ended December 31, 2016 as compared to the equivalent period in 2015 due primarily to the major scheduled turnaround completed at the Coffeyville refinery in the fourth quarter of 2015. Sales volumes of refined fuels increased by approximately 2.3% during the same period.

The impact of FIFO accounting also impacted cost of materials and other during the comparable periods. Under the FIFO accounting method, changes in crude oil prices can cause fluctuations in the inventory valuation of crude oil, work in process and finished goods, thereby resulting in a favorable FIFO inventory impact when crude oil prices increase and an unfavorable FIFO inventory impact when crude oil prices decrease. For the years ended December 31, 2016 and 2015, the petroleum business had an favorable FIFO inventory impact of \$52.1 million compared to an unfavorable FIFO inventory impact of \$60.3 million, respectively.

Refining margin per barrel of crude oil throughput decreased to \$9.27 for the year ended December 31, 2016 from \$14.45 for the year ended December 31, 2015. Refining margin adjusted for FIFO impact was \$8.55 per crude oil throughput barrel for the year ended December 31, 2016, as compared to \$15.31 per crude oil throughput barrel for the year ended December 31, 2015. Gross profit per barrel decreased to \$2.10 for the year ended December 31, 2016, as compared to gross profit per barrel of \$6.23 in the equivalent period in 2015. The decrease in refining margin and gross profit per barrel was primarily due to the decline in product margins. The benchmark 2-1-1 crack

spread declined to \$14.66 per barrel for the year ended December 31, 2016 from \$20.41 per barrel for the year ended December 31, 2015.

Direct Operating Expenses (Exclusive of Depreciation and Amortization). Direct operating expenses (exclusive of depreciation and amortization) for the petroleum business include costs associated with the operations of the refineries, such as energy and utility costs, property taxes, catalyst and chemical costs, repairs and maintenance, labor and environmental compliance costs. Petroleum direct operating expenses and major scheduled turnaround expenses (exclusive of depreciation and amortization) were \$393.4 million for the year ended December 31, 2016, compared to direct operating expenses and major scheduled turnaround expenses of \$478.5 million for the year ended December 31, 2015. The decrease of \$85.1 million was the result of lower costs for the second phase of major scheduled turnaround activities performed at the Coffeyville refinery in 2016 as compared to the first phase completed in 2015 (\$70.7 million), lower insurance expense (\$4.5 million), environmental expense (\$4.3 million), production chemicals (\$3.1 million), repair and maintenance costs (\$2.4 million), outside services (\$2.3 million) and allocated shared services expenses (\$2.2 million). These decreases were partially offset by an increase in labor costs (\$4.0 million). Direct operating expenses per barrel of crude oil throughput for the year ended December 31, 2016 decreased to \$5.43 per barrel as compared to \$6.79 per barrel for the year ended December 31, 2015. The decrease in the direct operating expenses per barrel of crude oil throughput was primarily a function of lower overall expenses.

Operating Income. Petroleum operating income was \$77.8 million for the year ended December 31, 2016, as compared to operating income of \$361.7 million for the year ended December 31, 2015. The decrease of \$283.9 million was the result of a decrease in the refining margin (\$346.2 million) and the 2015 flood insurance recovery (\$27.3 million), partially offset by decreases in direct operating expenses (\$85.1 million), depreciation and amortization (\$1.2 million) and selling, general and administrative expenses (\$3.3 million).

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

Net Sales. Petroleum net sales were \$5,161.9 million for the year ended December 31, 2015, compared to \$8,829.7 million for the year ended December 31, 2014. The decrease of \$3,667.8 million was largely the result of significantly lower sales prices for transportation fuels and by-products. The average sales price per gallon for the year ended December 31, 2015 for gasoline of \$1.61 and distillate of \$1.62 decreased by approximately 36.4% and 42.3%, respectively, as compared to the year ended December 31, 2014. Overall sales volume decreased approximately 3.3% for the year ended December 31, 2015 compared to the year ended December 31, 2014. Sales volumes for 2015 were impacted by decreased production as a result of the major scheduled turnaround completed at the Coffeyville refinery in the fourth quarter of 2015 and lower purchased product volumes for resale. Sales volumes for 2014 were impacted by reduced crude oil throughput and production as a result of the Coffeyville refinery shutdown following the isomerization unit fire during the third quarter of 2014 and the FCCU outage at the Wynnewood refinery during the fourth quarter of 2014.

The following table demonstrates the impact of changes in sales volumes and sales prices for gasoline and distillates for the year ended December 31, 2015 compared to the year ended December 31, 2014:

	Year Ended December 31, 2015			Year Ended December 31, 2014			Total Variance			
	Volume (1)	\$ per barrel	Sales \$(2)	Volume (1)	\$ per barrel	Sales \$(2)	Volume (1)	Sales \$(2)	Price Variance	Volume Variance
	(in millions)									
Gasoline	40.1	\$ 67.52	\$ 2,708.4	40.3	\$ 106.21	\$4,282.2	(0.2)	\$(1,573.8)	\$(1,552.1)	\$ (21.7)
Distillate	33.1	\$ 68.01	\$ 2,248.2	34.9	\$ 118.09	\$4,122.3	(1.8)	\$(1,874.1)	\$(1,656.4)	\$ (217.7)

- (1) Barrels in millions
- (2) Sales dollars in millions

Cost of Materials and Other. Cost of materials and other includes cost of crude oil, other feedstocks, blendstocks, purchased refined products, RINs and transportation and distribution costs. Petroleum cost of materials and other was \$4,143.6 million for the year ended December 31, 2015, compared to \$8,013.4 million for the year ended December 31, 2014. The decrease of \$3,869.8 million was primarily the result of a decrease in the cost of consumed crude and purchased products for resale. The decrease in consumed crude oil cost was due to a decrease in crude oil throughput volume and crude oil prices. The WTI benchmark crude oil price decreased 47.5% from the year ended December 31, 2015 as compared to the year ended December 31, 2014. The petroleum business' average cost per barrel of crude oil consumed for the year ended December 31, 2015 was \$47.86 compared to \$92.57 for the year ended December 31, 2014, a decrease of approximately 48.3%. Crude oil throughput volume decreased by approximately 1.8% for the year ended December 31, 2015 as compared to the equivalent period in 2014 due primarily to the major scheduled turnaround completed at the Coffeyville refinery in the fourth quarter of 2015. Sales volumes of refined fuels decreased by approximately 3.3% during the same period.

The impact of FIFO accounting also impacted cost of materials and other during the comparable periods. Under the FIFO accounting method, changes in crude oil prices can cause fluctuations in the inventory valuation of crude oil, work in process and finished goods, thereby resulting in a favorable FIFO inventory impact when crude oil prices increase and an unfavorable FIFO inventory impact when crude oil prices decrease. For the years ended December 31, 2015 and 2014, the petroleum business had an unfavorable FIFO inventory impact of \$60.3 million compared to an unfavorable FIFO inventory impact of \$160.8 million, respectively. The major factor contributing to the unfavorable FIFO impact for the year ended December 31, 2014 was the decline in the market price of WTI from \$95.44 at the beginning of 2014 to \$53.27 on December 31, 2014. The FIFO inventory impact for 2014 included a lower of cost or market write-down of \$36.8 million, which was recorded in the fourth quarter as a result of the significant decline in the market price of crude oil.

Refining margin per barrel of crude oil throughput increased to \$14.45 for the year ended December 31, 2015 from \$11.38 for the year ended December 31, 2014. Refining margin adjusted for FIFO impact was \$15.31 per crude oil throughput barrel for the year ended December 31, 2015, as compared to \$13.62 per crude oil throughput barrel for the year ended December 31, 2014. Gross profit per barrel increased to \$6.20 for the year ended December 31, 2015, as compared to gross profit per barrel of \$3.87 in the equivalent period in 2014. The increase in refining margin and gross profit per barrel was primarily due to the higher unfavorable FIFO impact in 2014 as result of the significant decline in the market price of crude oil.

Direct Operating Expenses (Exclusive of Depreciation and Amortization). Direct operating expenses (exclusive of depreciation and amortization) for the petroleum business include costs associated with the operations of the refineries, such as energy and utility costs, property taxes, catalyst and chemical costs, repairs and maintenance, labor and environmental compliance costs. Petroleum direct operating expenses and major scheduled turnaround expenses (exclusive of depreciation and amortization) were \$478.5 million for the year ended December 31, 2015, compared to direct operating expenses and major scheduled turnaround expenses of \$416.0 million for the year ended December 31, 2014. The increase of \$62.5 million was primarily the result of major scheduled turnaround activities performed at the Coffeyville refinery (\$95.4 million), partially offset by decreases in repair and maintenance costs (\$22.1 million) and energy and utility costs (\$18.9 million). The decrease in repairs and maintenance costs was due to opportunity maintenance performed at the Coffeyville refinery during the shutdown following the isomerization fire in the third quarter of 2014 and during the FCCU outage at the Wynnewood refinery during the fourth quarter of 2014. The decrease in energy and utility costs was due to a 27.6% decrease in natural gas cost per unit and a 14.7% decrease in natural gas consumption. Direct operating expenses per barrel of crude oil throughput for the year ended December 31, 2015 increased to \$6.79 per barrel as compared to \$5.80 per barrel for the year ended December 31, 2014. The increase in the direct operating expenses per barrel of crude oil throughput was primarily a function of higher overall expenses.

Operating Income. Petroleum operating income was \$361.7 million for the year ended December 31, 2015, as compared to operating income of \$207.2 million for the year ended December 31, 2014. The increase of \$154.5 million was the result of an increase in the refining margin (\$202.0 million) and the flood insurance recovery (\$27.3 million), partially offset by increases in direct operating expenses (\$62.5 million), depreciation and amortization (\$7.7 million) and selling, general and administrative expenses (\$4.6 million).

Nitrogen Fertilizer Business Results of Operations

The tables below provide an overview of the nitrogen fertilizer business' results of operations, relevant market indicators and its key operating statistics for the years ended December 31, 2016, 2015 and 2014:

	Year Ended December 31,		
	2016	2015	2014
	(in millions)		
<u>Nitrogen Fertilizer Business Financial Results</u>			
Net sales	\$ 356.3	\$ 289.2	\$ 298.7
Operating costs and expenses:			
Cost of materials and other	93.7	65.2	72.0
Direct operating expenses(1)	141.7	99.1	98.9
Major scheduled turnaround expenses	6.6	7.0	—
Depreciation and amortization	58.2	28.4	27.3
Cost of sales	<u>300.2</u>	<u>199.7</u>	<u>198.2</u>
Selling, general and administrative	29.3	20.8	17.7
Operating income	<u>26.8</u>	<u>68.7</u>	<u>82.8</u>
Interest expense and other financing costs	(48.6)	(7.0)	(6.7)
Loss on extinguishment of debt	(4.9)	—	—
Other income, net	0.1	0.3	—
Income (loss) before income tax expense	<u>(26.6)</u>	<u>62.0</u>	<u>76.1</u>
Income tax expense	0.3	—	—
Net income (loss)	<u>\$ (26.9)</u>	<u>\$ 62.0</u>	<u>\$ 76.1</u>
Adjusted Nitrogen Fertilizer EBITDA(2)	\$ 92.7	\$ 106.8	\$ 110.3

	Year Ended December 31,		
	2016	2015	2014
Key Operating Statistics			
Sales (thousand tons):			
Ammonia	201.4	32.3	24.4
UAN	1,237.5	939.5	951.0
Product pricing at gate (dollars per ton)(3):			
Ammonia \$	376	\$ 521	\$ 518
UAN \$	177	\$ 247	\$ 259
Production volume (thousand tons):			
Ammonia (gross produced)(4)	693.5	385.4	388.9
Ammonia (net available for sale)(4)(5).	183.6	37.3	28.3
UAN	1,192.6	928.6	963.7
Feedstock:			
Pet coke consumed (thousand tons)	513.7	469.9	489.7
Pet coke (cost per ton)(6) \$	15	\$ 25	\$ 28
Natural gas used in production (thousands of MMBtu)	5,596.0	—	—
Natural gas used in production (dollars per MMBtu)(7) \$	2.96	\$ —	\$ —
Natural gas cost of materials and other (thousands of MMBtu).	4,618.7	—	—
Natural gas cost of materials and other (dollars per MMBtu)(7) \$	2.87	\$ —	\$ —
Coffeyville Facility on-stream factors(8):			
Gasification	96.9%	90.2%	96.8%
Ammonia	94.9%	87.5%	92.6%
UAN	93.1%	87.3%	92.0%
East Dubuque Facility on-stream factors (8):			
Ammonia	87.7%	—%	—%
UAN	87.3%	—%	—%
Reconciliation to net sales (dollars in millions):			
Sales net at gate \$	309.0	\$ 248.8	\$ 259.3
Freight in revenue	33.0	27.2	27.5
Hydrogen revenue	3.2	11.8	10.1
Other revenue	11.1	1.4	1.8
Total net sales \$	356.3	\$ 289.2	\$ 298.7

	Year Ended December 31,		
	2016	2015	2014
Market Indicators			
Ammonia — Southern Plains (dollars per ton)	356	510	539
Ammonia — Corn belt (dollars per ton)	416	566	601
UAN — Corn belt (dollars per ton).	208	284	314
Natural gas NYMEX (dollars per MMBtu). \$	2.55	\$ 2.63	\$ 4.26

Amounts are shown exclusive of depreciation and amortization.

- (1) Nitrogen Fertilizer EBITDA represents nitrogen fertilizer net income adjusted for (i) interest expense and other financing costs, net of interest income, (ii) income tax expense and (iii) depreciation and amortization. Adjusted Nitrogen Fertilizer EBITDA represents Nitrogen Fertilizer EBITDA adjusted for (i) share-based compensation, non-cash, (ii) major scheduled turnaround expenses, (iii) loss on extinguishment of debt and (iv) expenses associated with the East Dubuque Merger, as applicable. We present Adjusted Nitrogen Fertilizer EBITDA because we have found it helpful to consider an operating measure that excludes expenses, such as major scheduled turnaround expense, loss on extinguishment of debt and expenses associated with the East Dubuque Merger, relating to transactions not reflective of the Nitrogen Fertilizer Partnership's core operations. In addition, we believe that it is useful to exclude from Adjusted Nitrogen Fertilizer EBITDA share-based compensation, non-cash, although it is a recurring cost incurred in the ordinary course of business. We believe share-based compensation, non-cash, reflects a non-cash cost which may obscure, for a given period, trends in the underlying business, due to the timing and nature of the equity awards.

We also present Adjusted Nitrogen Fertilizer EBITDA because it is the starting point for calculating the Nitrogen Fertilizer Partnership's available cash for distribution. Adjusted Nitrogen Fertilizer EBITDA is not a recognized term under GAAP and should not be substituted for net income as a measure of performance. Management believes that Nitrogen Fertilizer EBITDA and Adjusted Nitrogen Fertilizer EBITDA enable investors and analysts to better understand the Nitrogen Fertilizer Partnership's ability to make distributions to its common unitholders, help investors and analysts evaluate its ongoing operating results and allow for greater transparency in reviewing our overall financial, operational and economic performance by allowing investors to evaluate the same information used by management. Nitrogen Fertilizer EBITDA and Adjusted Nitrogen Fertilizer EBITDA presented by other companies may not be comparable to our presentation, since each company may define these terms differently. Below is a reconciliation of net income for the nitrogen fertilizer segment to Nitrogen Fertilizer EBITDA and Adjusted Nitrogen Fertilizer EBITDA for the years ended December 31, 2016, 2015 and 2014:

	Year Ended December 31,		
	2016	2015	2014
	(in millions)		
Nitrogen Fertilizer:			
Nitrogen Fertilizer net income	\$ (26.9)	\$ 62.0	\$ 76.1
Add:			
Interest expense and other financing costs, net	48.6	7.0	6.7
Income tax expense	0.3	—	—
Depreciation and amortization	58.2	28.4	27.3
Nitrogen Fertilizer EBITDA	<u>80.2</u>	<u>97.4</u>	<u>110.1</u>
Add:			
Major scheduled turnaround expenses	6.6	7.0	—
Share-based compensation, non-cash	—	0.1	0.2
Loss on extinguishment of debt	4.9	—	—
Expenses associated with the East Dubuque Merger	3.1	2.3	—
Less:			
Insurance recovery - business interruption	(2.1)	—	—
Adjusted Nitrogen Fertilizer EBITDA	<u>\$ 92.7</u>	<u>\$ 106.8</u>	<u>\$ 110.3</u>

- (2) Product pricing at gate represents net sales less freight revenue divided by product sales volume in tons and is shown in order to provide a pricing measure that is comparable across the fertilizer industry.

- (3) Gross tons produced for ammonia represent the total ammonia produced, including ammonia produced that was upgraded into other fertilizer products. Net tons available for sale represent the ammonia available for sale that was not upgraded into other fertilizer products.
- (4) In addition to produced ammonia, the Nitrogen Fertilizer Partnership acquired approximately 10,000, 29,300 and 33,600 tons of ammonia during the years ended December 31, 2016, 2015 and 2014, respectively.
- (5) The Nitrogen Fertilizer Partnership's pet coke cost per ton purchased from the Refining Partnership average \$6, \$19, and \$24 for the years ended December 31, 2016, 2015 and 2014, respectively. Third-party pet coke prices averaged \$35, \$40 and \$41 for the years ended December 31, 2016, 2015 and 2014, respectively.
- (6) The cost per MMBtu excludes derivative activity, when applicable. The impact of natural gas derivative activity during the year ended December 31, 2016 was not material.
- (7) On-stream factor is the total number of hours operated divided by the total number of hours in the reporting period and is a measure of operating efficiency.

Coffeyville Facility

Excluding the impact of the full facility turnaround and the Linde air separation unit outages at the Coffeyville Fertilizer Facility, the on-stream factors for the year ended December 31, 2015 would have been 99.9% for gasifier, 97.7% for ammonia and 97.6% for UAN. Excluding the impact of the downtime associated with the installation of the waste heat boiler, the pressure swing adsorption unit upgrade and the Linde air separation unit maintenance at the Coffeyville Fertilizer Facility, the on-stream factors for the year ended December 31, 2014 would have been 98.2% for gasifier, 94.3% for ammonia and 93.7% for UAN.

East Dubuque Facility

Excluding the impact of the full facility turnaround at the East Dubuque Nitrogen Fertilizer Facility, the on-stream factors would have been 97.8% for ammonia and 97.1% for UAN for the post-acquisition period ended December 31, 2016.

Year Ended December 31, 2016 compared to the Year Ended December 31, 2015 (Nitrogen Fertilizer Business)

Net Sales. Nitrogen fertilizer net sales were \$356.3 million for the year ended December 31, 2016, compared to \$289.2 million for the year ended December 31, 2015. The net sales increase of \$67.1 million is primarily attributable to increased sales volume due to the inclusion of the nine months of the East Dubuque Facility (\$128.0 million). For the year ended December 31, 2016, UAN and ammonia made up \$249.1 million and \$78.0 million of the nitrogen fertilizer business' net sales, respectively. This compared to UAN and ammonia net sales of \$258.8 million and \$17.2 million, respectively, for the year ended December 31, 2015.

Excluding the East Dubuque acquisition, net sales would have decreased by \$60.9 million. The following table demonstrates the impact of changes in sales volumes and pricing for the primary components of net sales at the Coffeyville Fertilizer Facility for the year ended December 31, 2016 compared to the year ended December 31, 2015:

	Price Variance	Volume Variance
	(in millions)	
UAN	\$ (69.8)	\$ 16.8
Ammonia.....	\$ (7.6)	\$ 6.8
Hydrogen.....	\$ (1.8)	\$ (6.8)

The decrease in UAN and ammonia sales prices at the Coffeyville Fertilizer Facility for the year ended December 31, 2016 compared to the year ended December 31, 2015 was primarily attributable to pricing fluctuation in the market. The increase of UAN and ammonia sales volume at the Coffeyville Fertilizer Facility for the year ended December 31, 2016 compared to the year ended December 31, 2015 was primarily attributable to the lost production during the Coffeyville Fertilizer Facility major scheduled turnaround during the third quarter of 2015. Lower hydrogen needs from the Refining Partnership resulted in decreased hydrogen sales volume at the Coffeyville Fertilizer Facility for the year ended December 31, 2016 compared to the year ended December 31, 2015.

Cost of Materials and Other. Nitrogen fertilizer cost of materials and other includes cost of freight and distribution expenses, feedstock, purchased ammonia and purchased hydrogen. Cost of materials and other for the year ended December 31, 2016 was \$93.7 million, compared to \$65.2 million for the year ended December 31, 2015. The \$28.5 million increase was attributable to the inclusion of the nine months of the East Dubuque Facility (\$36.7 million), which is partially offset by cost decreases at the Coffeyville Fertilizer Facility.

Direct Operating Expenses (Exclusive of Depreciation and Amortization). Direct operating expenses (exclusive of depreciation and amortization) for the nitrogen fertilizer business consist primarily of energy and utility costs, direct costs of labor, property taxes, plant-related maintenance services, including turnaround, and environmental and safety compliance costs as well as catalyst and chemical costs. Nitrogen fertilizer direct operating expenses (exclusive of depreciation and amortization) for the year ended December 31, 2016 were \$148.3 million, as compared to \$106.1 million for the year ended December 31, 2015. The total increase of \$42.2 million for the year ended December 31, 2016, as compared to the year ended December 31, 2015, was primarily attributable to the inclusion of the nine months of the East Dubuque Facility (\$55.7 million).

Operating Income. Nitrogen fertilizer operating income was \$26.8 million for the year ended December 31, 2016, as compared to operating income of \$68.7 million for the year ended December 31, 2015. The decrease of \$41.9 million was the result of the increases in direct operating expenses (\$42.2 million), depreciation and amortization (\$29.8 million), cost of materials and other (\$28.5 million) and selling, general and administrative expenses (\$8.5 million), partially offset by increases in net sales (\$67.1 million).

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

Net Sales. Nitrogen fertilizer net sales were \$289.2 million for the year ended December 31, 2015, compared to \$298.7 million for the year ended December 31, 2014. The net sales decrease of \$9.5 million for the year ended December 31, 2015 as compared to the year ended December 31, 2014 was primarily the result of lower UAN sales prices (\$11.6 million), lower UAN sales volumes (\$3.3 million) and lower hydrogen sales prices (\$0.3 million), partially offset by higher ammonia sales volumes (\$4.2 million) and higher hydrogen sales volumes (\$2.0 million). For the year ended December 31, 2015, UAN, ammonia and hydrogen made up \$258.8 million, \$17.2 million and \$11.8 million of the nitrogen fertilizer business' net sales, respectively. This compared to UAN, ammonia and hydrogen net sales of \$273.7 million, \$13.1 million and \$10.1 million, respectively, for the year ended December 31, 2014. The following table demonstrates the impact of changes in sales volumes and sales price for UAN, ammonia and hydrogen for the year ended December 31, 2015 compared to the year ended December 31, 2014:

	<u>Price Variance</u>	<u>Volume Variance</u>
	(in millions)	
UAN	\$ (11.6)	\$ (3.3)
Ammonia.....	\$ (0.1)	\$ 4.2
Hydrogen.....	\$ (0.3)	\$ 2.0

For the year ended December 31, 2015 compared to the year ended December 31, 2014, the nitrogen fertilizer segment's operations experienced a decrease of 1.2% in UAN sales unit volumes and an increase of 32.6% in ammonia sales unit volumes. The decrease in UAN sales volumes for the year ended December 31, 2015 compared to the year ended December 31, 2014 was partially attributable to the 2015 turnaround and the Linde air separation unit related outages. The increase in ammonia sales for the year ended December 31, 2015 compared to the year ended December 31, 2014 was partially attributable to higher customer demand.

Product pricing at gate represents net sales less freight revenue divided by product sales volume in tons. Product pricing at gate for UAN decreased approximately 4.6% for the year ended December 31, 2015 as compared to the year ended December 31, 2014. Product pricing at gate for ammonia increased approximately 0.6% for the year ended December 31, 2015 as compared to the year ended December 31, 2014.

Cost of Materials and Other. Nitrogen fertilizer cost of materials and other consists primarily of freight and distribution expenses, pet coke expenses, purchased ammonia and purchased hydrogen. Cost of materials and other for the year ended December 31, 2015 was \$65.2 million, compared to \$72.0 million for the year ended December 31, 2014. The \$6.8 million decrease was primarily the result of lower consumption of pet coke mostly due to the decrease in production during the turnaround and the Linde air separation unit related downtime, lower pet coke pricing, decreased distribution costs, freight expenses and purchased ammonia. The lower distribution costs is due to a smaller portion of the nitrogen fertilizer business' fleet due for regulatory inspections and related repairs during the year ended December 31, 2015 as compared to the year ended December 31, 2014.

Direct Operating Expenses (Exclusive of Depreciation and Amortization). Direct operating expenses (exclusive of depreciation and amortization) for the nitrogen fertilizer business consist primarily of energy and utility costs, direct costs of labor, property taxes, plant-related maintenance services, including turnaround, and environmental and safety compliance costs as well as catalyst and chemical costs. Nitrogen fertilizer direct operating expenses (exclusive of depreciation and amortization) for the year ended December 31, 2015 were \$106.1 million, as compared to \$98.9 million for the year ended December 31, 2014. The total increase of \$7.2 million for the year ended December 31, 2015, as compared to the year ended December 31, 2014, resulted primarily from higher turnaround expenses (\$7.0 million), personnel costs (\$2.9 million) and repairs and maintenance (\$2.2 million), partially offset by lower utilities, net (\$2.3 million), refractory brick amortization (\$2.2 million) and outside services (\$1.8 million). The increase in personnel costs is partially attributable to the increased efforts required to complete activities during downtime. The increase in repairs and maintenance is due to the nitrogen fertilizer business being able to perform an increased amount of normal repairs and maintenance during the downtime. The lower utilities, net are primarily the result of lower usage during the downtime from the turnaround and the Linde outages.

Operating Income. Nitrogen fertilizer operating income was \$68.7 million for the year ended December 31, 2015, as compared to operating income of \$82.8 million for the year ended December 31, 2014. The decrease of \$14.1 million for the year ended December 31, 2015 as compared to the year ended December 31, 2014 was the result of the decrease in net sales (\$9.5 million) and increases in direct operating expenses (\$7.2 million), selling, general and administrative expenses (\$3.1 million) and depreciation and amortization (\$1.1 million), partially offset by a decrease in cost of materials and other (\$6.8 million).

Liquidity and Capital Resources

Although results are consolidated for financial reporting, CVR Energy, CVR Refining and CVR Partners are independent business entities and operate with independent capital structures. Since the Nitrogen Fertilizer Partnership's IPO in April 2011 and the Refining Partnership's IPO in January 2013, with the exception of cash distributions paid to us by the Nitrogen Fertilizer Partnership and the Refining Partnership, the cash needs of the Nitrogen Fertilizer Partnership and the Refining Partnership have been met independently from the cash needs of CVR Energy and each other with a combination of existing cash and cash equivalent balances, cash generated from operating activities and credit facility borrowings. The Refining Partnership's and the Nitrogen Fertilizer Partnership's ability to generate sufficient cash flows from their respective operating activities and to then make distributions on their common units, including to us (which we will need to pay salaries, reporting expenses and other expenses as well as dividends on our common stock) will continue to be primarily dependent on producing or purchasing, and selling, sufficient quantities of refined and nitrogen fertilizer products at margins sufficient to cover fixed and variable expenses.

We believe that the petroleum business and the nitrogen fertilizer business' cash flows from operations and existing cash and cash equivalents, along with borrowings under their respective existing credit facilities as necessary, will be sufficient to satisfy the anticipated cash requirements associated with their existing operations for at least the next twelve months, and that we have sufficient cash resources to fund our operations for at least the next twelve months. However, future capital expenditures and other cash requirements could be higher than we currently expect as a result of various factors. Additionally, the ability to generate sufficient cash from operating activities depends on future performance, which is subject to general economic, political, financial, competitive, and other factors outside our control.

Cash Balances and Other Liquidity

As of December 31, 2016, we had consolidated cash and cash equivalents of \$735.8 million. Of that amount, \$366.1 million was cash and cash equivalents of CVR Energy, \$314.1 million was cash and cash equivalents of the Refining Partnership and \$55.6 million was cash and cash equivalents of the Nitrogen Fertilizer Partnership. As of February 14, 2017, we had consolidated cash and cash equivalents of approximately \$851.8 million.

The Amended and Restated ABL Credit Facility provides the Refining Partnership with borrowing availability of up to \$400.0 million with an incremental facility, subject to compliance with a borrowing base. The Amended and Restated ABL Credit Facility is scheduled to mature on December 20, 2017. The proceeds of the loans may be used for capital expenditures and working capital and general corporate purposes of the Refining Partnership and the credit facility provides for loans and letters of credit in an amount up to the aggregate availability under the facility, subject to meeting certain borrowing base conditions, with sub-limits of 10% of the total facility commitment for swingline loans and 90% of the total facility commitment for letters of credit. As of February 14, 2017, the Refining Partnership had \$312.4 million available under the Amended and Restated ABL Credit Facility and \$250 million available under the intercompany credit facility. Availability under the Amended and Restated ABL Credit Facility was limited by borrowing base conditions.

On April 1, 2016, in connection with the closing of the East Dubuque Merger, the Nitrogen Fertilizer Partnership entered into a \$300.0 million senior term loan credit facility (the "CRLLC Facility") with CRLLC, as the lender, the proceeds of which were used by the Nitrogen Fertilizer Partnership (i) to fund the repayment of amounts outstanding under the Wells Fargo Credit Agreement discussed in Note 17 ("Related Party Transactions") (ii) to pay the cash consideration and to pay fees and expenses in connection with the East Dubuque Merger and related transactions and (iii) to repay all of the loans outstanding under the Credit Agreement discussed below. The CRLLC Facility had a term of two years and an interest rate of 12.0% per annum. Interest was calculated on the basis of the actual number of days elapsed over a 360-day year and payable quarterly. In April 2016, the Nitrogen Fertilizer Partnership borrowed \$300.0 million under the CRLLC Facility. On June 10, 2016, the Nitrogen Fertilizer Partnership paid off the \$300.0 million outstanding under the CRLLC Facility, paid \$7.0 million in interest, and terminated the CRLLC Facility.

In June 2016, the Nitrogen Fertilizer Partnership and CVR Nitrogen Finance issued \$645.0 million aggregate principal amount of the 2023 Notes, as further discussed below. The Nitrogen Fertilizer Partnership received approximately \$622.9 million of cash proceeds, net of the original issue discount and underwriting fees, but before deducting other third-party fees and expenses associated with the offering. The net proceeds from the sale of the 2023 Notes were used to (i) repay all amounts outstanding under the CRLLC Facility; (ii) finance the Tender Offer and (iii) pay related fees and expenses.

Also in June 2016, the Nitrogen Fertilizer Partnership repaid the substantial majority of the aggregate principal amount outstanding under the 2021 Notes in connection with the Tender Offer and the Change of Control Offer. The total amount paid related to the Tender Offer and Change of Control Offer was approximately \$320.6 million, including an approximate \$4.7 million premium. In November 2016, the Nitrogen Fertilizer Partnership repurchased an additional \$1.9 million principal amount of 2021 Notes, resulting in a \$0.2 million gain on extinguishment of debt. As of December 31, 2016, \$2.2 million of aggregate principal amount of the 2021 Notes was outstanding. As of December 31, 2016, the 2021 Notes contain substantially no restrictive covenants and are not secured.

The Refining Partnership and the Nitrogen Fertilizer Partnership have distribution policies in which they generally distribute all of their available cash each quarter, within 60 days after the end of each quarter. The Refining Partnership's distributions began with the quarter ended March 31, 2013 and were adjusted to exclude the period from January 1, 2013 through January 22, 2013 (the period preceding the closing of the Refining Partnership IPO). The distributions are made to all common unitholders. As of December 31, 2016, we held approximately 66% and 34% of the Refining Partnership's and the Nitrogen Fertilizer Partnership's common units outstanding, respectively. The amount of each distribution will be determined pursuant to each general partner's calculation of available cash for the applicable quarter. The general partner of each partnership, as a non-economic interest holder, is not entitled to receive cash distributions. As a result of each general partner's distribution policy, funds held by the Refining Partnership and the Nitrogen Fertilizer Partnership will not be available for our use, and we as a unitholder will receive our applicable percentage of the distribution of funds within 60 days following each quarter. The Refining Partnership and the Nitrogen Fertilizer Partnership do not have a legal obligation to pay distributions and there is no guarantee that they will pay any distributions on the units in any quarter.

Borrowing Activities

2023 Notes. On June 10, 2016, the Nitrogen Fertilizer Partnership and CVR Nitrogen Finance Corporation issued \$645.0 million aggregate principal amount of 9.250%. The 2023 Notes were issued at a \$16.1 million discount, which is being amortized over the term of the 2023 Notes as interest expense using the effective-interest method. As a result of the issuance, approximately \$9.4 million of debt issuance costs were incurred, which are being amortized over the term of the 2023 Notes as interest expense using the effective-interest method.

The 2023 Notes are guaranteed on a senior secured basis by all of the Partnership's existing subsidiaries.

At any time prior to June 15, 2019, the Nitrogen Fertilizer Partnership may on any of one or more occasions redeem up to 35% of the aggregate principal amount of the 2023 Notes issued under the indenture governing the 2023 Notes in an amount not greater than the net proceeds of one or more public equity offerings at a redemption price of 109.250% of the principal amount of the 2023 Notes, plus any accrued and unpaid interest to the date of redemption. Prior to June 15, 2019, the Nitrogen Fertilizer Partnership may on any one or more occasions redeem all or part of the 2023 Notes at a redemption price equal to the sum of: (i) the principal amount thereof, plus (ii) the Make Whole Premium, as defined in the indenture governing the 2023 Notes, at the redemption date, plus any accrued and unpaid interest to the applicable redemption date.

On and after June 15, 2019, the Nitrogen Fertilizer Partnership may on any one or more occasions redeem all or a part of the 2023 Notes at the redemption prices (expressed as percentages of principal amount) set forth below, plus any accrued and unpaid interest to the applicable redemption date on such Notes, if redeemed during the 12-month period beginning on June 15 of the years indicated below:

Year	Percentage
2019	104.625%
2020	102.313%
2021 and thereafter	100.000%

Upon the occurrence of certain change of control events as defined in the indenture (including the sale of all or substantially all of the properties or assets of the Nitrogen Fertilizer Partnership and its subsidiaries taken as a whole), each holder of the 2023 Notes will have the right to require that the Nitrogen Fertilizer Partnership repurchase all or a portion of such holder's 2023 Notes in cash at a purchase price equal to 101% of the aggregate principal amount thereof plus any accrued and unpaid interest to the date of repurchase.

The 2023 Notes contain customary covenants for a financing of this type that, among other things, restrict the Nitrogen Fertilizer Partnership's ability and the ability of certain of its subsidiaries to: (i) sell assets; (ii) pay distributions on, redeem or repurchase the Nitrogen Fertilizer Partnership's units or redeem or repurchase its subordinated debt; (iii) make investments; (iv) incur or guarantee additional indebtedness or issue preferred units; (v) create or incur certain liens; (vi) enter into agreements that restrict distributions or other payments from the Nitrogen Fertilizer Partnership's restricted subsidiaries to the Nitrogen Fertilizer Partnership; (vii) consolidate, merge or transfer all or substantially all of the Nitrogen Fertilizer Partnership's assets; (viii) engage in transactions with affiliates; and (ix) create unrestricted subsidiaries. Most of the foregoing covenants would cease to apply at such time that the 2023 Notes are rated investment grade by both Standard & Poor's Ratings Services and Moody's Investors Service, Inc. However, such covenants would be reinstated if the 2023 Notes subsequently lost their investment grade rating. In addition, the indenture contains customary events of default, the occurrence of which would result in, or permit the trustee or the holders of at least 25% of the 2023 Notes to cause, the acceleration of the 2023 Notes, in addition to the pursuit of other available remedies.

The indenture governing the 2023 Notes prohibits the Nitrogen Fertilizer Partnership from making distributions to unitholders if any default or event of default (as defined in the indenture) exists. In addition, the indenture limits the Nitrogen Fertilizer Partnership's ability to pay distributions to unitholders. The covenants will apply differently depending on the Nitrogen Fertilizer Partnership's fixed charge coverage ratio (as defined in the indenture). If the fixed charge coverage ratio is not less than 1.75 to 1.0, the Nitrogen Fertilizer Partnership will generally be permitted to make restricted payments, including distributions to unitholders, without substantive restriction. If the fixed charge coverage ratio is less than 1.75 to 1.0, the Nitrogen Fertilizer Partnership will generally be permitted to make restricted payments, including distributions to unitholders, up to an aggregate \$75.0 million basket plus certain other amounts referred to as "incremental funds" under the indenture. As of December 31, 2016, the Nitrogen Fertilizer Partnership was in compliance with the covenants, and the ratio was satisfied (not less than 1.75 to 1.0).

2022 Notes. On October 23, 2012, Refining LLC and Coffeyville Finance issued \$500.0 million aggregate principal amount of the 2022 Notes. The net proceeds from the offering of the 2022 Notes were used to purchase all of the First Lien Secured Notes due 2015 through a tender offer and settled redemption in the fourth quarter of 2012.

The debt issuance costs of the 2022 Notes totaled approximately \$8.7 million and are being amortized over the term of the 2022 Notes as interest expense using the effective-interest amortization method. As of December 31, 2016, the 2022 Notes had an aggregate principal balance and a net carrying value of \$500.0 million.

The 2022 Notes were fully and unconditionally guaranteed by CVR Refining and each of Refining LLC's existing domestic subsidiaries (other than the co-issuer, Coffeyville Finance) on a joint and several basis. After January 23, 2013, the 2022 Notes were no longer secured. CVR Refining has no independent assets or operations and Refining LLC is a 100% owned finance subsidiary of CVR Refining. CVR Energy, CVR Partners and CRNF are not guarantors.

On September 17, 2013, Refining LLC and Coffeyville Finance consummated a registered exchange offer, whereby all \$500.0 million of the outstanding 2022 Notes were exchanged for an equal principal amount of notes with identical terms that were registered under the Securities Act of 1933, as amended. The exchange offer fulfilled

the Refining Partnership's obligations contained in the registration rights agreement entered into in connection with the issuance of the 2022 Notes. The Refining Partnership incurred approximately \$0.4 million of debt registration costs related to the registration and exchange offer during the year ended December 31, 2013, which are being amortized over the term of the 2022 Notes as interest expense using the effective-interest amortization method.

The 2022 Notes bear interest at a rate of 6.5% per annum and mature on November 1, 2022, unless earlier redeemed or repurchased by the issuers. Interest is payable on the 2022 Notes semi-annually on May 1 and November 1 of each year, to holders of record at the close of business on April 15 and October 15, as the case may be, immediately preceding each such interest payment date.

The issuers have the right to redeem the 2022 Notes at a redemption price of (i) 103.250% of the principal amount thereof, if redeemed during the twelve-month period beginning on November 1, 2017; (ii) 102.167% of the principal amount thereof, if redeemed during the twelve-month period beginning on November 1, 2018; (iii) 101.083% of the principal amount thereof, if redeemed during the twelve-month period beginning on November 1, 2019; and (iv) 100% of the principal amount, if redeemed on or after November 1, 2020, in each case, plus any accrued and unpaid interest. Prior to November 1, 2017, some or all of the 2022 Notes may be redeemed at a price equal to 100% of the principal amount thereof, plus a make-whole premium and any accrued and unpaid interest.

In the event of a "change of control," the issuers are required to offer to buy back all of the 2022 Notes at 101% of their principal amount. A change of control is generally defined as (i) the direct or indirect sale or transfer (other than by a merger) of all or substantially all of the assets of Refining LLC to any person other than qualifying owners (as defined in the indenture), (ii) liquidation or dissolution of Refining LLC, or (iii) any person, other than a qualifying owner, directly or indirectly acquiring 50% of the voting stock of Refining LLC.

The indenture governing the 2022 Notes imposes covenants that restrict the ability of the issuers and subsidiary guarantors to (i) issue debt, (ii) incur or otherwise cause liens to exist on any of their property or assets, (iii) declare or pay dividends, repurchase equity, or make payments on subordinated or unsecured debt, (iv) make certain investments, (v) sell certain assets, (vi) merge, consolidate with or into another entity, or sell all or substantially all of their assets, and (vii) enter into certain transactions with affiliates. Most of the foregoing covenants would cease to apply at such time that the 2022 Notes are rated investment grade by both Standard & Poor's Rating Services and Moody's Investors Services, Inc. However, such covenants would be reinstated if the 2022 Notes subsequently lost their investment grade rating. In addition, the indenture contains customary events of default, the occurrence of which would result in, or permit the trustee or the holders of at least 25% of the 2022 Notes to cause, the acceleration of the 2022 Notes, in addition to the pursuit of other available remedies.

The indenture governing the 2022 Notes prohibits the Refining Partnership from making distributions to its unitholders if any default or event of default (as defined in the indenture) exists. In addition, the indenture limits the Refining Partnership's ability to pay distributions to unitholders. The covenants will apply differently depending on the Refining Partnership's fixed charge coverage ratio (as defined in the indenture). If the fixed charge coverage ratio is not less than 2.5 to 1.0, the Refining Partnership will generally be permitted to make restricted payments, including distributions to its unitholders, without substantive restriction. If the fixed charge coverage ratio is less than 2.5 to 1.0, the Refining Partnership will generally be permitted to make restricted payments, including distributions to its unitholders, up to an aggregate \$100.0 million basket plus certain other amounts referred to as "incremental funds" under the indenture. The Refining Partnership was in compliance with the covenants as of December 31, 2016, and the ratio was satisfied (not less than 2.5 to 1.0).

Amended and Restated Asset Based (ABL) Credit Facility. On December 20, 2012, the Credit Parties entered into the Amended and Restated ABL Credit Facility with Wells Fargo Bank, National Association, as administrative agent and collateral agent for a syndicate of lenders. The Amended and Restated ABL Credit Facility replaced our prior ABL credit facility. Under the Amended and Restated ABL Credit Facility, the Refining Partnership assumed our position as borrower and our obligations under the Amended and Restated ABL Credit Facility upon the closing of the Refining Partnership IPO on January 23, 2013. The Amended and Restated ABL Credit Facility is a \$400.0 million asset-based revolving credit facility, with sub-limits for letters of credit and swingline loans of \$360.0

million and \$40.0 million, respectively. The Amended and Restated ABL Credit Facility also includes a \$200.0 million uncommitted incremental facility. The Amended and Restated ABL Credit Facility permits the payment of distributions, subject to the following conditions: (i) no default or event of default exists, (ii) excess availability and projected excess availability at all times during the three-month period following the distribution exceeds 20% of the lesser of the borrowing base and the total commitments; provided, that, if excess availability and projected excess availability for the six-month period following the distribution is greater than 25% at all times, then the following condition in clause (iii) will not apply, and (iii) the fixed charge coverage ratio for the immediately preceding 12-month period shall be equal to or greater than 1.10 to 1.00. The Amended and Restated ABL Credit Facility has a five-year maturity and will be used for working capital and other general corporate purposes (including permitted acquisitions).

Borrowings under the Amended and Restated ABL Credit Facility bear interest at either a base rate or LIBOR plus an applicable margin. The applicable margin is (i)(a) 1.75% for LIBOR borrowings and (b) 0.75% for prime rate borrowings, in each case if quarterly average excess availability exceeds 50% of the lesser of the borrowing base and the total commitments and (ii)(a) 2.00% for LIBOR borrowings and (b) 1.00% for prime rate borrowings, in each case if quarterly average excess availability is less than or equal to 50% of the lesser of the borrowing base and the total commitments. The Amended and Restated ABL Credit Facility also requires the payment of customary fees, including an unused line fee of (i) 0.40% if the daily average amount of loans and letters of credit outstanding is less than 50% of the lesser of the borrowing base and the total commitments and (ii) 0.30% if the daily average amount of loans and letters of credit outstanding is equal to or greater than 50% of the lesser of the borrowing base and the total commitments. The Refining Partnership is also required to pay customary letter of credit fees equal to, for standby letters of credit, the applicable margin on LIBOR loans on the maximum amount available to be drawn under and, for commercial letters of credit, the applicable margin on LIBOR loans less 0.50% on the maximum amount available to be drawn under, and customary facing fees equal to 0.125% of the face amount of, each letter of credit.

The Amended and Restated ABL Credit Facility also contains customary covenants for a financing of this type that limit the ability of the Credit Parties and their subsidiaries to, among other things, incur liens, engage in a consolidation, merger, purchase or sale of assets, pay dividends, incur indebtedness, make advances, investments and loans, enter into affiliate transactions, issue equity interests, or create subsidiaries and unrestricted subsidiaries. The Amended and Restated ABL Credit Facility also contains a fixed charge coverage ratio financial covenant, as defined therein. The Refining Partnership was in compliance with the covenants of the Amended and Restated ABL Credit Facility as of December 31, 2016.

Nitrogen Fertilizer Partnership Credit Facility. On April 13, 2011, CRNF, as borrower, and the Nitrogen Fertilizer Partnership, as guarantor, entered into the Nitrogen Fertilizer Partnership credit facility with a group of lenders including Goldman Sachs Lending Partners LLC, as administrative and collateral agent. The Nitrogen Fertilizer Partnership credit facility included a term loan facility of \$125.0 million and a revolving credit facility of \$25.0 million with an uncommitted incremental facility of up to \$50.0 million. There was no scheduled amortization and the Nitrogen Fertilizer Partnership credit facility was scheduled to mature in April 2016, but was repaid and terminated as discussed below.

Borrowing under the Nitrogen Fertilizer Partnership credit facility bore interest based on a pricing grid determined by the trailing four quarter leverage ratio. As of March 31, 2016, the initial pricing for Eurodollar rate loans under the Nitrogen Fertilizer Partnership credit facility was based on the Eurodollar rate plus a margin of 3.50% or for base rate loans, the prime rate plus 2.50%. Under its terms, the lenders under the Nitrogen Fertilizer Partnership credit facility were granted a perfected first priority security interest (subject to certain customary exceptions) in substantially all of the assets of CRNF and the Nitrogen Fertilizer Partnership and all of the capital stock of CRNF and each domestic subsidiary owned by the Nitrogen Fertilizer Partnership or CRNF. CRNF was the borrower under the Nitrogen Fertilizer Partnership credit facility. All obligations under the Nitrogen Fertilizer Partnership credit facility were unconditionally guaranteed by the Nitrogen Fertilizer Partnership and substantially all of its future, direct and indirect, domestic subsidiaries. Borrowings under the credit facility were non-recourse to the Company and its direct subsidiaries.

Merger-Related Financing Arrangements

On April 1, 2016, the Nitrogen Fertilizer Partnership incurred additional indebtedness in connection with consummating the East Dubuque Merger. The additional indebtedness included the 2021 Notes and also included outstanding advances under the Wells Fargo Credit Agreement. The outstanding balance under the Wells Fargo Credit Agreement was repaid in full and the Wells Fargo Credit Agreement was terminated on April 1, 2016. The repayment of the Wells Fargo Credit Agreement was funded from amounts drawn on the CRLLC Facility.

In June 2016, the Nitrogen Fertilizer Partnership issued \$645.0 million aggregate principal amount of the 2023 Notes. The Nitrogen Fertilizer Partnership received approximately \$622.9 million of cash proceeds, net of the original issue discount and underwriting fees, but before deducting other third-party fees and expenses associated with the offering. The net proceeds from the sale of the 2023 Notes were used to: (i) repay all amounts outstanding under the CRLLC Facility; (ii) finance the Tender Offer and (iii) pay related fees and expenses.

On June 10, 2016, the Nitrogen Fertilizer Partnership paid off the \$300.0 million outstanding under the CRLLC Facility and paid \$7.0 million in interest, and the CRLLC Facility was terminated.

Also in June 2016, the Nitrogen Fertilizer Partnership repaid the substantial majority of the aggregate principal amount outstanding under the 2021 Notes in connection with the Tender Offer and the Change of Control Offer. The total amount paid related to the Tender Offer and Change of Control Offer was approximately \$320.6 million, including an approximate \$4.7 million premium. As of December 31, 2016, \$2.2 million of aggregate principal amount of the 2021 Notes was outstanding. As of December 31, 2016, the 2021 Notes contain substantially no restrictive covenants and are not secured.

Nitrogen Fertilizer Partnership Interest Rate Swaps

Prior to the termination of the Nitrogen Fertilizer Partnership credit facility on April 1, 2016, the Nitrogen Fertilizer Partnership's profitability and cash flows were affected by changes in interest rates on credit facility borrowings, specifically LIBOR and prime rates. The primary purpose of the Nitrogen Fertilizer Partnership's interest rate risk management activities is to hedge the exposure to changes in interest rates by using interest rate derivatives to convert some or all of the interest rates on borrowings from a floating rate to a fixed interest rate.

The Nitrogen Fertilizer Partnership has determined that the two interest rate swaps agreements entered into in 2011 qualified for hedge accounting treatment. The impact recorded for each of the three years ended December 31, 2016, 2015 and 2014 was \$0.1 million, \$1.1 million and \$1.1 million, respectively, in additional interest expense. The interest rate swaps agreements terminated in February 2016.

Asset Based (ABL) Credit Facility.

On September 30, 2016, the Nitrogen Fertilizer Partnership entered into the ABL Credit Facility with a group of lenders and UBS AG, Stamford Branch, as administrative agent and collateral agent. The ABL Credit Facility is a senior secured asset based revolving credit facility in an aggregate principal amount of availability of up to \$50.0 million with an incremental facility, which permits an increase in borrowings of up to \$25.0 million in the aggregate subject to additional lender commitments and certain other conditions. The proceeds of the loans may be used for capital expenditures and working capital and general corporate purposes of the Nitrogen Fertilizer Partnership and its subsidiaries. The ABL Credit Facility provides for loans and standby letters of credit in an amount up to the aggregate availability under the facility, subject to meeting certain borrowing base conditions, with sub-limits of the lesser of 10% of the total facility commitment and \$5.0 million for swingline loans and \$10.0 million for letters of credit. The ABL Credit Facility has a five-year maturity and will be used for working capital and other general corporate purposes.

At the option of the borrowers, loans under the ABL Credit Facility initially bear interest at an annual rate equal to (i) 2.00% plus LIBOR or (ii) 1.00% plus a base rate, subject to a 0.50% step-down based on the previous quarter's excess availability.

The Nitrogen Fertilizer Partnership must also pay a commitment fee on the unutilized commitments to the lenders under the ABL Credit Facility equal to (a) 0.375% per annum for the first full calendar quarter after the closing date and (b) thereafter, (i) 0.375% per annum if utilization under the facility is less than 50% of the total commitments and (ii) 0.25% per annum if utilization under the facility is equal to or greater than 50% of the total commitments. The borrowers must also pay customary letter of credit fees equal to 2.00%, subject to a 0.50% step-down based on the previous quarter's excess availability, on the maximum amount available to be drawn under, and customary facing fees equal to 0.125% of the face amount of, each letter of credit.

The ABL Credit Facility also contains customary covenants for a financing of this type that limit the ability of the Credit Parties and their subsidiaries to, among other things, incur liens, engage in a consolidation, merger, purchase or sale of assets, pay dividends, incur indebtedness, make advances, investments and loans, enter into affiliate transactions, issue equity interests, or create subsidiaries and unrestricted subsidiaries. The ABL Credit Facility also contains a fixed charge coverage ratio financial covenant, as defined therein. The Nitrogen Fertilizer Partnership was in compliance with the covenants of the ABL Credit Facility as of December 31, 2016.

As of December 31, 2016, the Nitrogen Fertilizer Partnership and its subsidiaries had availability under the ABL Credit Facility of \$49.3 million. There were no borrowings outstanding under the ABL Credit Facility as of December 31, 2016.

Capital Spending

We divide the petroleum business and the nitrogen fertilizer business' capital spending needs into two categories: maintenance and growth. Maintenance capital spending includes only non-discretionary maintenance projects and projects required to comply with environmental, health and safety regulations. We undertake discretionary capital spending based on the expected return on incremental capital employed. Discretionary capital projects generally involve an expansion of existing capacity, improvement in product yields, and/or a reduction in direct operating expenses. Major scheduled turnaround expenses are expensed when incurred.

The following table summarizes our total actual capital expenditures for 2016 and current estimated capital expenditures in 2017 by operating segment and major category. These estimates may change as a result of unforeseen circumstances or a change in our plans, and amounts may not be spent in the manner allocated below:

	Year Ended December 31,	
	2016 Actual	2017 Estimate
	(in millions)	
	(unaudited)	
Petroleum Business (the Refining Partnership):		
<i>Coffeyville refinery:</i>		
Maintenance	\$ 39.1	\$ 58.0
Growth	37.2	15.0
Coffeyville refinery total capital excluding major scheduled turnaround expenses	76.3	73.0
<i>Wynnewood refinery:</i>		
Maintenance	20.6	63.0
Growth	0.5	5.0
Wynnewood refinery total capital excluding major scheduled turnaround expenses	21.1	68.0
<i>Other Petroleum:</i>		
Maintenance	3.9	16.0
Growth	1.0	—
Other petroleum total capital excluding major scheduled turnaround expenses	4.9	16.0
Petroleum business total capital excluding major scheduled turnaround expenses	102.3	157.0
Nitrogen Fertilizer Business (the Nitrogen Fertilizer Partnership):		
Maintenance	13.7	15.0
Growth	9.5	—
Nitrogen fertilizer business total capital excluding major scheduled turnaround expenses	23.2	15.0
Corporate	7.2	11.0
Total capital spending excluding major scheduled turnaround expenses	\$ 132.7	\$ 183.0

The petroleum business' and the nitrogen fertilizer business' estimated capital expenditures are subject to change due to unanticipated increases in the cost, scope and completion time for capital projects. For example, they may experience increases in labor or equipment costs necessary to comply with government regulations or to complete projects that sustain or improve the profitability of the refineries or nitrogen fertilizer plants. Capital spending for the Nitrogen Fertilizer Partnership's nitrogen fertilizer business and the Refining Partnership's petroleum business is determined by each partnership's respective board of directors of its general partner.

In October 2014, the board of directors of the general partner of the Refining Partnership approved the construction of a hydrogen plant at the Coffeyville refinery. The hydrogen plant will increase the overall plant liquid volume recovery and provide additional hydrogen that is needed for environmental compliance. As of December 31, 2016, the Refining Partnership had incurred costs of approximately \$99.1 million, excluding capitalized interest, for the hydrogen plant. The total estimated cost of this project, excluding capitalized interest, is approximately \$108.0 million, including the remaining estimated costs to fully complete the project and for pipeline tie in work.

During 2015, the Refining Partnership constructed two crude oil storage tanks in Cushing, which provide the petroleum business with an additional 0.5 million barrels of crude storage capacity. The tanks became operational in

October 2015. As of December 31, 2016, the storage tanks have been fully completed with incurred total costs of approximately \$10.3 million, excluding capitalized interest.

Our estimated capital expenditures are subject to change due to unanticipated increases/decreases in the cost, scope and completion time for our capital projects. For example, we may experience increases/decreases in labor or equipment costs necessary to comply with government regulations or to complete projects that sustain or improve the profitability of our refineries.

Cash Flows

The following table sets forth our consolidated cash flows for the periods indicated below:

	Year Ended December 31,		
	2016	2015	2014
	(in millions)		
Net cash provided by (used in):			
Operating activities	\$ 267.5	\$ 536.8	\$ 640.3
Investing activities	(201.4)	(150.6)	(296.6)
Financing activities	(95.4)	(374.8)	(432.1)
Net increase (decrease) in cash and cash equivalents	\$ (29.3)	\$ 11.4	\$ (88.4)

Cash Flows Provided by Operating Activities

For purposes of this cash flow discussion, we define trade working capital as accounts receivable, inventory and accounts payable. Other working capital is defined as all other current assets and liabilities except trade working capital.

Net cash flows provided by operating activities for the year ended December 31, 2016 were \$267.5 million. The positive cash flow from operating activities generated over this period was primarily driven by \$8.9 million of net income before noncontrolling interest and favorable impacts to other working capital, partially offset by unfavorable impacts to trade working capital. Trade working capital for the year ended December 31, 2016 resulted in a net cash outflow of \$65.2 million, which was attributable to increases in accounts receivable (\$47.5 million) and inventory (\$7.3 million), primarily attributable to increased pricing for petroleum products, and a decrease in accounts payable (\$10.4 million). Each of the cash flow impacts in trade working capital were largely attributable to the crude oil pricing environment and increases in sales prices for gasoline and distillates at the petroleum business in 2016 as compared to 2015. Other working capital activities resulted in a net cash inflow of \$146.3 million, which was primarily related to increases in other current liabilities (\$151.2 million) and due to parent (\$22.2 million), partially offset by decreases in deferred revenue (\$20.4 million) and accrued income taxes (\$3.3 million) and an increase in prepaid expenses and other current assets (\$3.4 million). The large increase in other current liabilities was primarily attributable to the increase in the biofuel blending obligation at the petroleum business to fulfill the petroleum business' requirements under the RFS, as a result of increased RINs obligation associated with increased RINs prices during the year ended December 31, 2016. The increase in due to parent was the result of the timing and application of the tax payments to AEPC under the Tax Allocation Agreement. The decrease in deferred revenue was primarily attributable to the East Dubuque Merger. Settlements on derivative contracts during 2016 also contributed to the positive cash flow from operating activities.

Net cash flows provided by operating activities for the year ended December 31, 2015 were \$536.8 million. The positive cash flow from operating activities generated over this period was primarily driven by \$297.8 million of net income before noncontrolling interest and favorable impacts to trade working capital and other working capital. Trade working capital for the year ended December 31, 2015 resulted in a net cash inflow of \$66.4 million, which was attributable to decreases in accounts receivable (\$41.0 million) and inventory (\$39.7 million), partially offset by a decrease in accounts payable (\$14.3 million). Each of the cash flow impacts in trade working capital were largely

attributable to the crude oil pricing environment and significant decreases in sales prices for gasoline and distillates at the petroleum business in 2015 as compared to 2014. Other working capital activities resulted in net cash inflow of \$14.8 million, which was primarily related to decreases in prepaid expenses and other current assets (\$40.4 million) and due from parent (\$32.8 million), partially offset by decreases in other current liabilities (\$52.1 million) and deferred revenue (\$10.5 million). The decrease in prepaid expenses and other current assets was primarily due to the sale of trading securities, the timing of payments associated with the petroleum business' crude oil intermediation agreement and a reduction in prepaid insurance. The decrease in due from parent was the result of the timing and application of overpayments to AEPC under the Tax Allocation Agreement. The decrease in other current liabilities was primarily attributable to a decrease in the biofuel blending obligation at the petroleum business as a result of increased RINs purchases during the year ended December 31, 2015 to fulfill the petroleum business' requirements under the RFS. The decrease in deferred revenue was primarily attributable to lower market demand for prepaid contracts at the nitrogen fertilizer business for the year ended December 31, 2015 compared to the year ended December 31, 2014.

Net cash flows provided by operating activities for the year ended December 31, 2014 were \$640.3 million. The positive cash flow from operating activities generated over this period was primarily driven by \$309.4 million of net income before noncontrolling interest and favorable impacts to trade working capital of \$211.2 million, partially offset by an unfavorable impact to other working capital of \$6.3 million. Trade working capital for the year ended December 31, 2014 resulted in a net cash inflow of \$211.2 million, which was attributable to decreases in inventory (\$197.3 million) and accounts receivable (\$105.7 million), partially offset by a decrease in accounts payable (\$91.8 million). Each of the cash flow impacts in trade working capital were largely attributable to the crude oil pricing environment and significant reduction in pricing during the fourth quarter of 2014. The favorable trade working capital impacts for inventory and accounts receivable resulted from higher product prices and crude oil prices at the end of 2013 as compared to the end of 2014. These favorable trade working capital impacts were partially offset by the decrease in accounts payable at the petroleum business as a result of payables related to crude purchases based on higher crude oil prices at the end of 2013 as compared to the end of 2014, as well as payments for a judgment in an on-going litigation matter during 2014. Other working capital activities resulted in net cash outflow of \$6.3 million, which was primarily related to an increase in the due (to) from parent (\$44.6 million), partially offset by an increase in other current liabilities (\$15.0 million), an increase in deferred revenue (\$12.9 million) and a decrease in prepaid expenses and other current assets (\$10.7 million). The increase in due to (from) parent was the result of overpayments to AEPC under the Tax Allocation Agreement. The increase in other current liabilities was primarily attributable to an increase in accruals related to the biofuel blending obligation as a result of higher RINs prices as of December 31, 2014 as compared to the prior year. The increase in deferred revenue was primarily attributable to higher market demand for prepaid contracts at the nitrogen fertilizer business for the year ended December 31, 2014 compared to the prior period. The decrease in prepaid expenses and other current assets was primarily due to a reduction in prepaid insurance and the timing of payments related to certain other prepaid items.

Cash Flows Used In Investing Activities

Net cash used in investing activities for the year ended December 31, 2016 was \$201.4 million compared to \$150.6 million for the year ended December 31, 2015. The increase of \$50.8 million of cash used in investing activities was primarily due to the net cash paid for the acquisition of CVR Nitrogen (\$63.8 million), security purchases (\$18.6 million), investment in VPP (\$5.6 million) and a decrease in proceeds from available-for-sale securities (\$48.7 million), partially offset by a decrease in capital expenditures during 2016 (\$86.0 million).

Net cash used in investing activities for the year ended December 31, 2015 was \$150.6 million compared to \$296.6 million for the year ended December 31, 2014. The decrease of \$146.0 million was the result of decreased purchases of available-for-sale securities (\$78.3 million) and proceeds received from the sale of available-for-sale securities (\$68.0 million) for the year ended December 31, 2015. Capital spending remained relatively consistent for the year ended December 31, 2015 compared to the year ended December 31, 2014.

Cash Flows Used In Financing Activities

Net cash used in financing activities for the year ended December 31, 2016 was \$95.4 million. The net cash used in financing activities for the year ended December 31, 2016 was primarily attributable to debt repayments totaling \$496.3 million, dividend payments of \$173.6 million to common stockholders and distributions of \$41.9 million to the Nitrogen Fertilizer Partnership common unitholders, offset by net proceeds of \$628.8 million from the Nitrogen Fertilizer Partnerships' issuance of 2023 Notes.

Net cash used in financing activities for the year ended December 31, 2015 was approximately \$374.8 million. The net cash used in financing activities for the year ended December 31, 2015 was primarily attributable to dividend payments to common stockholders of \$173.7 million and distributions to the Refining Partnership and Nitrogen Fertilizer Partnership common unitholders of \$199.7 million.

Net cash used in financing activities for the year ended December 31, 2014 was approximately \$432.1 million. The net cash used in financing activities for the year ended December 31, 2014 was primarily attributable to dividend payments to common stockholders of \$434.2 million, distributions to the Refining Partnership and Nitrogen Fertilizer Partnership common unitholders of \$184.9 million, partially offset by proceeds of \$188.3 million from the Refining Partnership's Second Underwritten Offering.

As of and for the year ended December 31, 2016, there were no borrowings or repayments under the Amended and Restated ABL Credit Facility or the ABL Credit Facility.

Capital and Commercial Commitments

In addition to long-term debt, we are required to make payments relating to various types of obligations. The following table summarizes our minimum payments as of December 31, 2016 relating to long-term debt outstanding, operating leases, capital lease obligations, unconditional purchase obligations and other specified capital and commercial commitments for the five-year period following December 31, 2016 and thereafter.

	Payments Due by Period						
	Total	2017	2018	2019	2020	2021	Thereafter
	(in millions)						
Contractual Obligations							
Long-term debt(1)	\$ 1,147.2	\$ —	\$ —	\$ —	\$ —	\$ 2.2	\$ 1,145.0
Operating leases(2)	33.0	6.6	5.6	5.0	4.6	4.4	6.8
Capital lease obligations(3)	46.9	1.8	2.1	2.3	2.6	2.9	35.2
Unconditional purchase obligations(4)	1,251.3	149.5	129.3	126.4	109.0	97.4	639.7
Environmental liabilities(5)	4.9	1.5	1.6	1.3	0.1	0.1	0.3
Interest payments(6)	636.1	99.7	99.8	99.9	100.0	100.0	136.7
Total	\$ 3,119.4	\$ 259.1	\$ 238.4	\$ 234.9	\$ 216.3	\$ 207.0	\$ 1,963.7
Other Commercial Commitments							
Standby letters of credit(7)	\$ 28.3	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —

(1) Consists of the 2021 Notes, the 2022 Notes and the 2023 Notes as of December 31, 2016.

(2) The Refining Partnership and the Nitrogen Fertilizer Partnership lease various facilities and equipment, including railcars and real property, under operating leases for various periods.

- (3) The amount includes commitments under capital lease arrangements for two leases associated with pipelines and storage and terminal equipment at the Wynnewood refinery.
- (4) The amount includes (a) commitments under several agreements for the petroleum operations related to pipeline usage, petroleum products storage and petroleum transportation, (b) commitments under an electricity supply agreement with the city of Coffeyville and electricity supply agreements associated with our East Dubuque Facility in Illinois, (c) a product supply agreement with Linde, (d) a pet coke supply agreement with HollyFrontier Corporation with a term ending in December 2017, (e) commitments related to our biofuels blending obligation, (f) various agreements associated with our East Dubuque Facility in Illinois for gas and gas transportation and (g) approximately \$733.7 million payable ratably over fourteen years pursuant to petroleum transportation service agreements between CRRM and each of TransCanada Keystone Pipeline Limited Partnership and TransCanada Keystone Pipeline, LP (together, "TransCanada"). The purchase obligation reflects the exchange rate between the Canadian dollar and the U.S. dollar as of December 31, 2016, where applicable. Under the agreements, CRRM receives transportation of at least 25,000 barrels per day of crude oil with a delivery point at Cushing for a term of twenty years on TransCanada's Keystone pipeline system. The petroleum business began receiving crude oil under the agreements in the first quarter of 2011.
- (5) Environmental liabilities represents our estimated payments required by federal and/or state environmental agencies related to closure of hazardous waste management units at our sites in Coffeyville and Phillipsburg, Kansas and Wynnewood, Oklahoma. We also are required to make payments with respect to other environmental liabilities which are not contractual obligations but which would be necessary for our continued operations. See Item 1. "Business — Environmental Matters."
- (6) Interest payments are based on stated interest rates for our long-term debt outstanding and interest payments for the capital lease obligation as of December 31, 2016.
- (7) Standby letters of credit issued against our Amended and Restated ABL Credit Facility include \$0.2 million of letters of credit issued in connection with environmental liabilities, \$26.5 million in letters of credit to secure transportation services for crude oil and a \$1.6 million letter of credit issued to guarantee a portion of our insurance policy.

The Refining Partnership's and the Nitrogen Fertilizer Partnership's ability to make payments on and to refinance their indebtedness, to fund budgeted capital expenditures and to satisfy their other capital and commercial commitments will depend on their respective independent abilities to generate cash flow in the future. Their ability to refinance their respective indebtedness is also subject to the availability of the credit markets, which in recent periods have been volatile. This, to a certain extent, is subject to refining spreads (for the Refining Partnership), fertilizer margins (for the Nitrogen Fertilizer Partnership) and general economic, financial, competitive, legislative, regulatory and other factors they are unable to control. Our businesses may not generate sufficient cash flow from operations, and future borrowings may not be available to the Nitrogen Fertilizer Partnership under its revolving credit facility or the 2021 and 2023 senior notes or to the Refining Partnership under the Amended and Restated ABL Credit Facility or the 2022 senior notes (or other credit facilities our businesses may enter into in the future) in an amount sufficient to enable them to pay indebtedness or to fund other liquidity needs. They may seek to sell assets to fund liquidity needs but may not be able to do so. They may also need to refinance all or a portion of their indebtedness on or before maturity, and may not be able to refinance such indebtedness on commercially reasonable terms or at all.

Off-Balance Sheet Arrangements

We do not have any "off-balance sheet arrangements" as such term is defined within the rules and regulations of the SEC.

Recent Accounting Pronouncements

Refer to Part II, Item 8, Note 2 ("Summary of Significant Accounting Policies"), of this Report for a discussion of recent accounting pronouncements applicable to us.

Critical Accounting Policies

We prepare our consolidated financial statements in accordance with GAAP. In order to apply these principles, management must make judgments, assumptions and estimates based on the best available information at the time. Actual results may differ based on the accuracy of the information utilized and subsequent events. Our accounting policies are described in the notes to our audited consolidated financial statements included elsewhere in this Report. Our critical accounting policies, which are described below, could materially affect the amounts recorded in our consolidated financial statements.

Goodwill

To comply with Accounting Standards Codification ("ASC") Topic 350, *Intangibles — Goodwill and Other* ("ASC 350"), we perform a test for goodwill impairment annually, or more frequently in the event we determine that a triggering event has occurred. Our annual testing is performed as of November 1 each year. In accordance with ASC 350, we identified our reporting units based upon our two key operating segments. These reporting units are our petroleum and nitrogen fertilizer segments. For 2016, 2015 and 2014, the nitrogen fertilizer segment was the only reporting unit that had goodwill.

In accordance with ASC 350, the nitrogen fertilizer segment may elect to perform a qualitative assessment to determine whether the two-step quantitative impairment test is required. If the nitrogen fertilizer segment elects to perform a qualitative assessment, the two-step impairment test is required only if the nitrogen fertilizer segment concludes that it is more likely than not that the reporting unit's fair value is less than its carrying amount. For the years ended December 31, 2016 and 2015, the nitrogen fertilizer segment elected to perform a qualitative assessment.

The nitrogen fertilizer segment began the qualitative assessment by analyzing the key drivers and other external factors that impact the business in order to determine if any significant events, transactions or other factors had occurred or are expected to occur that would impair earnings or competitiveness, thereby impairing the fair value of the nitrogen fertilizer segment. After assessing the totality of events and circumstances, it was determined that it was not more likely than not that the fair value of the nitrogen fertilizer segment was less than the carrying value, and so it was not necessary to perform the two-step valuation. The key drivers that were considered in the evaluation of the nitrogen fertilizer segment's fair value included: general economic conditions; fertilizer pricing; input costs; liquidity and capital resources; and customer outlook.

Long-Lived Assets

We calculate depreciation and amortization on a straight-line basis over the estimated useful lives of the various classes of depreciable assets. When assets are placed in service, we make estimates of what we believe are their reasonable useful lives. We account for impairment of long-lived assets in accordance with ASC Topic 360, *Property, Plant and Equipment — Impairment or Disposal of Long-Lived Assets* ("ASC 360"). In accordance with ASC 360, we review long-lived assets (excluding goodwill, intangible assets with indefinite lives, and deferred tax assets) for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to estimated undiscounted future net cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated undiscounted future net cash flows, an impairment charge is recognized for the amount by which the carrying amount of the assets exceeds their fair value. Assets to be disposed of are reported at the lower of their carrying value or fair value less cost to sell. No impairment charges were recognized for any of the periods presented.

Derivative Instruments and Fair Value of Financial Instruments

The petroleum business uses futures contracts, options, and forward contracts primarily to reduce exposure to changes in crude oil prices and finished goods product prices to provide economic hedges of inventory positions. Although management considers these derivatives economic hedges, these derivative instruments do not qualify as hedges for hedge accounting purposes under ASC Topic 815, *Derivatives and Hedging* ("ASC 815"), and accordingly are recorded at fair value in the balance sheet. Changes in the fair value of these derivative instruments are recorded into earnings as a component of other income (expense) in the period of change. The estimated fair values of forward and swap contracts are based on quoted market prices and assumptions for the estimated forward yield curves of related commodities in periods when quoted market prices are unavailable. The petroleum business recorded net gains (losses) from derivative instruments of \$(19.4) million, \$(28.6) million and \$185.6 million for the years ended December 31, 2016, 2015 and 2014, respectively.

The nitrogen fertilizer business uses forward swap contracts primarily to reduce the exposure to changes in interest rates on its debt and to provide a cash flow hedge. These derivative instruments have been designated as hedges for accounting purposes. Accordingly, these instruments are recorded at fair value in the Consolidated Balance Sheets, at each reporting period end. The actual measurement of the cash flow hedge ineffectiveness is recognized in earnings, if applicable. The effective portion of the gain or loss on the swaps is reported in AOCI, in accordance with ASC 815.

Other financial instruments consisting of cash and cash equivalents, accounts receivable, and accounts payable are carried at cost, which approximates fair value, as a result of the short-term nature of the instruments.

Share-Based Compensation

We account for share-based compensation in accordance with ASC Topic 718, *Compensation — Stock Compensation* ("ASC 718"). ASC 718 requires that compensation costs relating to share-based payment transactions be recognized in a company's financial statements. ASC 718 applies to transactions in which an entity exchanges its equity instruments for goods or services and also may apply to liabilities an entity incurs for goods or services that are based on the fair value of those equity instruments. Total share-based compensation expense for the years ended December 31, 2016, 2015 and 2014 was \$9.3 million, \$12.8 million and \$12.3 million, respectively.

Income Taxes

We provide for income taxes in accordance with ASC Topic 740, *Income Taxes*, accounting for uncertainty in income taxes. We record deferred tax assets and liabilities to account for the expected future tax consequences of events that have been recognized in our financial statements and our tax returns. We routinely assess the realizability of our deferred tax assets and if we conclude that it is more likely than not that some portion or all of the deferred tax assets will not be realized, the deferred tax asset would be reduced by a valuation allowance. We consider future taxable income in making such assessments which requires numerous judgments and assumptions. We record contingent income tax liabilities, interest and penalties, based on our estimate as to whether, and the extent to which, additional taxes may be due.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

The risk inherent in our market risk sensitive instruments and positions is the potential loss from adverse changes in commodity prices and interest rates. None of our market risk sensitive instruments are held for trading.

Commodity Price Risk

The petroleum business, as a manufacturer of refined petroleum products, and the nitrogen fertilizer business, as a manufacturer of nitrogen fertilizer products, all of which are commodities, have exposure to market pricing for products sold in the future. In order to realize value from our processing capacity, a positive spread between the cost of raw materials and the value of finished products must be achieved (i.e., gross margin or crack spread). The physical commodities that comprise our raw materials and finished goods are typically bought and sold at a spot or index price that can be highly variable.

The petroleum business uses a crude oil purchasing intermediary, Vitol, to purchase the majority of its non-gathered crude oil inventory for the refineries, which allows it to take title to and price its crude oil at locations in close proximity to the refineries, as opposed to the crude oil origination point, reducing its risk associated with volatile commodity prices by shortening the commodity conversion cycle time. The commodity conversion cycle time refers to the time elapsed between raw material acquisition and the sale of finished goods. In addition, the petroleum business seeks to reduce the variability of commodity price exposure by engaging in hedging strategies and transactions that will serve to protect gross margins as forecasted in the annual operating plan. Accordingly, the petroleum business uses commodity derivative contracts to economically hedge future cash flows (i.e., gross margin or crack spreads) and product inventories. With regard to its hedging activities, the petroleum business may enter into, or have entered into, derivative instruments which serve to: lock in or fix a percentage of the anticipated or planned gross margin in future periods when the derivative market offers commodity spreads that generate positive cash flows; hedge the value of inventories in excess of minimum required inventories; and manage existing derivative positions related to a change in anticipated operations and market conditions.

Further, the petroleum business intends to engage only in risk mitigating activities directly related to its businesses. The nitrogen fertilizer business has not historically hedged for commodity prices.

Basis Risk. The effectiveness of our derivative strategies is dependent upon the correlation of the price index utilized for the hedging activity and the cash or spot price of the physical commodity for which price risk is being mitigated. Basis risk is a term we use to define that relationship. Basis risk can exist due to several factors including time or location differences between the derivative instrument and the underlying physical commodity. Our selection of the appropriate index to utilize in a hedging strategy is a prime consideration in our basis risk exposure.

Examples of our basis risk exposure are as follows:

- *Time Basis* — In entering over-the-counter swap agreements, the settlement price of the swap is typically the average price of the underlying commodity for a designated calendar period. This settlement price is based on the assumption that the underlying physical commodity will price ratably over the swap period. If the commodity does not move ratably over the periods, then weighted-average physical prices will be weighted differently than the swap price as the result of timing.
- *Location Basis* — In hedging NYMEX crack spreads, we experience location basis as the settlement of NYMEX refined products (related more to New York Harbor cash markets) which may be different than the prices of refined products in our Group 3 pricing area.

Price and Basis Risk Management Activities.

In the event inventories exceed the petroleum business' target base level of inventories, it may enter into commodity derivative contracts to manage price exposure to inventory positions that are in excess of its base level. Excess inventories are typically the result of plant operations, such as a turnaround or other plant maintenance.

To reduce the basis risk between the price of products for Group 3 and that of the NYMEX associated with selling forward derivative contracts for NYMEX crack spreads, the petroleum business may enter into basis swap positions to lock the price difference. If the difference between the price of products on the NYMEX and Group 3 (or some other price benchmark as specified in the swap) is different than the value contracted in the swap, then it will receive from or owe to the counterparty the difference on each unit of product contracted in the swap, thereby completing the locking of its margin. An example of the petroleum business' use of a basis swap is in the winter heating oil season. The risk associated with not hedging the basis when using NYMEX forward contracts to fix future margins is if the crack spread increases based on prices traded on NYMEX while Group 3 pricing remains flat or decreases then we would be in a position to lose money on the derivative position while not earning an offsetting additional margin on the physical position based on the Group 3 pricing.

From time to time, the petroleum business also holds various NYMEX positions through a third-party clearing house. At December 31, 2016, the Refining Partnership had no open commodity positions. At December 31, 2016, the Refining Partnership's account balance maintained at the third-party clearing house totaled approximately \$2.0 million, which is reflected on the Consolidated Balance Sheets in cash and cash equivalents. NYMEX transactions conducted for the year ended December 31, 2016 resulted in gain (loss) on derivatives, net of approximately \$(0.5) million.

The Refining Partnership enters into commodity swap contracts in order to fix the margin on a portion of future production. Additionally, the Refining Partnership may enter into price and basis swaps in order to fix the price on a portion of its commodity purchases and product sales. The physical volumes are not exchanged and these contracts are net settled with cash. The contract fair value of the commodity swaps is reflected on the Consolidated Balance Sheets with changes in fair value currently recognized in the Consolidated Statements of Operations. At December 31, 2016, the Refining Partnership had open commodity hedging instruments consisting of 4.0 million barrels of crack spreads primarily to fix the margin on a portion of its future distillate production. A change of \$1.00 per barrel in the fair value of the crack spread swaps would result in an increase or decrease in the related fair values of commodity hedging instruments of \$4.0 million. The fair value of the outstanding contracts at December 31, 2016 was a net unrealized loss of \$11.1 million, comprised of short-term unrealized losses.

Interest Rate Risk

As of December 31, 2015 and prior to the expiration of the interest rate swaps on February 12, 2016, the Nitrogen Fertilizer Partnership had exposure to interest rate risk on 50% of its \$125.0 million floating rate term debt. A 1.0% increase over the Eurodollar floor spread of 3.5%, as specified in the credit agreement, would increase interest cost to the Nitrogen Fertilizer Partnership by approximately \$625,000 on an annualized basis, thus decreasing net income by the same amount.

Subsequent to the expiration of the interest rate swaps on February 12, 2016, the Nitrogen Fertilizer Partnership has exposure to interest rate risk on 100% of its \$125.0 million floating rate debt. A 1.0% increase over the Eurodollar floor spread of 3.5%, as specified in the credit agreement, would increase interest cost to the Nitrogen Fertilizer Partnership by approximately \$1,250,000 on an annualized basis, thus decreasing net income by the same amount.

The Nitrogen Fertilizer Partnership's credit facility was scheduled to expire on April 13, 2016. On April 1, 2016, in connection with the completion of the East Dubuque Merger, the Nitrogen Fertilizer Partnership repaid all amounts outstanding under the Credit Agreement and paid \$0.3 million for accrued and unpaid interest. The credit

facility is discussed in Note 10 ("Long-Term Debt") and the interest rate swap agreements are discussed in Note 16 ("Derivative Financial Instruments") to Part II, Item 8 of this Report.

Foreign Currency Exchange

Given that ours, the petroleum business' and the nitrogen fertilizer business' operations are based entirely in the United States, we are not significantly exposed to foreign currency exchange rate risk. A portion of the petroleum business' pipeline transportation costs are transacted in Canadian dollars. Commitments for future periods under this agreement reflect the exchange rate between the Canadian Dollar and the U.S. Dollar as of the end of the reporting period. Based on the short period of time between the billing and settlement of these transportation costs in Canadian dollars, the exposure to foreign currency exchange rate risk and the resulting foreign currency gain (loss) is not material.

Compliance Program Price Risk

As a producer of transportation fuels from petroleum, the Refining Partnership is required to blend biofuels into the product it produces or to purchase RINs in the open market in lieu of blending to meet the mandates established by the EPA. The Refining Partnership is exposed to market risk related to volatility in the price of RINs needed to comply with the RFS. To mitigate the impact of this risk on the Refining Partnership's results of operations and cash flows, the Refining Partnership purchased RINs when prices are deemed favorable. See Note 14 ("Commitments and Contingencies") to Part II, Item 8 of this Report and "Major Influences on Results of Operations" in Part II, Item 7 of this Report for further discussion about compliance with the RFS.

Item 8. *Financial Statements and Supplementary Data*

CVR Energy, Inc. and Subsidiaries

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Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of CVR Energy, Inc.

We have audited the accompanying consolidated balance sheets of CVR Energy, Inc. (a Delaware corporation) and subsidiaries (the "Company") as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive income, changes in equity, and cash flows for each of the three years in the period ended December 31, 2016. 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 audits.

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

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of CVR Energy, Inc. and subsidiaries as of December 31, 2016 and 2015, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016 in conformity with accounting principles generally accepted in the United States of America.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of December 31, 2016, based on criteria established in the 2013 *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated February 17, 2017 expressed an unqualified opinion.

/s/ GRANT THORNTON LLP

Kansas City, Missouri
February 17, 2017

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of CVR Energy, Inc.

We have audited the internal control over financial reporting of CVR Energy, Inc. (a Delaware corporation) and subsidiaries (the "Company") as of December 31, 2016, based on criteria established in the 2013 *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying *Management's Report On Internal Control Over Financial Reporting* under Item 9A. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

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

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

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

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in the 2013 *Internal Control — Integrated Framework* issued by COSO.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements of the Company as of and for the year ended December 31, 2016, and our report dated February 17, 2017 expressed an unqualified opinion on those financial statements.

/s/ GRANT THORNTON LLP

Kansas City, Missouri
February 17, 2017

CVR Energy, Inc. and Subsidiaries
CONSOLIDATED BALANCE SHEETS

	December 31,	
	2016	2015
	(in millions, except share data)	
ASSETS		
Current assets:		
Cash and cash equivalents (including \$369.7 and \$237.3, respectively, of consolidated variable interest entities ("VIEs"))	\$ 735.8	\$ 765.1
Accounts receivable of VIEs, net of allowance for doubtful accounts of \$0.5 and \$0.3, respectively	151.9	95.8
Inventories of VIEs	349.2	289.9
Prepaid expenses and other current assets (including \$65.0 and \$101.2, respectively, of VIEs)	68.4	104.3
Income tax receivable (including \$0.2 and \$0.0, respectively, of VIEs)	10.2	6.9
Due from parent	—	11.6
Total current assets	1,315.5	1,273.6
Property, plant and equipment, net of accumulated depreciation (including \$2,645.1 and \$1,942.6, respectively, of VIEs)	2,672.1	1,967.1
Intangible assets of VIEs, net	0.2	0.2
Goodwill of VIEs	41.0	41.0
Other long-term assets (including \$19.1 and \$13.0, respectively, of VIEs)	21.4	17.5
Total assets	\$ 4,050.2	\$ 3,299.4
LIABILITIES AND EQUITY		
Current liabilities:		
Note payable and capital lease obligations of VIEs	\$ 1.8	\$ 1.6
Current portion of long-term debt of VIEs	—	124.8
Accounts payable (including \$247.7 and \$258.0, respectively, of VIEs)	251.0	261.5
Personnel accruals (including \$23.6 and \$21.7, respectively, of VIEs)	45.7	45.7
Accrued taxes other than income taxes of VIEs	27.0	23.5
Deferred revenue of VIEs	12.6	3.1
Due to parent	10.6	—
Other current liabilities (including \$216.8 and \$23.9, respectively, of VIEs)	217.2	24.4
Total current liabilities	565.9	484.6
Long-term liabilities:		
Long-term debt and capital lease obligations of VIEs, net of current portion	1,162.8	540.7
Deferred income taxes (including \$0.8 and \$0.1, respectively, of VIEs)	579.9	639.7
Other long-term liabilities (including \$5.4 and \$3.1, respectively, of VIEs)	32.0	33.9
Total long-term liabilities	1,774.7	1,214.3
Commitments and contingencies		
Equity:		
CVR stockholders' equity:		
Common stock \$0.01 par value per share, 350,000,000 shares authorized, 86,929,660 shares issued	0.9	0.9
Additional paid-in-capital	1,197.6	1,174.7
Retained deficit	(338.1)	(189.2)
Treasury stock, 98,610 shares at cost	(2.3)	(2.3)
Accumulated other comprehensive loss, net of tax	—	—
Total CVR stockholders' equity	858.1	984.1
Noncontrolling interest	851.5	616.4
Total equity	1,709.6	1,600.5
Total liabilities and equity	\$ 4,050.2	\$ 3,299.4

See accompanying notes to consolidated financial statements.

CVR Energy, Inc. and Subsidiaries

CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31,		
	2016	2015	2014
	(in millions, except per share data)		
Net sales	\$ 4,782.4	\$ 5,432.5	\$ 9,109.5
Operating costs and expenses:			
Cost of materials and other	3,847.5	4,190.4	8,066.0
Direct operating expenses (exclusive of depreciation and amortization as reflected below)	541.8	584.7	515.1
Depreciation and amortization	184.5	156.4	148.1
Cost of sales	4,573.8	4,931.5	8,729.2
Flood insurance recovery	—	(27.3)	—
Selling, general and administrative expenses (exclusive of depreciation and amortization as reflected below)	109.1	99.0	109.7
Depreciation and amortization	8.6	7.7	6.3
Total operating costs and expenses	4,691.5	5,010.9	8,845.2
Operating income	90.9	421.6	264.3
Other income (expense):			
Interest expense and other financing costs	(83.9)	(48.4)	(40.0)
Interest income	0.7	1.0	0.9
Gain (loss) on derivatives, net	(19.4)	(28.6)	185.6
Loss on extinguishment of debt	(4.9)	—	—
Other income (expense), net	5.7	36.7	(3.7)
Total other income (expense)	(101.8)	(39.3)	142.8
Income (loss) before income taxes	(10.9)	382.3	407.1
Income tax expense (benefit)	(19.8)	84.5	97.7
Net income	8.9	297.8	309.4
Less: Net income (loss) attributable to noncontrolling interest	(15.8)	128.2	135.5
Net income attributable to CVR Energy stockholders	\$ 24.7	\$ 169.6	\$ 173.9
Basic earnings per share	\$ 0.28	\$ 1.95	\$ 2.00
Diluted earnings per share	\$ 0.28	\$ 1.95	\$ 2.00
Dividends declared per share	\$ 2.00	\$ 2.00	\$ 5.00
Weighted-average common shares outstanding:			
Basic and Diluted	86.8	86.8	86.8

See accompanying notes to consolidated financial statements.

CVR Energy, Inc. and Subsidiaries

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	Year Ended December 31,		
	2016	2015	2014
	(in millions)		
Net income	\$ 8.9	\$ 297.8	\$ 309.4
Other comprehensive income (loss):			
Unrealized gain on available-for-sale securities, net of tax of \$0.2, \$12.6 and \$0.0, respectively	0.3	19.2	—
Net gain reclassified into income on sale of available-for-sale securities, net of tax of \$(0.2), \$(8.0), and \$0.0, respectively (Note 15)	(0.3)	(12.1)	—
Net gain reclassified into income on reclassification of available-for-sale securities to trading securities, net of tax of \$0.0, \$(4.6), and \$0.0, respectively (Note 15)	—	(7.1)	—
Change in fair value of interest rate swaps, net of tax of \$0.0, \$0.0 and \$0.0, respectively	—	(0.1)	(0.2)
Net loss reclassified into income on settlement of interest rate swaps, net of tax of \$0.0, \$0.2, and \$0.2, respectively (Note 16)	—	0.8	0.9
Total other comprehensive income	—	0.7	0.7
Comprehensive income	8.9	298.5	310.1
Less: Comprehensive income (loss) attributable to noncontrolling interest	(15.8)	128.6	135.9
Comprehensive income attributable to CVR Energy stockholders	\$ 24.7	\$ 169.9	\$ 174.2

See accompanying notes to consolidated financial statements.

CVR Energy, Inc. and Subsidiaries

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

	Common Stockholders								
	Shares Issued	\$0.01 Par Value Common Stock	Additional Paid-In Capital	Retained Earnings (Deficit)	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Total CVR Stockholders' Equity	Noncontrolling Interest	Total Equity
(in millions, except share data)									
Balance at December 31, 2013	86,929,660	\$ 0.9	\$ 1,114.4	\$ 76.2	\$ (2.3)	\$ (0.6)	\$ 1,188.6	\$ 646.8	\$ 1,835.4
June issuance of CVR Refining's common units to the public, net of \$39.4 tax impact	—	—	60.3	—	—	—	60.3	88.6	148.9
Dividends paid to CVR Energy stockholders	—	—	—	(434.2)	—	—	(434.2)	—	(434.2)
Distributions from CVR Partners to public unitholders	—	—	—	—	—	—	—	(48.2)	(48.2)
Distributions from CVR Refining to public unitholders	—	—	—	—	—	—	—	(136.7)	(136.7)
Share-based compensation	—	—	0.1	(0.8)	—	—	(0.7)	0.8	0.1
Excess tax deficiency from share-based compensation	—	—	(0.1)	—	—	—	(0.1)	—	(0.1)
Net income	—	—	—	173.9	—	—	173.9	135.5	309.4
Other comprehensive income, net of tax	—	—	—	—	—	0.3	0.3	0.4	0.7
Balance at December 31, 2014	86,929,660	\$ 0.9	\$ 1,174.7	\$ (184.9)	\$ (2.3)	\$ (0.3)	\$ 988.1	\$ 687.2	\$ 1,675.3
Dividends paid to CVR Energy stockholders	—	—	—	(173.7)	—	—	(173.7)	—	(173.7)
Distributions from CVR Partners to public unitholders	—	—	—	—	—	—	—	(42.8)	(42.8)
Distributions from CVR Refining to public unitholders	—	—	—	—	—	—	—	(156.9)	(156.9)
Share-based compensation	—	—	0.1	(0.2)	—	—	(0.1)	0.3	0.2
Excess tax deficiency from share-based compensation	—	—	(0.1)	—	—	—	(0.1)	—	(0.1)
Net income	—	—	—	169.6	—	—	169.6	128.2	297.8
Other comprehensive income, net of tax	—	—	—	—	—	0.3	0.3	0.4	0.7
Balance at December 31, 2015	86,929,660	\$ 0.9	\$ 1,174.7	\$ (189.2)	\$ (2.3)	\$ —	\$ 984.1	\$ 616.4	\$ 1,600.5
Dividends paid to CVR Energy stockholders	—	—	—	(173.6)	—	—	(173.6)	—	(173.6)
Distributions from CVR Partners to public unitholders	—	—	—	—	—	—	—	(41.9)	(41.9)
Impact of CVR Partners' common units issuance for the East Dubuque Merger, net of tax of \$20.0	—	—	22.9	—	—	—	22.9	292.8	315.7
Net income (loss)	—	—	—	24.7	—	—	24.7	(15.8)	8.9
Other comprehensive income (loss), net of tax	—	—	—	—	—	—	—	—	—
Balance at December 31, 2016	86,929,660	\$ 0.9	\$ 1,197.6	\$ (338.1)	\$ (2.3)	\$ —	\$ 858.1	\$ 851.5	\$ 1,709.6

See accompanying notes to consolidated financial statements.

CVR Energy, Inc. and Subsidiaries

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,		
	2016	2015	2014
	(in millions)		
Cash flows from operating activities:			
Net income	\$ 8.9	\$ 297.8	\$ 309.4
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	193.1	164.1	154.4
Allowance for doubtful accounts	0.2	(0.1)	(0.5)
Amortization of deferred financing costs and original issue discount	3.6	2.8	2.8
Amortization of debt fair value adjustment	1.2	—	—
Deferred income taxes	(84.4)	(10.4)	19.2
Excess income tax deficiency of share-based compensation	—	0.1	0.1
Loss on disposition of assets	0.5	1.8	0.4
Loss on extinguishment of debt	4.9	—	—
Share-based compensation	9.3	12.8	12.3
Gain on sale of available-for-sale securities	(4.9)	(20.1)	—
Unrealized gain on securities	(0.3)	—	—
(Gain) loss on derivatives, net	19.4	28.6	(185.6)
Current period settlements on derivative contracts	36.4	(26.0)	122.2
Changes in assets and liabilities:			
Accounts receivable	(47.5)	41.0	105.7
Inventories	(7.3)	39.7	197.3
Prepaid expenses and other current assets	(3.4)	40.4	10.7
Due to (from) parent	22.2	32.8	(44.6)
Other long-term assets	(0.6)	3.8	(0.8)
Accounts payable	(10.4)	(14.3)	(91.8)
Accrued income taxes	(3.3)	4.2	(0.3)
Deferred revenue	(20.4)	(10.5)	12.9
Other current liabilities	151.2	(52.1)	15.0
Other long-term liabilities	(0.9)	0.4	1.5
Net cash provided by operating activities	<u>267.5</u>	<u>536.8</u>	<u>640.3</u>
Cash flows from investing activities:			
Capital expenditures	(132.7)	(218.7)	(218.4)
Proceeds from sale of assets	—	0.1	0.1
Acquisition of CVR Nitrogen, net of cash acquired	(63.8)	—	—
Purchase of securities	(4.2)	—	—
Investment in affiliates	(5.6)	—	—
Purchase of available-for-sale securities	(14.4)	—	(78.3)
Proceeds from sale of available-for-sale securities	19.3	68.0	—
Net cash used in investing activities	<u>(201.4)</u>	<u>(150.6)</u>	<u>(296.6)</u>
Cash flows from financing activities:			
Proceeds on issuance of 2023 Notes, net of original issue discount	628.8	—	—
Principal and premium payments on 2021 Notes	(322.2)	—	—
Payments of revolving debt	(49.1)	—	—
Principal payments on CRNF credit facility	(125.0)	—	—
Payment of capital lease obligations	(1.7)	(1.3)	(1.2)

Payment of deferred financing costs	(10.7)	—	—
Proceeds from CVR Refining's June 2014 offering, net of offering costs	—	—	188.3
Dividends to CVR Energy's stockholders	(173.6)	(173.7)	(434.2)
Distributions to CVR Refining's noncontrolling interest holders	—	(156.9)	(136.7)
Distributions to CVR Partners' noncontrolling interest holders	(41.9)	(42.8)	(48.2)
Excess income tax deficiency of share-based compensation	—	(0.1)	(0.1)
Net cash used in financing activities	(95.4)	(374.8)	(432.1)
Net increase (decrease) in cash and cash equivalents	(29.3)	11.4	(88.4)
Cash and cash equivalents, beginning of period	765.1	753.7	842.1
Cash and cash equivalents, end of period	<u>\$ 735.8</u>	<u>\$ 765.1</u>	<u>\$ 753.7</u>
Supplemental disclosures:			
Cash paid for income taxes, net of refunds (received)	\$ 45.5	\$ 57.9	\$ 123.5
Cash paid for interest net of capitalized interest of \$5.4, \$3.7, and \$9.4 for the years ended December 31, 2016, 2015 and 2014, respectively	\$ 76.8	\$ 45.4	\$ 37.2
Non-cash investing and financing activities:			
Construction in progress additions included in accounts payable	\$ 15.8	\$ 22.3	\$ 21.6
Change in accounts payable related to construction in progress additions	\$ 6.0	\$ 0.7	\$ (11.2)
Fair value of common units issued in a business combination	\$ 335.7	\$ —	\$ —
Fair value of debt assumed in a business combination	\$ 367.5	\$ —	\$ —
Reduction of proceeds from 2023 Notes from underwriting discount	\$ 16.1	\$ —	\$ —

See accompanying notes to consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(1) Organization and History of the Company

Organization

The "Company," "CVR Energy," or "CVR" may be used to refer to CVR Energy, Inc. and, unless the context otherwise requires, its subsidiaries. Any references to the "Company" as of a date prior to October 16, 2007 (the date of the restructuring as further discussed in this Note) and subsequent to June 24, 2005 are to Coffeyville Acquisition LLC ("CALLC") and its subsidiaries.

CVR is a diversified holding company primarily engaged in the petroleum refining and nitrogen fertilizer manufacturing industries through its holdings in CVR Refining, LP ("CVR Refining" or the "Refining Partnership") and CVR Partners, LP ("CVR Partners" or the "Nitrogen Fertilizer Partnership"). The Refining Partnership is an independent petroleum refiner and marketer of high value transportation fuels. The Nitrogen Fertilizer Partnership produces and markets nitrogen fertilizers in the form of UAN and ammonia. The Company's operations include two business segments: the petroleum segment and the nitrogen fertilizer segment.

CALLC formed CVR Energy, Inc. as a wholly-owned subsidiary, incorporated in Delaware in September 2006, in order to effect an initial public offering. The initial public offering of CVR was consummated on October 26, 2007. In conjunction with the initial public offering, a restructuring occurred in which CVR became a direct or indirect owner of all of the subsidiaries of CALLC. Additionally, in connection with the initial public offering, CALLC was split into two entities: CALLC and Coffeyville Acquisition II LLC.

CVR's common stock is listed on the NYSE under the symbol "CVI." As of December 31, 2010, approximately 40% of its outstanding shares were beneficially owned by GS Capital Partners V, L.P. and related entities ("GS" or "Goldman Sachs Funds") and Kelso Investment Associates VII, L.P. and related entities ("Kelso" or "Kelso Funds"). On February 8, 2011, GS and Kelso completed a registered public offering, whereby GS sold into the public market its remaining ownership interests in CVR and Kelso substantially reduced its interest in the Company. On May 26, 2011, Kelso completed a registered public offering, whereby Kelso sold into the public market its remaining ownership interest in CVR Energy.

On December 15, 2011, CVR acquired all of the issued and outstanding shares of Gary-Williams Energy Corporation (subsequently converted to "WEC"). Assets acquired include a 70,000 bpcd rated capacity refinery in Wynnewood, Oklahoma and approximately 2.0 million barrels of company-owned storage tanks.

On April 18, 2012, an affiliate of Icahn Enterprises L.P. ("IEP") entered into a Transaction Agreement (the "Transaction Agreement") with CVR, with respect to its tender offer to purchase all of the issued and outstanding shares of CVR's common stock. On May 7, 2012, an affiliate of IEP announced that it had acquired control of CVR pursuant to a tender offer for all of the Company's common stock (the "IEP Acquisition"). As of December 31, 2016, IEP and its affiliates owned approximately 82% of the Company's outstanding shares. Prior to the IEP Acquisition, the Company was owned 100% by the public.

CVR Partners, LP

In conjunction with the consummation of CVR's initial public offering in 2007, CVR transferred Coffeyville Resources Nitrogen Fertilizers, LLC ("CRNF"), its nitrogen fertilizer business, to CVR Partners, which at the time was a newly created limited partnership, in exchange for a managing general partner interest ("managing GP interest"), a special general partner interest ("special GP interest," represented by special GP units) and a de minimis limited partner interest ("LP interest," represented by special LP units). CVR concurrently sold the managing GP interest, including the associated incentive distribution rights ("IDRs"), to Coffeyville Acquisition III LLC ("CALLC III"), an entity owned by its then controlling stockholders and senior management.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

On April 13, 2011, the Nitrogen Fertilizer Partnership completed its initial public offering of 22,080,000 common units (the "Nitrogen Fertilizer Partnership IPO") priced at \$16.00 per unit. The common units, which are listed on the NYSE, began trading on April 8, 2011 under the symbol "UAN." In connection with the Nitrogen Fertilizer Partnership IPO, the IDRs were purchased by the Nitrogen Fertilizer Partnership and subsequently extinguished. In addition, the noncontrolling interest representing the managing GP interest was purchased by Coffeyville Resources, LLC ("CRLLC"), a subsidiary of CVR, for a nominal amount. The consideration for the IDRs was paid to the owners of CALLC III, which included the Goldman Sachs Funds, the Kelso Funds and members of CVR's senior management. In connection with the Nitrogen Fertilizer Partnership IPO and through May 27, 2013, the Company recorded a noncontrolling interest for the common units sold into the public market which represented approximately a 30% interest in the Nitrogen Fertilizer Partnership.

In connection with the Nitrogen Fertilizer Partnership IPO, the Nitrogen Fertilizer Partnership's limited partner interests were converted into common units, the Nitrogen Fertilizer Partnership's special general partner interests were converted into common units, and the Nitrogen Fertilizer Partnership's special general partner was merged with and into CRLLC, with CRLLC continuing as the surviving entity. In addition, as discussed above, the managing general partner sold its IDRs to the Nitrogen Fertilizer Partnership. These interests were extinguished, and CALLC III sold the managing general partner to CRLLC for a nominal amount. As a result of the Nitrogen Fertilizer Partnership IPO, the Nitrogen Fertilizer Partnership has two types of partnership interests outstanding:

- common units representing limited partner interests; and
- a general partner interest, which is not entitled to any distributions, and which is held by the Nitrogen Fertilizer Partnership's general partner.

On May 28, 2013, CRLLC completed a registered public offering (the "Secondary Offering") whereby it sold 12,000,000 Nitrogen Fertilizer Partnership common units to the public at a price of \$25.15 per unit. The net proceeds to CRLLC from the Secondary Offering were approximately \$292.6 million, after deducting approximately \$9.2 million in underwriting discounts and commissions. The Nitrogen Fertilizer Partnership did not receive any of the proceeds from the sale of common units by CRLLC. In connection with the Secondary Offering, the Nitrogen Fertilizer Partnership incurred approximately \$0.5 million in offering costs during the year ended December 31, 2013.

Immediately subsequent to the closing of the Secondary Offering, public security holders held approximately 47% of the total Nitrogen Fertilizer Partnership common units, and CRLLC held approximately 53% of the total Nitrogen Fertilizer Partnership common units.

On April 1, 2016, the Nitrogen Fertilizer Partnership completed the merger (the "East Dubuque Merger") with CVR Nitrogen, LP ("CVR Nitrogen") (formerly known as East Dubuque Nitrogen Partners, L.P. and also formerly known as Rentech Nitrogen Partners L.P.) and CVR Nitrogen GP, LLC ("CVR Nitrogen GP") (formerly known as East Dubuque Nitrogen GP, LLC and also formerly known as Rentech Nitrogen GP, LLC), whereby the Nitrogen Fertilizer Partnership acquired a nitrogen fertilizer manufacturing facility located in East Dubuque, Illinois (the "East Dubuque Facility"). See Note 3 ("Acquisition").

As a result of the Nitrogen Fertilizer Partnership's acquisition of CVR Nitrogen, LP and issuance of the unit consideration, the noncontrolling interest related to the Nitrogen Fertilizer Partnership reflected in our Consolidated Financial Statements on April 1, 2016 and from such date and as of December 31, 2016 was approximately 66%. In addition, CRLLC owns 100% of the Nitrogen Fertilizer Partnership's general partner, CVR GP, LLC, which only holds a non-economic general partner interest. The noncontrolling interest reflected on the Consolidated Balance Sheets of CVR is impacted by the net income of, and distributions from, the Nitrogen Fertilizer Partnership.

The Nitrogen Fertilizer Partnership has adopted a policy pursuant to which the Nitrogen Fertilizer Partnership will distribute all of the available cash it generates each quarter. The available cash for each quarter will be determined by the board of directors of the Nitrogen Fertilizer Partnership's general partner following the end of such quarter. The partnership agreement does not require that the Nitrogen Fertilizer Partnership make cash

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

distributions on a quarterly basis or at all, and the board of directors of the general partner of the Nitrogen Fertilizer Partnership can change the Nitrogen Fertilizer Partnership's distribution policy at any time.

The Nitrogen Fertilizer Partnership and its general partner is party to a services agreement with CVR Energy, pursuant to which the Nitrogen Fertilizer Partnership and its general partner obtain certain management and other services from CVR Energy. The Nitrogen Fertilizer Partnership's general partner, CVR GP, LLC, manages the operations and activities of the Nitrogen Fertilizer Partnership, subject to the terms and conditions specified in the partnership agreement. The operations of the general partner in its capacity as general partner are managed by its board of directors. Actions by the general partner that are made in its individual capacity are made by CRLLC as the sole member of the general partner and not by the board of directors of the general partner. The general partner is not elected by the common unitholders and is not subject to re-election on a regular basis. The officers of the general partner manage the day-to-day affairs of the business of the Nitrogen Fertilizer Partnership. CVR, the Nitrogen Fertilizer Partnership, their respective subsidiaries and the general partner are parties to a number of agreements to regulate certain business relations between them. Certain of these agreements were amended in connection with the Nitrogen Fertilizer Partnership IPO.

CVR Refining, LP

In contemplation of an initial public offering, in September 2012, CRLLC formed CVR Refining Holdings, LLC ("CVR Refining Holdings"), which in turn formed CVR Refining GP, LLC. CVR Refining Holdings and CVR Refining GP, LLC formed the Refining Partnership, which issued them a 100% limited partnership interest and a non-economic general partner interest, respectively. CVR Refining Holdings formed CVR Refining, LLC ("Refining LLC") and CRLLC contributed its petroleum and logistics subsidiaries, as well as its equity interests in Coffeyville Finance Inc. ("Coffeyville Finance"), to Refining LLC in October 2012. CVR Refining Holdings contributed Refining LLC to the Refining Partnership on December 31, 2012.

On January 23, 2013, the Refining Partnership completed the initial public offering of its common units representing limited partner interests (the "Refining Partnership IPO"). The Refining Partnership sold 24,000,000 common units to the public at a price of \$25.00 per unit, resulting in gross proceeds of \$600.0 million, before giving effect to underwriting discounts and other offering expenses. Of the common units issued, 4,000,000 units were purchased by an affiliate of IEP. Additionally, on January 30, 2013, the Refining Partnership sold an additional 3,600,000 common units to the public at a price of \$25.00 per unit in connection with the underwriters' exercise of their option to purchase additional common units, resulting in gross proceeds of \$90.0 million, before giving effect to underwriting discounts and other offering costs. The common units, which are listed on the NYSE, began trading on January 17, 2013 under the symbol "CVRR." In connection with the Refining Partnership IPO, the Refining Partnership paid approximately \$32.5 million in underwriting fees and incurred approximately \$3.9 million of other offering costs.

Upon consummation of the Refining Partnership IPO, CVR indirectly owned the Refining Partnership's general partner and limited partnership interests in the form of common units. Following the offering, the Refining Partnership has two types of partnership interests outstanding:

- common units representing limited partner interests; and
- a general partner interest, which is not entitled to any distributions, and which is held by the Refining Partnership's general partner.

The net proceeds from the Refining Partnership IPO of approximately \$653.6 million, after deducting underwriting discounts and commissions and offering expenses, have been utilized as follows:

- approximately \$253.0 million was used to repurchase the 10.875% senior secured notes due 2017 (including accrued interest);

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

- approximately \$160.0 million was used to fund certain maintenance and environmental capital expenditures through 2014;
- approximately \$54.0 million was used to fund the turnaround expenses at the Wynnewood refinery that were incurred during the fourth quarter of 2012;
- approximately \$85.1 million was distributed to CRLLC; and
- the balance of the proceeds of approximately \$101.5 million was allocated to be utilized by the Refining Partnership for general partnership purposes.

In connection with the Refining Partnership IPO and through May 19, 2013, the Company recorded a noncontrolling interest for the common units sold into the public market, which represented an approximate 19% interest in the Refining Partnership. Prior to the Refining Partnership IPO, CVR owned 100% of the Refining Partnership and net income earned during this period was fully attributable to the Company.

On May 20, 2013, the Refining Partnership completed an underwritten offering (the "Underwritten Offering") by selling 12,000,000 common units to the public at a price of \$30.75 per unit. American Entertainment Properties Corporation ("AEPC"), an affiliate of IEP, also purchased an additional 2,000,000 common units at the public offering price in a privately negotiated transaction with a subsidiary of CVR Energy, which was completed on May 29, 2013. In connection with the Underwritten Offering, on June 10, 2013, the Refining Partnership sold an additional 1,209,236 common units to the public at a price of \$30.75 per unit in connection with a partial exercise by the underwriters of their option to purchase additional common units. The transactions described in this paragraph are collectively referred to as the "Transactions." In connection with the Transactions, the Refining Partnership paid approximately \$12.2 million in underwriting fees and approximately \$0.4 million in offering costs.

The Refining Partnership utilized net proceeds of approximately \$394.0 million from the Underwritten Offering (including net proceeds from the exercise of the underwriters' option) to redeem 13,209,236 common units from CVR Refining Holdings, an indirect wholly-owned subsidiary of CVR Energy. The net proceeds to a subsidiary of CVR Energy from the sale of 2,000,000 common units to AEPC were approximately \$61.5 million. The Refining Partnership did not receive any of the proceeds from the sale of common units by CVR Energy to AEPC.

Immediately following the closing of the Transactions and prior to June 30, 2014, public security holders held approximately 29% of the total Refining Partnership common units (including units owned by affiliates of IEP representing 4% of the total Refining Partnership common units), and CVR Refining Holdings held approximately 71% of the total Refining Partnership common units.

On June 30, 2014, the Refining Partnership completed a second underwritten offering (the "Second Underwritten Offering") by selling 6,500,000 common units to the public at a price of \$26.07 per unit. The Refining Partnership paid approximately \$5.3 million in underwriting fees and approximately \$0.5 million in offering costs. The Refining Partnership utilized net proceeds of approximately \$164.1 million from the Second Underwritten Offering to redeem 6,500,000 common units from CVR Refining Holdings. Immediately subsequent to the closing of the Second Underwritten Offering and through July 23, 2014, public security holders held approximately 33% of the total Refining Partnership common units, and CVR Refining Holdings held approximately 67% of the total Refining Partnership common units.

On July 24, 2014, the Refining Partnership sold an additional 589,100 common units to the public at a price of \$26.07 per unit in connection with the underwriters' exercise of their option to purchase additional common units. The Refining Partnership utilized net proceeds of approximately \$14.9 million from the underwriters' exercise of their option to purchase additional common units to redeem an equal amount of common units from CVR Refining Holdings. Additionally, on July 24, 2014, CVR Refining Holdings sold 385,900 common units to the public at a price of \$26.07 per unit in connection with the underwriters' exercise of their remaining option to purchase additional common units. CVR Refining Holdings received net proceeds of \$9.7 million.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

On August 2, 2016, an affiliate of IEP sold 250,000 common units of CVR Refining. As a result of this transaction, CVR Refining GP and its affiliates collectively own 69.99% of CVR Refining's outstanding common units. Pursuant to CVR Refining's partnership agreement, in certain circumstances, CVR Refining GP has the right to purchase all, but not less than all, of CVR Refining common units held by unaffiliated unit holders at a price not less than their then-current market price, as calculated pursuant to the terms of such partnership agreement (the "Call Right"). Pursuant to the terms of the partnership agreement, because CVR Refining GP and its affiliates' holdings were reduced to less than 70.0% of CVR Refining's outstanding common units, the ownership threshold for the application of such Call Right was permanently reduced from 95% to 80%. Accordingly, if at any time CVR Refining GP and its affiliates own more than 80% of CVR Refining common units, it will have the right, but not the obligation, to exercise such Call Right.

As of December 31, 2016, public security holders held approximately 34% of the total Refining Partnership common units (including units owned by affiliates of IEP representing 3.9% of the total Refining Partnership common units), and CVR Refining Holdings held approximately 66% of the total Refining Partnership common units. In addition, CVR Refining Holdings owns 100% of the Refining Partnership's general partner, CVR Refining GP, LLC, which holds a non-economic general partner interest. The noncontrolling interest reflected on the Consolidated Balance Sheets of CVR is impacted by the net income of, and distributions from, the Refining Partnership.

The Refining Partnership entered into a services agreement on December 31, 2012, pursuant to which the Refining Partnership and its general partner obtain certain management and other services from CVR Energy. The Refining Partnership's general partner, CVR Refining GP, LLC, manages the Refining Partnership's activities subject to the terms and conditions specified in the Refining Partnership's partnership agreement. The Refining Partnership's general partner is owned by CVR Refining Holdings. The operations of its general partner, in its capacity as general partner, are managed by its board of directors. Actions by its general partner that are made in its individual capacity are made by CVR Refining Holdings as the sole member of the Refining Partnership's general partner and not by the board of directors of its general partner. The members of the board of directors of the Refining Partnership's general partner are not elected by the Refining Partnership's unitholders and are not subject to re-election on a regular basis. The officers of the general partner manage the day-to-day affairs of the business of the Refining Partnership.

The Refining Partnership has adopted a policy pursuant to which it will distribute all of the available cash it generates each quarter. The available cash for each quarter will be determined by the board of directors of the Refining Partnership's general partner following the end of such quarter. The partnership agreement does not require that the Refining Partnership make cash distributions on a quarterly basis or at all, and the board of directors of the general partner of the Refining Partnership can change the distribution policy at any time.

(2) Summary of Significant Accounting Policies

Principles of Consolidation

The accompanying CVR consolidated financial statements include the accounts of CVR Energy, Inc. and its majority-owned direct and indirect subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation. The ownership interests of noncontrolling investors in its subsidiaries are recorded as noncontrolling interests.

The Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2015-02, "Consolidations (Topic 810) - Amendments to the Consolidation Analysis" ("ASU 2015-02"), which amended previous consolidation guidance, including introducing a separate consolidation analysis specific to limited partnerships and other similar entities, became effective for the Company as of January 1, 2016. Under this analysis, limited partnerships and other similar entities are considered a variable interest entity ("VIE") unless the limited partners hold substantive kick-out rights or participating rights. Management has determined that the Refining Partnership and the Nitrogen Fertilizer Partnership are VIEs because the limited partners of CVR Refining and CVR Partners lack both substantive kick-out rights and participating rights. As such, management evaluated the qualitative criteria under FASB ASC Topic 810 - Consolidation in conjunction with ASU 2015-02 to make a

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

determination whether the Refining Partnership and the Nitrogen Fertilizer Partnership should be consolidated on the Company's financial statements. ASC Topic 810-10 requires the primary beneficiary of a variable interest entity's activities to consolidate the VIE. The primary beneficiary is identified as the enterprise that has a) the power to direct the activities of the VIE that most significantly impact the entity's economic performance and b) the obligation to absorb losses of the entity that could potentially be significant to the VIE or the right to receive benefits from the entity that could potentially be significant to the VIE. The standard requires an ongoing analysis to determine whether the variable interest gives rise to a controlling financial interest in the VIE. Based upon the general partner's roles and rights as afforded by the partnership agreements and its exposure to losses and benefits of each of the partnerships through its significant limited partner interests, intercompany credit facilities, and services agreements, CVR determined that it is the primary beneficiary of both the Refining Partnership and the Nitrogen Fertilizer Partnership. Based upon that evaluation, the consolidated financial statements of CVR continue to consolidate both the Refining and Nitrogen Fertilizer Partnerships.

Cash and Cash Equivalents

For purposes of the Consolidated Statements of Cash Flows, CVR considers all highly liquid money market accounts and debt instruments with original maturities of three months or less to be cash equivalents. Under the Company's cash management system, checks issued but not presented to banks frequently result in book overdraft balances for accounting purposes and are classified as accounts payable in the Consolidated Balance Sheets. The change in book overdrafts are reported in the Consolidated Statements of Cash Flows as a component of operating cash flow for accounts payable as they do not represent bank overdrafts. The amount of these checks included in accounts payable as of December 31, 2016 and 2015 was \$18.1 million and \$24.7 million, respectively.

Accounts Receivable, net

CVR grants credit to its customers. Credit is extended based on an evaluation of a customer's financial condition; generally, collateral is not required. Accounts receivable are due on negotiated terms and are stated at amounts due from customers, net of an allowance for doubtful accounts. Accounts outstanding for longer than their contractual payment terms are considered past due. CVR determines its allowance for doubtful accounts by considering a number of factors, including the length of time trade accounts are past due, the customer's ability to pay its obligations to CVR, and the condition of the general economy and the industry as a whole. CVR writes off accounts receivable when they become uncollectible, and payments subsequently received on such receivables are credited to the allowance for doubtful accounts. Amounts collected on accounts receivable are included in net cash provided by operating activities in the Consolidated Statements of Cash Flows. As of December 31, 2016, one customer individually represented greater than 10% of the total net accounts receivable balance. The largest concentration of credit for any one customer at December 31, 2016 and 2015 was approximately 10% and 9%, respectively, of the net accounts receivable balance.

Inventories

Inventories consist primarily of domestic and foreign crude oil, blending stock and components, work-in-progress, fertilizer products, and refined fuels and by-products. Inventories are valued at the lower of the first-in, first-out ("FIFO") cost, or market for fertilizer products, refined fuels and by-products for all periods presented. Refinery unfinished and finished products inventory values were determined using the ability-to-bear process, whereby raw materials and production costs are allocated to work-in-process and finished products based on their relative fair values. Other inventories, including other raw materials, spare parts, and supplies, are valued at the lower of moving-average cost, which approximates FIFO, or market. The cost of inventories includes inbound freight costs. Due to the crude pricing environment and subsequent reduction in sales prices for refined products at the end of 2014, the Refining Partnership recorded a lower of FIFO costs or market adjustment of approximately \$36.8 million as of December 31, 2014. The inventory adjustment is included in cost of materials and other in the Consolidated Statement of Operations.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets consist of prepayments for crude oil deliveries to the Refining Partnership's refineries for which title had not transferred, non-trade accounts receivable, current portions of prepaid insurance, deferred financing costs, derivative agreements and other general current assets.

Property, Plant, and Equipment

Additions to property, plant and equipment, including capitalized interest and certain costs allocable to construction and property purchases, are recorded at cost. Capitalized interest is added to any capital project over \$1.0 million in cost which is expected to take more than six months to complete. Depreciation is computed using principally the straight-line method over the estimated useful lives of the various classes of depreciable assets. The lives used in computing depreciation for such assets are as follows:

<u>Asset</u>	<u>Range of Useful Lives, in Years</u>
Improvements to land	15 to 30
Buildings	20 to 30
Machinery and equipment	5 to 30
Automotive equipment	5 to 15
Furniture and fixtures	3 to 10
Aircraft	20
Railcars	25 to 30

Leasehold improvements and assets held under capital leases are depreciated or amortized on the straight-line method over the shorter of the contractual lease term or the estimated useful life of the asset. Expenditures for routine maintenance and repair costs are expensed when incurred. Such expenses are reported in direct operating expenses (exclusive of depreciation and amortization) in the Company's Consolidated Statements of Operations.

Goodwill and Intangible Assets

Goodwill represents the excess of the cost of an acquired entity over the fair value of the assets acquired less liabilities assumed. Intangible assets are assets that lack physical substance (excluding financial assets). Goodwill acquired in a business combination and intangible assets with indefinite useful lives are not amortized, and intangible assets with finite useful lives are amortized. Goodwill and intangible assets not subject to amortization are tested for impairment annually or more frequently if events or changes in circumstances indicate the asset might be impaired. CVR uses November 1 of each year as its annual valuation date for its goodwill impairment test. The Company performed its annual impairment review of goodwill for 2016, 2015 and 2014, which is attributable entirely to the nitrogen fertilizer segment and concluded there were no impairments. See Note 7 ("Goodwill") for further discussion.

Deferred Financing Costs

Deferred financing costs associated with debt issuances are amortized to interest expense and other financing costs using the effective-interest method over the life of the debt. Additionally, any underwriting and original issue discount and premium related to debt issuances are amortized to interest expense and other financing costs using the effective-interest method over the life of the debt. Deferred financing costs related to line-of-credit arrangements are amortized to interest expense and other financing costs using the straight-line method through the termination date of the facility.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Planned Major Maintenance Costs

The direct-expense method of accounting is used for planned major maintenance activities. Maintenance costs are recognized as expense when maintenance services are performed. Planned major maintenance activities for the nitrogen plant generally occur every two to three years. The required frequency of planned major maintenance activities varies by unit for the refineries, but generally is every four to five years. Costs associated with these turnaround activities were included in direct operating expenses (exclusive of depreciation and amortization) in the Consolidated Statements of Operations.

For the years ended December 31, 2016, 2015 and 2014, the Company's petroleum and nitrogen fertilizer segments incurred the following major scheduled turnaround expenses.

	For the Year Ended December 31,		
	2016	2015	2014
	(in millions)		
Petroleum segment			
Coffeyville refinery(1)	\$ 31.5	\$ 102.2	\$ 5.5
Wynnewood refinery(2)	—	—	1.3
Nitrogen Fertilizer segment			
Nitrogen Fertilizer plants(3)	6.6	7.0	—
Total Major Scheduled Turnaround Expenses	\$ 38.1	\$ 109.2	\$ 6.8

- (1) The Coffeyville refinery completed the first phase of its most recent major scheduled turnaround in mid-November 2015. The second phase of the Coffeyville turnaround was completed during the first quarter of 2016. During the outage at the Coffeyville refinery as discussed in Note 8 ("Insurance Claims"), the Refining Partnership accelerated certain planned turnaround activities scheduled for 2015 and incurred turnaround expenses for the year ended December 31, 2014.
- (2) During the fluid catalytic cracking unit ("FCCU") outage at the Wynnewood refinery, the Refining Partnership accelerated certain planned turnaround activities previously scheduled for 2016 and incurred turnaround expenses for the year ended December 31, 2014. The next turnaround for the Wynnewood refinery will be performed as a two-phase turnaround. The first phase is scheduled to begin in the second half of 2017, with the second phase to begin in the second half of 2018. Additionally, certain planned turnaround activities will be accelerated in the first quarter of 2017 on the hydrocracker unit for a catalyst change-out.
- (3) The Nitrogen Fertilizer Partnership underwent a full facility turnaround at the Coffeyville fertilizer facility in the third quarter of 2015. During the second quarter of 2016, the East Dubuque Facility completed a major scheduled turnaround.

Cost Classifications

Cost of materials and other includes cost of crude oil, other feedstocks, blendstocks, purchased refined products, pet coke expenses, renewable identification numbers ("RINs") expenses and freight and distribution expenses.

Direct operating expenses (exclusive of depreciation and amortization) includes direct costs of labor, maintenance and services, energy and utility costs, property taxes, environmental compliance costs as well as chemicals and catalysts and other direct operating expenses. Direct operating expenses excluded depreciation and amortization of approximately \$184.5 million, \$156.4 million and \$148.1 million for the years ended December 31, 2016, 2015 and 2014, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Selling, general and administrative expenses (exclusive of depreciation and amortization) consist primarily of legal expenses, treasury, accounting, marketing, human resources, information technology and maintaining the corporate and administrative offices in Texas and Kansas. Selling, general and administrative expenses excluded depreciation and amortization of approximately \$8.6 million, \$7.7 million and \$6.3 million for the years ended December 31, 2016, 2015 and 2014, respectively.

Income Taxes

CVR accounts for income taxes utilizing the asset and liability approach. Under this method, deferred tax assets and liabilities are recognized for the anticipated future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis. Deferred amounts are measured using enacted tax rates expected to apply to taxable income in the year those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

Impairment of Long-Lived Assets

CVR accounts for long-lived assets in accordance with accounting standards issued by the Financial Accounting Standards Board ("FASB") regarding the treatment of the impairment or disposal of long-lived assets. As required by these standards, CVR reviews long-lived assets (excluding goodwill, intangible assets with indefinite lives, and deferred tax assets) for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to estimated undiscounted future net cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated undiscounted future net cash flows, an impairment charge is recognized for the amount by which the carrying amount of the assets exceeds their fair value. Assets to be disposed of are reported at the lower of their carrying value or fair value less cost to sell.

Revenue Recognition

Revenues for products sold are recorded upon delivery of the products to customers, which is the point at which title is transferred, the customer has the assumed risk of loss, and payment has been received or collection is reasonably assured. Deferred revenue represents customer prepayments under contracts to guarantee a price and supply of nitrogen fertilizer in quantities expected to be delivered in the next 12 months in the normal course of business. Excise and other taxes collected from customers and remitted to governmental authorities are not included in reported revenues.

Nonmonetary product exchanges and certain buy/sell crude oil transactions which are entered into in the normal course of business are included on a net cost basis in operating expenses on the Consolidated Statement of Operations.

The Company also engages in trading activities, whereby the Company enters into agreements to purchase and sell refined products with third parties. The Company acts as a principal in these transactions, taking title to the products in purchases from counterparties, and accepting the risks and rewards of ownership. The Company records revenue for the gross amount of the sales transactions, and records costs of purchases as an operating expense in the accompanying consolidated financial statements.

Shipping Costs

Pass-through finished goods delivery costs reimbursed by customers are reported in net sales, while an offsetting expense is included in cost of materials and other.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Derivative Instruments and Fair Value of Financial Instruments

The petroleum business uses futures contracts, options, and forward contracts primarily to reduce exposure to changes in crude oil prices and finished goods product prices to provide economic hedges of inventory positions. Although management considers these derivatives economic hedges, these derivative instruments do not qualify as hedges for hedge accounting purposes under Accounting Standards Codification ("ASC") Topic 815, *Derivatives and Hedging* ("ASC 815"), and accordingly are recorded at fair value in the balance sheet. Changes in the fair value of these derivative instruments are recorded into earnings as a component of other income (expense) in the period of change. The estimated fair values of forward and swap contracts are based on quoted market prices and assumptions for the estimated forward yield curves of related commodities in periods when quoted market prices are unavailable.

The nitrogen fertilizer business uses forward swap contracts primarily to reduce the exposure to changes in interest rates on its debt and to provide a cash flow hedge. These derivative instruments have been designated as hedges for accounting purposes. Accordingly, these instruments are recorded at fair value in the Consolidated Balance Sheets at each reporting period end. The measurement of the cash flow hedge ineffectiveness is recognized in earnings, if applicable. The effective portion of the gain or loss on the swaps is reported in accumulated other comprehensive income (loss) ("AOCI"), in accordance with ASC 815. See Note 16 ("Derivative Financial Instruments") for further discussion.

Other financial instruments consisting of cash and cash equivalents, accounts receivable, and accounts payable are carried at cost, which approximates fair value, as a result of the short-term nature of the instruments. See Note 10 ("Long-Term Debt") for further discussion of the fair value of the debt instruments.

Share-Based Compensation

The Company accounts for share-based compensation in accordance with ASC Topic 718, *Compensation — Stock Compensation* ("ASC 718"). ASC 718 requires that compensation costs relating to share-based payment transactions be recognized in a company's financial statements. ASC 718 applies to transactions in which an entity exchanges its equity instruments for goods or services and also may apply to liabilities an entity incurs for goods or services that are based on the fair value of those equity instruments. See Note 4 ("Share-Based Compensation") for further discussion.

Treasury Stock

The Company accounts for its treasury stock under the cost method. To date, all treasury stock purchased was for the purpose of satisfying minimum statutory tax withholdings due at the vesting of non-vested stock awards.

Environmental Matters

Liabilities related to future remediation costs of past environmental contamination of properties are recognized when the related costs are considered probable and can be reasonably estimated. Estimates of these costs are based upon currently available facts, internal and third party assessments of contamination, available remediation technology, site-specific costs, and currently enacted laws and regulations. In reporting environmental liabilities, no offset is made for potential recoveries. Loss contingency accruals, including those for environmental remediation, are subject to revision as further information develops or circumstances change and such accruals can take into account the legal liability of other parties. Environmental expenditures are capitalized at the time of the expenditure when such costs provide future economic benefits.

Use of Estimates

The consolidated financial statements have been prepared in conformity with U.S. generally accepted accounting principles, using management's best estimates and judgments where appropriate. These estimates and judgments affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ materially from these estimates and judgments.

Subsequent Events

The Company evaluated subsequent events, if any, that would require an adjustment to the Company's consolidated financial statements or require disclosure in the notes to the consolidated financial statements through the date of issuance of the consolidated financial statements. See Note 21 ("Subsequent Events") for further discussion.

Recent Accounting Pronouncements

In May 2014, the FASB issued ASU No. 2014-09, creating a new topic, FASB ASC Topic 606, "*Revenue from Contracts with Customers*", which supersedes revenue recognition requirements in FASB ASC Topic 605, "*Revenue Recognition*." This ASU requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. In addition, an entity is required to disclose sufficient information to enable users of financial statements to understand the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. The standard was originally effective for interim and annual periods beginning after December 15, 2016 and permits the use of either the retrospective or cumulative effect transition method. Early adoption is not permitted. On July 9, 2015, the FASB approved a one-year deferral of the effective date making the standard effective for interim and annual periods beginning after December 15, 2017. The FASB will continue to permit entities to adopt the standard on the original effective date if they choose. The Company has developed an implementation plan to adopt the new standard. As part of this plan, the Company is currently assessing the impact of the new guidance on its business processes, business and accounting systems, and consolidated financial statements and related disclosures, which involves review of existing revenue streams, evaluation of accounting policies and identification of the types of arrangements where differences may arise in the conversion to the new standard. The Company expects to complete the assessment phase of its implementation plan within the next several months after which the Company will initiate the design and implementation phases of the plan, including implementing any changes to existing business processes and systems to accommodate the new standard, during 2017. The Company will adopt this standard as of January 1, 2018 using the modified retrospective application method. To date, the Company has not identified any material differences in its existing revenue recognition methods that would require modification under the new standard.

In February 2015, the FASB issued ASU No. 2015-02, "*Consolidations (Topic 810) - Amendments to the Consolidation Analysis*" ("ASU 2015-02"), which amended previous consolidation guidance, including introducing a separate consolidation analysis specific to limited partnerships and other similar entities. Under this analysis, limited partnerships and other similar entities will be considered a VIE unless the limited partners hold substantive kick-out rights or participating rights. The standard is effective for interim and annual periods beginning after December 15, 2015. The Company adopted ASU 2015-02 as of January 1, 2016. Refer to Note 2 ("Summary of Significant Accounting Policies") for more information.

In April 2015, the FASB issued ASU 2015-03, "*Simplifying the Presentation of Debt Issuance Costs*" ("ASU 2015-03"). The new standard required that all costs incurred to issue debt be presented in the balance sheet as a direct deduction from the carrying value of the debt. The standard was effective for interim and annual periods beginning after December 15, 2015 and is required to be applied on a retrospective basis. Early adoption is permitted. The Company adopted ASU 2015-03 as of January 1, 2016 and applied the standard retrospectively to the Consolidated Balance Sheet as of December 31, 2015. Refer to Note 10 ("Long-Term Debt") for further details.

In February 2016, the FASB issued ASU 2016-02, "*Leases*" ("ASU 2016-02"). The new standard revises accounting for operating leases by a lessee, among other changes, and requires a lessee to recognize a liability to make lease payments and an asset representing its right to use the underlying asset for the lease term in the balance sheet. The standard is effective for the first interim and annual periods beginning after December 15, 2018, with early adoption permitted. At adoption, ASU 2016-02 will be applied using a modified retrospective application

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

method. The Company is currently evaluating the standard and the impact on its consolidated financial statements and footnotes disclosures.

In January 2017, the FASB issued ASU 2017-04, "*Intangibles-Goodwill and Other (Topic 350) - Simplifying the Test for Goodwill Impairment*" ("ASU 2017-04"). The new standard simplifies the accounting for goodwill impairments by eliminating step 2 from the goodwill quantitative impairment test. Instead, if the carrying amount of a reporting unit exceeds its fair value, an impairment loss shall be recognized in an amount equal to that excess, limited to the total amount of goodwill allocated to that reporting unit. The standard is effective for interim and annual periods beginning after December 15, 2019 and early adoption is permitted. The Company early adopted ASU 2017-04 on January 1, 2017.

(3) Acquisition

On April 1, 2016, the Nitrogen Fertilizer Partnership completed the East Dubuque Merger as contemplated by the Agreement and Plan of Merger, dated as of August 9, 2015 (the "Merger Agreement"), whereby the Nitrogen Fertilizer Partnership acquired CVR Nitrogen and CVR Nitrogen GP. Pursuant to the East Dubuque Merger, the Nitrogen Fertilizer Partnership acquired the East Dubuque Facility. The primary reasons for the East Dubuque Merger were to expand the Nitrogen Fertilizer Partnership's geographical footprint, diversify its raw material feedstocks, widen its customer reach and increase its potential for cash-flow generation.

CVR Nitrogen was required to sell or spin off its facility located in Pasadena, Texas (the "Pasadena Facility") as condition to closing of the East Dubuque Merger. On March 14, 2016, CVR Nitrogen completed the sale of 100% of the issued and outstanding membership interests of its subsidiary that owned the Pasadena Facility to a third party. Holders of common units representing limited partner interests in CVR Nitrogen ("CVR Nitrogen common units") of record as of March 28, 2016 received consideration for the Pasadena Facility and may receive additional consideration in the future according to the terms of the purchase agreement. The Nitrogen Fertilizer Partnership did not receive and will not receive any consideration relating to the sale of the Pasadena Facility.

Under the terms of the Merger Agreement, holders of CVR Nitrogen common units eligible to receive consideration received 1.04 common units (the "unit consideration") representing limited partner interests in CVR Partners ("CVR Partners common units") and \$2.57 in cash, without interest (the "cash consideration" and together with the unit consideration, the "merger consideration") for each CVR Nitrogen common unit. Pursuant to the Merger Agreement, CVR Partners issued approximately 40.2 million CVR Partners common units and paid approximately \$99.2 million in cash consideration to CVR Nitrogen common unit holders and certain holders of CVR Nitrogen phantom units discussed below.

Phantom units granted and outstanding under CVR Nitrogen's equity plans and held by an employee who continued in the employment of a CVR Partners-affiliated entity upon closing of the East Dubuque Merger were canceled and replaced with new incentive awards of substantially equivalent value and on similar terms. See Note 4 ("Share-Based Compensation") for further discussion. Each phantom unit granted and outstanding and held by (i) an employee who did not continue in employment of a CVR Partners-affiliated entity, or (ii) a director of CVR Nitrogen GP, upon closing of the East Dubuque Merger, vested in full and the holders thereof received the merger consideration.

In accordance with the FASB's ASC Topic 805 — *Business Combinations* ("ASC 805"), the Nitrogen Fertilizer Partnership accounted for the East Dubuque Merger as an acquisition of a business with CVR Partners as the acquirer. ASC 805 requires that the consideration transferred be measured at the current market price at the date of the closing of the East Dubuque Merger. The aggregate merger consideration was approximately \$802.4 million, including the fair value of CVR Partners common units issued of \$335.7 million, a cash contribution of \$99.2 million and \$367.5 million fair value of assumed debt. The East Dubuque Facility contributed net sales of \$127.9 million and an operating loss of \$1.2 million to the Consolidated Statement of Operations for the year ended December 31, 2016.

CVR Energy, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Parent Affiliate Units

In March 2016, CVR Energy purchased 400,000 CVR Nitrogen common units, representing approximately 1% of the outstanding CVR Nitrogen limited partner interests. CVR Energy did not receive merger consideration for these designated CVR Nitrogen common units. As a result of the East Dubuque Merger, on April 1, 2016, the fair value of the CVR Nitrogen common units of \$4.6 million was reclassified as an investment in consolidated subsidiary, which is a non-cash investing activity during the second quarter of 2016. Subsequent to the East Dubuque Merger, the Nitrogen Fertilizer Partnership purchased the 400,000 CVR Nitrogen common units from CVR Energy during the second quarter of 2016 for \$5.0 million.

Purchase Price Consideration

A summary of the total purchase price is as follows:

	Purchase Price
	(in millions)
Fair value of CVR Partners common units issued, as of the close of the East Dubuque Merger.	\$ 335.7
Cash payment to CVR Nitrogen common unitholders and certain phantom unit holders	99.2
Fair value of consideration transferred.	434.9
Fair value of parent affiliate units (1).	4.6
Total purchase price consideration to be allocated.	<u>\$ 439.5</u>

The fair value of the unit consideration was determined as follows:

	Fair Value of Unit Consideration
	(in thousands, except per unit data)
CVR Nitrogen common units outstanding, as of the close of the merger	38,985
Less: Parent affiliate units (1)	400
Net units subject to merger consideration	<u>38,585</u>
Unit consideration per CVR Nitrogen common unit	1.04
Number of CVR Partners common units issued for merger consideration	40,129
Number of CVR Partners common units issued for CVR Nitrogen phantom units issued to noncontinuing employees and CVR Nitrogen board members (2)	26
Total number of CVR Partners units issued.	<u>40,155</u>
Fair value per CVR Partners common unit, as of the close of the East Dubuque Merger.	\$ 8.36
Fair value of CVR Partners common units issued (in millions)	\$ 335.7

(1) See above for discussion of parent affiliate units.

(2) As discussed above, each phantom unit granted and outstanding and held by (i) an employee who did not continue in the employment of a CVR Partners-affiliated entity, or (ii) a director of CVR Nitrogen GP, upon closing of the East Dubuque Merger, vested in full and the holders thereof received the merger consideration.

CVR Energy, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Merger-Related Indebtedness

CVR Nitrogen's debt arrangements that remained in place after the closing date of the East Dubuque Merger included \$320.0 million of its 6.50% notes due 2021 (the "2021 Notes"). The majority of the 2021 Notes were repurchased in June 2016, as discussed further in Note 10 ("Long-Term Debt").

Immediately prior to the East Dubuque Merger, CVR Nitrogen also had outstanding balances under a credit agreement with Wells Fargo Bank, National Association, as successor-in-interest by assignment from General Electric Company, as administrative agent (the "Wells Fargo Credit Agreement"). The Wells Fargo Credit Agreement consisted of a \$50.0 million senior secured revolving credit facility with a \$10.0 million letter of credit sublimit. In connection with the closing of the East Dubuque Merger, the Nitrogen Fertilizer Partnership paid \$49.4 million for the outstanding balance, accrued interest and fees under the Wells Fargo Credit Agreement and the Wells Fargo Credit Agreement was canceled.

Purchase Price Allocation

Under the acquisition method of accounting, the purchase price was allocated to CVR Nitrogen's net tangible assets based on their fair values as of April 1, 2016. The Nitrogen Fertilizer Partnership has obtained an independent appraisal of the net assets acquired. Determining the fair value of net tangible assets requires judgment and involves the use of significant estimates and assumptions. The Nitrogen Fertilizer Partnership based its fair value estimates on assumptions it believes to be reasonable but are inherently uncertain.

The following table, set forth below, displays the purchase price allocated to CVR Nitrogen's net tangible assets based on their fair values as of April 1, 2016. There were no identifiable intangible assets.

	Purchase Price Allocation
	(in millions)
Cash	\$ 35.4
Accounts receivable	8.9
Inventories	49.1
Prepaid expenses and other current assets	5.2
Property, plant and equipment	775.3
Other long-term assets	1.1
Deferred revenue	(29.8)
Other current liabilities	(37.0)
Long-term debt	(367.5)
Other long-term liabilities	(1.2)
Total fair value of net assets acquired	<u>439.5</u>
Less: Cash acquired	<u>35.4</u>
Total consideration transferred, net of cash acquired	<u>\$ 404.1</u>

Expenses Associated with the East Dubuque Merger

During the year ended December 31, 2016 and 2015, the Nitrogen Fertilizer Partnership incurred 3.1 million and 2.3 million, respectively, of legal and other professional fees and other merger related expenses, which were included in selling, general and administrative expenses (exclusive of depreciation and amortization).

CVR Energy, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Pro Forma Financial Information

Pro forma financial information for the year ended December 31, 2016 would not be materially different from the Company's results of operations presented in the Condensed Consolidated Statement of Operations for the year ended December 31, 2016.

Noncontrolling Interest in CVR Partners

A summary of the effect of the change in CVR Energy's ownership interest in CVR Partners on the equity attributable to CVR Energy, as a result of CVR Partners issuance of the unit consideration in connection with the East Dubuque Merger, is as follows:

		<u>Non-controlling interest</u> <u>(in millions)</u>
Fair value of CVR Partners common units issued, as of the close of the East Dubuque Merger.	\$	335.7
Less: Change in CVR Energy's noncontrolling interest in CVR Partner's equity due to the East Dubuque Merger		292.8
Adjustment to additional paid-in capital, as of the close of the East Dubuque Merger	\$	<u>42.9</u>

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(4) Share-Based Compensation

Long-Term Incentive Plan — CVR Energy

CVR has a Long-Term Incentive Plan ("LTIP"), which permits the grant of options, stock appreciation rights, restricted shares, restricted stock units, dividend equivalent rights, share awards and performance awards (including performance share units, performance units and performance-based restricted stock). As of December 31, 2016, only performance units under the LTIP remain outstanding. Individuals who are eligible to receive awards and grants under the LTIP include the Company's employees, officers, consultants, advisors and directors. A summary of the principal features of the LTIP is provided below.

Shares Available for Issuance. The LTIP authorizes a share pool of 7,500,000 shares of the Company's common stock, 1,000,000 of which may be issued in respect of incentive stock options. Whenever any outstanding award granted under the LTIP expires, is canceled, is settled in cash or is otherwise terminated for any reason without having been exercised or payment having been made in respect of the entire award, the number of shares available for issuance under the LTIP is increased by the number of shares previously allocable to the expired, canceled, settled or otherwise terminated portion of the award. As of December 31, 2016, 6,787,341 shares of common stock were available for issuance under the LTIP.

Restricted Stock Units

A summary of restricted stock units activity and changes during the years ended December 31, 2016, 2015 and 2014 is presented below:

	Restricted Shares	Weighted- Average Grant-Date Fair Value	Aggregate Intrinsic Value
			(in millions)
Non-vested at December 31, 2013	359,552	\$ 28.09	\$ 15.6
Granted	—	—	
Vested	(281,684)	23.89	
Forfeited	(29,857)	39.17	
Non-vested at December 31, 2014	48,011	\$ 45.89	\$ 1.9
Granted	—	—	
Vested	(43,085)	45.55	
Forfeited	(4,327)	47.68	
Non-vested at December 31, 2015	599	\$ 57.23	\$ —
Granted	—	—	
Vested	(599)	57.23	
Forfeited	—	—	
Non-vested at December 31, 2016	—	\$ —	\$ —

Through the LTIP, shares of restricted stock and restricted stock units (collectively "restricted shares") were previously granted to employees of the Company. These restricted shares were generally graded-vesting awards, which vested over a three-year period. Compensation expense was recognized on a straight-line basis over the vesting period of the respective tranche of the award. The IEP Acquisition and related Transaction Agreement dated April 18, 2012 between CVR and an affiliate of IEP discussed in Note 1 ("Organization and History of the Company") triggered a modification to outstanding awards under the LTIP converting the awards to restricted stock units whereby the recipient received cash settlement of the offer price of \$30.00 per share in cash plus one contingent cash payment right ("CCP") upon vesting. The CCPs expired on August 19, 2013. Restricted shares that vested in 2013, 2014 and 2015 were converted to restricted stock units whereby the awards were settled in cash

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

upon vesting in an amount equal to the lesser of the offer price or the fair market value of the Company's common stock as determined at the most recent valuation date of December 31 of each year. The awards were remeasured at each subsequent reporting date until they vested. As a result of the modification of the awards, the classification changed from equity-classified awards to liability-classified awards.

In December 2012 and during 2013, awards of restricted stock units and dividend equivalent rights were granted to certain employees of CVR. The awards vested over three years with one-third of the award vesting each year with the exception of awards granted to certain executive officers that vested over one year. The award granted in December 2012 to Mr. Lipinski, the Company's Chief Executive Officer and President, was canceled in connection with the issuance of certain performance unit awards as discussed further below. Each restricted stock unit and dividend equivalent right represented the right to receive, upon vesting, a cash payment equal to (i) the fair market value of one share of the Company's common stock, plus (ii) the cash value of all dividends declared and paid by the Company per share of the Company's common stock from the grant date to and including the vesting date. The awards, which were liability-classified, were remeasured each subsequent reporting date until they vest.

As of December 31, 2016, no restricted stock units were outstanding. Total compensation expense for the year ended December 31, 2016 related to the restricted stock unit awards was nominal. Total compensation expense for the years ended December 31, 2015 and 2014 was approximately \$0.8 million and \$2.6 million, respectively, related to the restricted stock unit awards.

As of December 31, 2016, the Company had a nominal liability for non-vested restricted stock unit awards and associated dividend equivalent rights, which is recorded in personnel accruals on the Consolidated Balance Sheets. The liability as of December 31, 2015 was nominal. For the year ended December 31, 2016, the cash paid to settle liability-classified restricted stock unit awards and dividend equivalent rights was nominal. For the years ended December 31, 2015 and 2014, the Company paid cash of \$2.5 million and \$9.9 million, respectively, to settle liability-classified restricted stock unit awards and dividend equivalent rights upon vesting.

Performance Unit Awards

In December 2013, the Company entered into performance unit awards agreements (the "2013 Performance Unit Awards Agreements") with Mr. Lipinski. Certain of the 2013 Performance Unit Awards Agreements were entered into in connection with the cancellation of Mr. Lipinski's December 2012 restricted stock unit award, as discussed above. In accordance with accounting guidance related to the modification of share-based and other compensatory award arrangements, the Company concluded that the cancellation and concurrent issuance of the performance awards created a substantive service period from the original grant date of the December 2012 restricted stock unit award through December 31, 2014, the end of the performance period for the related performance awards. Compensation cost for the related awards was recognized over the substantive service period. Total compensation expense for the years ended and December 31, 2014 and 2013 related to the performance unit awards was \$4.4 million and \$3.9 million, respectively.

The Company paid Mr. Lipinski approximately \$6.8 million during 2014 for vested performance unit awards. As of December 31, 2014, the Company had a liability of \$1.7 million recorded in personnel accruals on the Consolidated Balance Sheets for the final vested and unpaid 2013 Performance Unit Awards, which was paid in the first quarter of 2015.

In December 2015, the Company entered into a performance unit award agreement (the "2015 Performance Unit Award Agreement") with Mr. Lipinski. The performance unit award of 3,500 performance units under the 2015 Performance Unit Award Agreement represents the right to receive, upon vesting, a cash payment equal to \$1,000 multiplied by the applicable performance factor. The performance factor is determined based on the level of attainment of the applicable performance objective, set forth as a percentage, which may range from 0-110%. Seventy-five percent of the performance units attributable to the award are subject to a performance objective relating to the average barrels per day crude throughput during the performance cycle, and 25% of the performance units attributable to the award are subject to a performance objective relating to the average gathered crude barrels per day during the performance cycle. The performance objectives are set in accordance with approved levels of the

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

business plan for the fiscal year during the performance cycle and therefore are considered reasonably possible of being achieved. The amount paid pursuant to the award, if any, will be paid following the end of the performance cycle for the award, but no later than March 6, 2017. The Partnership will be responsible for reimbursing CVR Energy for its allocated portion of the performance unit awards. Compensation cost for the 2015 Performance Unit Award Agreement was \$3.5 million was recognized over the performance cycle from January 1, 2016 to December 31, 2016.

In December 2016, CVR Energy entered into a performance unit award agreement (the "2016 Performance Unit Award Agreement") with Mr. Lipinski. Compensation cost for the 2016 Performance Unit Award Agreement will be recognized over the performance cycle from January 1, 2017 to December 31, 2017. The performance unit award of 3,500 performance units under the 2016 Performance Unit Award Agreement represents the right to receive, upon vesting, a cash payment equal to \$1,000 multiplied by the applicable performance factor. The performance factor is determined based on the level of attainment of the applicable performance objective, set forth as a percentage, which may range from 0-110%. Seventy-five percent of the performance units attributable to the award are subject to a performance objective relating to the average barrels per day crude throughput during the performance cycle, and 25% of the performance units attributable to the award are subject to a performance objective relating to the average gathered crude barrels per day during the performance cycle. The performance objectives are set in accordance with approved levels of the business plan for the fiscal year during the performance cycle and therefore are considered reasonably possible of being achieved. The amount paid pursuant to the award, if any, will be paid following the end of the performance cycle for the award, but no later than March 6, 2018. The Partnership will be responsible for reimbursing CVR Energy for its allocated portion of the performance unit awards. Assuming a target performance threshold and that the allocation of costs from CVR Energy remains consistent with the allocation percentages in place at December 31, 2016, there was approximately \$3.5 million of total unrecognized compensation cost related to the 2016 Performance Unit Award Agreement to be recognized over a period of 1.0 year.

Long-Term Incentive Plan — CVR Partners

Common Units and Phantom Units

In April 2011, the board of directors of the Nitrogen Fertilizer Partnership's general partner adopted the CVR Partners, LP Long-Term Incentive Plan ("CVR Partners LTIP"). Individuals who are eligible to receive awards under the CVR Partners LTIP include (i) employees of the Nitrogen Fertilizer Partnership and its subsidiaries, (ii) employees of its general partner, (iii) members of the board of directors of its general partner and (iv) employees, consultants and directors of CVR Energy. The CVR Partners LTIP provides for the grant of options, unit appreciation rights, distribution equivalent rights, restricted units, phantom units and other unit-based awards, each in respect of common units. The maximum number of common units issuable under the CVR Partners' LTIP is 5,000,000. As of December 31, 2016, there were 4,820,215 common units available for issuance under the CVR Partners LTIP.

Through the CVR Partners LTIP, phantom and common units have been awarded to employees of the Nitrogen Fertilizer Partnership and its general partner and to members of the board of directors of its general partner. In 2013, 2014 and 2015, awards of phantom units and distribution equivalent rights were granted to certain employees of the Nitrogen Fertilizer Partnership and its subsidiaries and its general partner. The awards are generally graded vesting awards, which are expected to vest over three years with one-third of the award vesting each year. Compensation expense is recognized on a straight-line basis over the vesting period of the respective tranche of the award. Each phantom unit and distribution equivalent right represents the right to receive, upon vesting, a cash payment equal to (i) the average fair market value of one unit of the Nitrogen Fertilizer Partnership's common units in accordance with the award agreement, plus (ii) the per unit cash value of all distributions declared and paid by the Nitrogen Fertilizer Partnership from the grant date to and including the vesting date. The awards, which are liability-classified, will be remeasured at each subsequent reporting date until they vest.

CVR Energy, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

A summary of common units and phantom units (collectively "units") activity and changes under the CVR Partners LTIP during the years ended December 31, 2016, 2015 and 2014 is presented below:

	Units	Weighted-Average Grant-Date Fair Value	Aggregate Intrinsic Value (in millions)
Non-vested at December 31, 2013	171,119	\$ 21.34	\$ 2.8
Granted	198,141	9.44	
Vested	(48,310)	20.95	
Forfeited	(77,004)	23.49	
Non-vested at December 31, 2014	243,946	\$ 11.07	\$ 2.4
Granted	245,199	7.87	
Vested	(94,854)	12.55	
Forfeited	(2,388)	10.99	
Non-vested at December 31, 2015	391,903	\$ 8.71	\$ 3.1
Granted	680,718	6.20	
Vested	(292,536)	8.78	
Forfeited	(8,299)	8.72	
Non-vested at December 31, 2016	771,786	\$ 6.47	\$ 4.6

As of December 31, 2016, there was approximately \$3.9 million of total unrecognized compensation cost related to the awards under the CVR Partners LTIP to be recognized over a weighted-average period of 1.7 years. Total compensation expense recorded for the years ended December 31, 2016, 2015 and 2014 related to the awards under the CVR Partners LTIP was approximately \$1.8 million, \$1.3 million and \$0.4 million, respectively.

At December 31, 2016 and 2015, the Nitrogen Fertilizer Partnership had a liability of \$1.0 million and \$0.7 million, respectively, for cash-settled non-vested phantom unit awards and associated distribution equivalent rights, which is recorded in personnel accruals on the Consolidated Balance Sheets. For the years ended December 31, 2016, 2015 and 2014 the Nitrogen Fertilizer Partnership paid cash of \$2.1 million, \$0.8 million and \$0.4 million, respectively, to settle liability-classified awards and associated distribution equivalent rights upon vesting.

Performance-Based Phantom Units

In May 2014, the Nitrogen Fertilizer Partnership entered into a Phantom Unit Agreement with the Chief Executive Officer and President of its general partner that included performance-based phantom units and distribution equivalent rights. Compensation cost for these awards is being recognized over the performance cycles of May 1, 2014 to December 31, 2014, January 1, 2015 to December 31, 2015 and January 1, 2016 to December 31, 2016, as the services are provided. Each phantom unit and distribution equivalent right represents the right to receive, upon vesting, a cash payment equal to (i) the average closing price of the Nitrogen Fertilizer Partnership's common units in accordance with the award agreement, multiplied by a performance factor that is based upon the level of the Nitrogen Fertilizer Partnership's production of UAN, and (ii) the per unit cash value of all distributions declared and paid by the Nitrogen Fertilizer Partnership from the grant date to and including the vesting date. Total compensation expense recorded for the years ended December 31, 2016 and 2015 related to the award was not material. Based on current estimates of performance thresholds for the remaining performance cycles, unrecognized compensation expense and the liability associated with the unvested phantom units at December 31, 2016 were also not material.

On December 31, 2014, the first award of Mr. Pytosh's Phantom Unit Agreement vested and a nominal amount was paid in 2015. On December 31, 2015, the second award of Mr. Pytosh's Phantom Unit Agreement vested and a nominal amount was paid in 2016. On December 31, 2016, the third award of Mr. Pytosh's Phantom Unit Agreement

CVR Energy, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

vested and nominal amount will be paid in 2017. The award was fully vested at December 31, 2016 and the amounts associated with the agreement was not material.

Long-Term Incentive Plan – CVR Refining

In connection with the Refining Partnership IPO, on January 16, 2013, the board of directors of the general partner of the Refining Partnership adopted the CVR Refining, LP Long-Term Incentive Plan (the "CVR Refining LTIP"). Individuals who are eligible to receive awards under the CVR Refining LTIP include (i) employees of the Refining Partnership and its subsidiaries, (ii) employees of the general partner, (iii) members of the board of directors of the general partner and (iv) certain employees, consultants and directors of CRLLC and CVR Energy who perform services for the benefit of the Refining Partnership. The CVR Refining LTIP provides for the grant of options, unit appreciation rights, restricted units, phantom units, unit awards, substitute awards, other-unit based awards, cash awards, performance awards and distribution equivalent rights, each in respect of common units. The maximum number of common units issuable under the CVR Refining LTIP is 11,070,000. As the phantom unit awards discussed below are cash-settled awards, they did not reduce the number of common units available for issuance under the plan. On August 14, 2013, the Refining Partnership filed a Form S-8 to register the common units.

In 2014, 2015 and 2016, awards of phantom units and distribution equivalent rights were granted to employees of the Refining Partnership and its subsidiaries, its general partner and certain employees of CRLLC and CVR Energy who perform services solely for the benefit of the Refining Partnership. The awards are generally graded-vesting awards, which are expected to vest over three years with one-third of the award vesting each year. Compensation expense is recognized on a straight-line basis over the vesting period of the respective tranche of the award. Each phantom unit and distribution equivalent right represents the right to receive, upon vesting, a cash payment equal to (i) the average fair market value of one unit of the Refining Partnership's common units in accordance with the award agreement, plus (ii) the per unit cash value of all distributions declared and paid by the Refining Partnership from the grant date to and including the vesting date. The awards, which are liability-classified, will be remeasured at each subsequent reporting date until they vest.

A summary of phantom unit activity and changes under the CVR Refining LTIP during the years ended December 31, 2016, 2015 and 2014 is presented below:

	Phantom Units	Weighted-Average Grant-Date Fair Value	Aggregate Intrinsic Value
			(in millions)
Non-vested at December 31, 2013	187,177	\$ 21.55	\$ 4.2
Granted	281,948	17.74	
Vested	(61,002)	21.55	
Forfeited	(4,176)	21.55	
Non-vested at December 31, 2014	403,947	\$ 18.89	\$ 6.8
Granted	302,319	20.40	
Vested	(136,531)	19.26	
Forfeited	(58,144)	18.87	
Non-vested at December 31, 2015	511,591	\$ 19.68	\$ 9.7
Granted	644,148	9.43	
Vested	(218,351)	19.78	
Forfeited	(32,533)	19.13	
Non-vested at December 31, 2016	904,855	\$ 12.38	\$ 9.4

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

As of December 31, 2016, there was approximately \$8.1 million of total unrecognized compensation cost related to the awards under the CVR Refining LTIP to be recognized over a weighted-average period of 1.8 years. Total compensation expense recorded for the years ended December 31, 2016 and 2015 related to the awards under the CVR Refining LTIP was \$1.8 million and \$4.6 million, respectively. Total compensation expense recorded for the year ended December 31, 2013 was not material. As of December 31, 2016 and 2015, the Refining Partnership had a liability of \$1.5 million and \$2.3 million, respectively, for non-vested phantom unit awards and associated distribution equivalent rights, which is recorded in personnel accruals on the Consolidated Balance Sheets. For the years ended December 31, 2016 and 2015, the Refining Partnership paid cash of \$2.6 million and \$3.3 million, respectively, to settle liability-classified phantom unit awards and associated distribution equivalent rights upon vesting.

In December 2014, the Company granted an award of 227,927 incentive units in the form of stock appreciation rights ("SARs") to an executive of CVR Energy. In April 2015, the award granted was cancelled and replaced by an award of notional units in the form of SARs by CVR Refining pursuant to the CVR Refining LTIP. The replacement award is structured on the same economic and other terms as the incentive unit award and did not result in a material impact. Each SAR vests over three years and entitles the executive to receive a cash payment in an amount equal to the excess of the fair market value of one unit of the Refining Partnership's common units for the first ten trading days in the month prior to vesting over the grant price of the SAR. The fair value will be adjusted to include all distributions declared and paid by the Refining Partnership during the vesting period. The fair value of each SAR is estimated at the end of each reporting period using the Black-Scholes option-pricing model. Assumptions utilized to value the award have been omitted due to immateriality of the award. Total compensation expense during the years ended December 31, 2016 and 2015 and the liability related to the SARs as of December 31, 2016 and 2015 were not material.

Incentive Unit Awards

In 2014, 2015 and 2016, the Company granted awards of incentive units and distribution equivalent rights to certain employees of CRLLC, CVR Energy and CVR GP, LLC. The awards are generally graded-vesting awards, which are expected to vest over three years with one-third of the award vesting each year. Compensation expense is recognized on a straight-line basis over the vesting period of the respective tranche of the award. Each incentive unit and distribution equivalent right represents the right to receive, upon vesting, a cash payment equal to (i) the average fair market value of one unit of the Refining Partnership's common units in accordance with the award agreement, plus (ii) the per unit cash value of all distributions declared and paid by the Refining Partnership from the grant date to and including the vesting date. The awards, which are liability-classified, will be remeasured at each subsequent reporting date until they vest.

CVR Energy, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

A summary of incentive unit activity and changes during the years ended December 31, 2016, 2015 and 2014 is presented below:

	Incentive Units	Weighted-Average Grant-Date Fair Value	Aggregate Intrinsic Value (in millions)
Non-vested at December 31, 2013	251,431	\$ 22.62	\$ 5.7
Granted	332,586	17.81	
Vested	(65,601)	22.63	
Forfeited	(82,901)	22.62	
Non-vested at December 31, 2014	435,515	\$ 18.95	\$ 7.3
Granted	347,811	20.38	
Vested	(160,120)	19.33	
Forfeited	(18,264)	19.69	
Non-vested at December 31, 2015	604,942	\$ 19.64	\$ 11.5
Granted	678,469	9.46	
Vested	(256,016)	19.69	
Forfeited	(39,598)	19.52	
Non-vested at December 31, 2016	987,797	\$ 12.63	\$ 10.3

As of December 31, 2016, there was approximately \$8.7 million of total unrecognized compensation cost related to non-vested incentive units to be recognized over a weighted-average period of approximately 1.7 years. Total compensation expense for the years ended December 31, 2016 and 2015 related to the incentive units was \$2.3 million and \$5.7 million, respectively. Total compensation expense for the year ended December 31, 2013 related to the incentive units was not material. As of December 31, 2016 and 2015, the Company had a liability of \$1.9 million and \$2.6 million, respectively, for non-vested incentive units and associated distribution equivalent rights, which is recorded in personnel accruals on the Consolidated Balance Sheets. For the years ended December 31, 2016 and 2015, the Company paid cash of \$3.0 million and \$3.9 million, respectively, to settle liability-classified incentive unit awards and associated distribution equivalent rights upon vesting.

(5) Inventories

Inventories consisted of the following:

	December 31,	
	2016	2015
	(in millions)	
Finished goods	\$ 151.7	\$ 114.5
Raw materials and precious metals	98.4	81.2
In-process inventories	23.9	35.8
Parts and supplies	75.2	58.4
Total Inventories	\$ 349.2	\$ 289.9

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(6) Property, Plant and Equipment

Property, plant, and equipment consisted of the following:

	December 31,	
	2016	2015
	(in millions)	
Land and improvements	\$ 46.5	\$ 38.6
Buildings	64.8	53.6
Machinery and equipment	3,656.5	2,723.0
Automotive equipment	24.7	24.8
Furniture and fixtures	28.9	21.3
Leasehold improvements	3.6	3.6
Aircraft	3.6	3.6
Railcars	16.8	16.3
Construction in progress	54.2	122.3
	<u>3,899.6</u>	<u>3,007.1</u>
Accumulated depreciation	1,227.5	1,040.0
Total Property, Plant and Equipment, net	<u>\$ 2,672.1</u>	<u>\$ 1,967.1</u>

Capitalized interest recognized as a reduction in interest expense for the years ended December 31, 2016, 2015 and 2014 totaled approximately \$5.4 million, \$3.7 million and \$9.4 million, respectively. Land, building and equipment that are under a capital lease obligation had an original carrying value of approximately \$24.8 million at both December 31, 2016 and 2015, respectively. Amortization of assets held under capital leases is included in depreciation expense.

(7) Goodwill

The Nitrogen Fertilizer Partnership evaluates the carrying value of goodwill annually as of November 1 and between annual evaluations if events occur or circumstances change that would more likely than not reduce the fair value of the reporting unit below its carrying amount. The Nitrogen Fertilizer Partnership's goodwill reporting unit is the Coffeyville Fertilizer Facility.

Based on a significant decline in market capitalization and lower cash flow forecasts resulting from weakened fertilizer pricing trends during the third quarter of 2016, the Nitrogen Fertilizer Partnership identified a triggering event and therefore performed an interim goodwill impairment test as of September 30, 2016. The goodwill impairment quantitative testing involves a two-step process, as described in ASC 350, "*Intangibles - Goodwill and Other*." Step 1 compares the fair value of the reporting unit to its carrying value. The Coffeyville Fertilizer Facility reporting unit fair value is based upon consideration of various valuation methodologies, including guideline public company multiples and projected future cash flows discounted at rates commensurate with the risk involved. The carrying amount of the reporting unit was less than its fair value; therefore, a Step 2 was not required to be completed and no impairment was recorded.

The fair value of the reporting unit exceeded its carrying value by approximately 17 percent based upon the results of the Step 1 test as of September 30, 2016. Judgments and assumptions are inherent in management's estimates used to determine the fair value of the reporting unit. Assumptions used in the discounted cash flows ("DCF") require the exercise of significant judgment, including judgment about appropriate discount rates and terminal values, growth rates, and the amount and timing of expected future cash flows. The discount rates used in the DCF, which are intended to reflect the risks inherent in future cash flow projections, are based on estimates of the weighted-average cost of capital of a market participant. Such estimates are derived from analysis of peer companies and consider the industry weighted average return on debt and equity from a market participant

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

perspective. The most significant assumption to determining the fair value of the reporting unit was forecasted fertilizer pricing. Changes in assumptions may result in a change in management's estimates and may result in an impairment in future periods, including, but not limited to, further declines in the forecasted fertilizer pricing.

Subsequent to the September 30, 2016 interim impairment test, the Nitrogen Fertilizer Partnership elected to perform a qualitative evaluation as of November 1, 2016 to determine whether it was necessary to perform the quantitative two step goodwill analysis described in ASC 350, "*Intangibles - Goodwill and Other*". After assessing the totality of events and circumstances, it was determined that it was not more likely than not that the fair value of the Nitrogen Fertilizer Partnership was less than the carrying value, and so it was not necessary to perform the two-step goodwill impairment analysis. Based on the results of the tests, no impairment of goodwill was recorded for any of the periods presented.

(8) Insurance Claims

On July 29, 2014, the Refining Partnership's Coffeyville refinery experienced a fire at its isomerization unit. Four employees were injured in the fire, including one employee who was fatally injured. The fire was extinguished, and the refinery was subsequently shut down due to a failure of its plant-wide Distributed Control System, which was directly caused by the fire. The Coffeyville refinery returned to operations in mid-August, with all units except the isomerization unit in operation by August 23, 2014. The isomerization unit started operating on October 12, 2014. This interruption adversely impacted production of refined products for the petroleum business in the third quarter of 2014. Total gross repair and other costs recorded related to the incident for the year ended December 31, 2014 were approximately \$6.3 million.

The Refining Partnership is covered by property damage insurance policies at the time of the incident, which had an associated deductible of \$5.0 million for the Coffeyville refinery. The Refining Partnership anticipates amounts in excess of the \$5.0 million deductible related to the isomerization unit fire incident will be recoverable under the property insurance policies. As of December 31, 2015 and 2014, the Refining Partnership had an insurance receivable related to the incident of approximately \$1.2 million and \$1.3 million, respectively, which is included in prepaid expenses and other current assets in the Consolidated Balance Sheet. The recording of the receivable resulted in a reduction of direct operating expenses (exclusive of depreciation and amortization). The Refining Partnership received the \$1.2 million of insurance proceeds during the first quarter of 2016.

During the outage at the Coffeyville refinery as discussed above, the Refining Partnership accelerated certain planned turnaround activities scheduled for 2015 and incurred approximately \$5.5 million in turnaround expenses for the year ended December 31, 2014.

(9) Income Taxes

On May 19, 2012, CVR became a member of the consolidated federal tax group of AEPC, a wholly-owned subsidiary of IEP, and subsequently entered into a tax allocation agreement with AEPC (the "Tax Allocation Agreement"). The Tax Allocation Agreement provides that AEPC will pay all consolidated federal income taxes on behalf of the consolidated tax group. CVR is required to make payments to AEPC in an amount equal to the tax liability, if any, that it would have paid if it were to file as a consolidated group separate and apart from AEPC.

As of December 31, 2016 and 2015, the Company's Consolidated Balance Sheets reflected a payable of \$10.6 million and a receivable of \$11.6 million, respectively, for federal income taxes due to/from AEPC. The overpayment for 2015 was applied as a credit against the Company's tax owed during 2016. These amounts are recorded as due to/from parent in the Consolidated Balance Sheets. During the years ended December 31, 2016, 2015 and 2014, the Company paid \$45.0 million, \$57.5 million and \$120.1 million, respectively, to AEPC under the Tax Allocation Agreement.

CVR Energy, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Income tax expense (benefit) is comprised of the following:

	Year Ended December 31,		
	2016	2015	2014
	(in millions)		
Current			
Federal	\$ 67.2	\$ 74.9	\$ 76.1
State	(7.0)	14.5	16.6
Total current	<u>60.2</u>	<u>89.4</u>	<u>92.7</u>
Deferred			
Federal	(61.0)	2.7	8.3
State	(19.0)	(7.6)	(3.3)
Total deferred	<u>(80.0)</u>	<u>(4.9)</u>	<u>5.0</u>
Total income tax expense (benefit)	<u>\$ (19.8)</u>	<u>\$ 84.5</u>	<u>\$ 97.7</u>

The following is a reconciliation of total income tax expense (benefit) to income tax expense (benefit) computed by applying the statutory federal income tax rate (35%) to pretax income (loss):

	Year Ended December 31,		
	2016	2015	2014
	(in millions)		
Tax computed at federal statutory rate	\$ (3.8)	\$ 133.8	\$ 142.5
State income taxes, net of federal tax benefit	(8.0)	11.7	14.0
State tax incentives, net of federal tax expense	(8.8)	(7.2)	(5.4)
Domestic production activities deduction	(4.3)	(5.9)	(5.5)
Non-deductible share-based compensation	—	—	0.2
Noncontrolling interest	5.5	(44.9)	(47.4)
Other, net	(0.4)	(3.0)	(0.7)
Total income tax expense (benefit)	<u>\$ (19.8)</u>	<u>\$ 84.5</u>	<u>\$ 97.7</u>

The 2016 state benefit is higher than expected due to the release of a portion of the reserve for uncertain tax positions on state credits and the related interest, the change in the value of the deferred tax assets and liabilities due to the reduced state tax rate and adjustment to the prior year's state tax liabilities. The impact of these items on the state income tax benefit, net of federal tax expense is \$(2.8) million, \$(3.1) million and \$(2.0) million, respectively.

The Company earns Kansas High Performance Incentive Program ("HPIP") credits for qualified business facility investment within the state of Kansas. CVR recognized a net income tax benefit of approximately \$5.7 million, \$4.3 million and \$2.8 million on a credit of approximately \$8.7 million, \$6.7 million and \$4.3 million for the years ended December 31, 2016, 2015 and 2014, respectively, with respect to the HPIP credits. The Company earns Oklahoma Investment credits for qualified manufacturing facility investment within the state of Oklahoma. CVR recognized a net income tax benefit of approximately \$3.1 million, \$2.9 million and \$2.5 million on a credit of approximately \$4.8 million, \$4.4 million and \$3.9 million for the years ended December 31, 2016, 2015 and 2014, respectively, with respect to the Oklahoma Investment credits.

As of December 31, 2016, CVR has Kansas state income tax credits of approximately \$1.4 million, which are available to reduce future Kansas state income taxes. These credits, if not used, will expire in 2032. Additionally, CVR has Oklahoma state income tax credits of approximately \$25.7 million which are available to reduce future Oklahoma state income taxes. These credits have an indefinite life.

CVR Energy, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The income tax effect of temporary differences that give rise to significant portions of the deferred income tax assets and deferred income tax liabilities at December 31, 2016 and 2015 are as follows:

	Year Ended December 31,	
	2016	2015
	(in millions)	
Deferred income tax assets:		
Personnel accruals	\$ 1.3	\$ 1.5
State tax credit carryforward, net	10.5	11.0
Contingent liabilities	—	0.1
Other	0.1	—
Total gross deferred income tax assets	<u>11.9</u>	<u>12.6</u>
Deferred income tax liabilities:		
Property, plant, and equipment	(3.8)	(3.1)
Investment in CVR Partners	(89.2)	(83.4)
Investment in CVR Refining	(497.8)	(565.3)
Prepaid expenses	(0.3)	(0.3)
Other	(0.7)	(0.2)
Total gross deferred income tax liabilities	<u>(591.8)</u>	<u>(652.3)</u>
Net deferred income tax liabilities	<u>\$ (579.9)</u>	<u>\$ (639.7)</u>

In assessing the realizability of deferred tax assets including credit carryforwards, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Management considers the scheduled reversal of deferred tax liabilities, projected future taxable income, and tax planning strategies in making this assessment. Although realization is not assured, management believes that it is more likely than not that all of the deferred tax assets will be realized and thus, no valuation allowance was provided as of December 31, 2016 and 2015.

A reconciliation of the unrecognized tax benefits for the years ended December 31, 2016, 2015 and 2014 is as follows:

	Year Ended December 31,		
	2016	2015	2014
	(in millions)		
Balance beginning of year	\$ 49.0	\$ 55.5	\$ 45.2
Increase based on prior year tax positions	—	—	0.5
Decrease based on prior year tax positions	—	—	—
Increases in current year tax positions	—	9.8	9.8
Settlements	—	—	—
Reductions related to expirations of statute of limitations	(4.9)	(16.3)	—
Balance end of year	<u>\$ 44.1</u>	<u>\$ 49.0</u>	<u>\$ 55.5</u>

Included in the balance of unrecognized tax benefits as of December 31, 2016, 2015 and 2014 are \$28.7 million, \$31.8 million and \$25.6 million, respectively, of tax benefits that, if recognized, would affect the effective tax rate. Approximately \$4.9 million of the unrecognized tax positions relating to state tax credits were recognized in 2016 as a result of a lapse of statute of limitations. Approximately \$16.3 million of the unrecognized tax positions

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

relating to the characterization of partnership distributions received were recognized by the end of 2015 as a result of a lapse of the statute of limitations. Additionally, the Company believes that it is reasonably possible that approximately \$15.4 million of its unrecognized tax positions relating to state tax credits may be recognized by the end of 2017 as a result of a lapse of the statute of limitations. Under ASU 2013-11, approximately \$25.7 million and \$25.9 million of unrecognized tax benefits were netted with deferred tax asset carryforwards as of December 31, 2016 and 2015, respectively. The remaining unrecognized tax benefits are included in other long-term liabilities in the Consolidated Balance Sheets.

CVR recognizes interest expense (income) and penalties on uncertain tax positions and income tax deficiencies (refunds) in income tax expense. CVR recognized interest expense of approximately \$0.5 million during 2016 and has recognized a liability for interest of approximately \$8.0 million as of December 31, 2016. In 2015, CVR recognized interest expense of approximately \$1.0 million and had recognized a liability for interest of approximately \$7.5 million as of December 31, 2015. In 2014, CVR recognized interest expense of approximately \$3.8 million. No penalties were recognized during 2016, 2015 or 2014.

At December 31, 2016, the Company's tax filings are generally open to examination in the United States for the tax years ended December 31, 2012 through December 31, 2015 and in various individual states for the tax years ended December 31, 2012 through December 31, 2015.

(10) Long-Term Debt

Long-term debt consisted of the following:

	<u>December 31, 2016</u>	<u>December 31, 2015</u>
	<u>(in millions)</u>	
6.5% Senior Notes due 2022	\$ 500.0	\$ 500.0
9.25% Senior Secured Notes due 2023	645.0	—
6.5% Senior Notes due 2021	2.2	—
CRNF credit facility	—	125.0
Capital lease obligations	46.9	48.5
Total debt	<u>1,194.1</u>	<u>673.5</u>
Unamortized debt issuance cost	(14.2)	(6.4)
Unamortized debt discount	(15.3)	—
Current portion of long-term debt and capital lease obligations	(1.8)	(126.4)
Long-term debt, net of current portion	<u>\$ 1,162.8</u>	<u>\$ 540.7</u>

During the first quarter of 2016, the Company adopted ASU 2015-03, which requires that costs incurred to issue debt be presented in the balance sheet as a direct deduction from the carrying value of the debt. Prior to adoption of the ASU, all debt issuance costs were presented as assets. As a result of adoption of the standard, debt issuance costs of \$14.2 million and \$6.4 million were reclassified as a direct deduction from the carrying value of the related debt balances as of December 31, 2016 and December 31, 2015, respectively, in the Consolidated Balance Sheets. Debt issuance costs related to the asset-based lending facilities continue to be presented as assets in the Consolidated Balance Sheets.

2022 Senior Notes

On October 23, 2012, Refining LLC and Coffeyville Finance completed a private offering of \$500.0 million aggregate principal amount of 6.5% Second Lien Senior Notes due 2022 (the "2022 Notes"). The 2022 Notes are unsecured and fully and unconditionally guaranteed by CVR Refining and each of Refining LLC's existing domestic subsidiaries on a joint and several basis. CVR Refining has no independent assets or operations and Refining LLC is

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

a 100% owned finance subsidiary of CVR Refining. CVR Energy, CVR Partners and their respective subsidiaries are not guarantors.

The net proceeds from the offering of the 2022 Notes were used to purchase all of the then outstanding First Lien Secured Notes due 2015 through a tender offer and settled redemption in the fourth quarter of 2012. The debt issuance costs of the 2022 Notes totaled approximately \$8.7 million and are being amortized over the term of the 2022 Notes as interest expense using the effective-interest amortization method. On September 17, 2013, Refining LLC and Coffeyville Finance consummated a registered exchange offer, whereby all \$500.0 million of the outstanding 2022 Notes were exchanged for an equal principal amount of notes with identical terms that were registered under the Securities Act of 1933. The exchange offer fulfilled the Refining Partnership's obligations contained in the registration rights agreement entered into in connection with the issuance of the 2022 Notes. The Refining Partnership incurred approximately \$0.4 million of debt registration costs related to the registration and exchange offer during the year ended December 31, 2013, which are being amortized over the term of the 2022 Notes as interest expense using the effective-interest amortization method.

The 2022 Notes mature on November 1, 2022, unless earlier redeemed or repurchased by the issuers. Interest is payable on the 2022 Notes semi-annually on May 1 and November 1 of each year, commencing on May 1, 2013.

The 2022 Notes contain customary covenants for a financing of this type that limit, subject to certain exceptions, the incurrence of additional indebtedness or guarantees, the creation of liens on assets, the ability to dispose of assets, the ability to make certain payments on contractually subordinated debt, the ability to merge, consolidate with or into another entity and the ability to enter into certain affiliate transactions. The 2022 Notes provide that the Refining Partnership can make distributions to holders of its common units provided, among other things, it has a minimum fixed charge coverage ratio and there is no default or event of default under the 2022 Notes. As of December 31, 2016, the Refining Partnership was in compliance with the covenants contained in the 2022 Notes.

Included in other current liabilities on the Consolidated Balance Sheets is accrued interest payable totaling approximately \$5.4 million as of both December 31, 2016 and 2015 related to the 2022 Notes. At December 31, 2016, the estimated fair value of the 2022 Notes was approximately \$496.3 million. This estimate of fair value is Level 2 as it was determined by quotations obtained from a broker-dealer who makes a market in these and similar securities.

Amended and Restated Asset Based (ABL) Credit Facility

On December 20, 2012, CRLLC, CVR Refining, Refining LLC and each of the operating subsidiaries of Refining LLC (collectively, the "Credit Parties") entered into an amended and restated ABL credit agreement (the "Amended and Restated ABL Credit Facility") with a group of lenders and Wells Fargo Bank, National Association ("Wells Fargo"), as administrative agent and collateral agent. The Amended and Restated ABL Credit Facility is scheduled to mature on December 20, 2017. Under the Amended and Restated ABL Credit Facility, the Refining Partnership assumed the Company's position as borrower and the Company's obligations under the facility upon the closing of the Refining Partnership's IPO on January 23, 2013, as further discussed in Note 1 ("Organization and History of the Company").

The Amended and Restated ABL Credit Facility is a senior secured asset-based revolving credit facility in an aggregate principal amount of up to \$400.0 million with an incremental facility, which permits an increase in borrowings of up to \$200.0 million subject to additional lender commitments and certain other conditions. The proceeds of the loans may be used for capital expenditures and working capital and general corporate purposes of the Credit Parties and their subsidiaries. The Amended and Restated ABL Credit Facility provides for loans and letters of credit in an amount up to the aggregate availability under the facility, subject to meeting certain borrowing base conditions, with sub-limits of 10% of the total facility commitment for swingline loans and 90% of the total facility commitment for letters of credit.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Borrowings under the Amended and Restated ABL Credit Facility bear interest at either a base rate or LIBOR plus an applicable margin. The applicable margin is (i) (a) 1.75% for LIBOR borrowings and (b) 0.75% for prime rate borrowings, in each case if quarterly average excess availability exceeds 50% of the lesser of the borrowing base and the total commitments and (ii) (a) 2.00% for LIBOR borrowings and (b) 1.00% for prime rate borrowings, in each case if quarterly average excess availability is less than or equal to 50% of the lesser of the borrowing base and the total commitments. The Amended and Restated ABL Credit Facility also requires the payment of customary fees, including an unused line fee of (i) 0.40% if the daily average amount of loans and letters of credit outstanding is less than 50% of the lesser of the borrowing base and the total commitments and (ii) 0.30% if the daily average amount of loans and letters of credit outstanding is equal to or greater than 50% of the lesser of the borrowing base and the total commitments. The Refining Partnership is also required to pay customary letter of credit fees equal to, for standby letters of credit, the applicable margin on LIBOR loans on the maximum amount available to be drawn under and for commercial letters of credit, the applicable margin on LIBOR loans less 0.50% on the maximum amount available to be drawn under, and customary facing fees equal to 0.125% of the face amount of, each letter of credit.

The Amended and Restated ABL Credit Facility also contains customary covenants for a financing of this type that limit the ability of the Credit Parties and their respective subsidiaries to, among other things, incur liens, engage in a consolidation, merger, purchase or sale of assets, pay dividends, incur indebtedness, make advances, investment and loans, enter into affiliate transactions, issue equity interests, or create subsidiaries and unrestricted subsidiaries. The amended and restated facility also contains a fixed charge coverage ratio financial covenant, as defined under the facility. The Credit Parties were in compliance with the covenants of the Amended and Restated ABL Credit Facility as of December 31, 2016.

In connection with the Amended and Restated ABL Credit Facility, CRLLC and its subsidiaries incurred lender and other third-party costs of approximately \$2.1 million for the year ended December 31, 2012, which are being deferred and amortized to interest expense and other financing costs using a straight-line method over the term of the amended facility. Additionally, in accordance with guidance provided by the FASB regarding the modification of revolving debt arrangements, the remaining approximately \$2.8 million of unamortized deferred financing costs associated with the prior ABL credit facility will continue to be amortized over the term of the Amended and Restated ABL Credit Facility.

As of December 31, 2016, the Refining Partnership and its subsidiaries had availability under the Amended and Restated ABL Credit Facility of \$312.4 million and had letters of credit outstanding of approximately \$28.3 million. There were no borrowings outstanding under the Amended and Restated ABL Credit Facility as of December 31, 2016. Availability under the Amended and Restated ABL Credit Facility was limited by borrowing base conditions as of December 31, 2016.

2023 Senior Secured Notes

On June 10, 2016, CVR Partners and CVR Nitrogen Finance Corporation, an indirect wholly-owned subsidiary of CVR Partners (together the "2023 Notes Issuers"), certain subsidiary guarantors named therein and Wilmington Trust, National Association, as trustee and as collateral trustee, completed a private offering of \$645.0 million aggregate principal amount of 9.25% Senior Secured Notes due 2023 (the "2023 Notes"). The 2023 Notes mature on June 15, 2023, unless earlier redeemed or repurchased by the issuers. Interest on the 2023 Notes is payable semi-annually in arrears on June 15 and December 15 of each year, beginning on December 15, 2016. The 2023 Notes are guaranteed on a senior secured basis by all of the Nitrogen Fertilizer Partnership's existing subsidiaries.

The 2023 Notes were issued at a \$16.1 million discount, which is being amortized over the term of the 2023 Notes as interest expense using the effective-interest method. The Nitrogen Fertilizer Partnership received approximately \$622.9 million of cash proceeds, net of the original issue discount and underwriting fees, but before deducting other third-party fees and expenses associated with the offering. The net proceeds from the sale of the 2023 Notes were used to: (i) repay all amounts outstanding under the senior term loan credit facility with CRLLC; (ii) finance the Tender Offer (defined and discussed below) and (iii) to pay related fees and expenses.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The debt issuance costs of the 2023 Notes totaled approximately \$9.4 million and are being amortized over the term of the 2023 Notes as interest expense using the effective-interest amortization method.

The 2023 Notes contain customary covenants for a financing of this type that, among other things, restrict the Nitrogen Fertilizer Partnership's ability and the ability of certain of its subsidiaries to: (i) sell assets; (ii) pay distributions on, redeem or repurchase the Nitrogen Fertilizer Partnership's units or redeem or repurchase its subordinated debt; (iii) make investments; (iv) incur or guarantee additional indebtedness or issue preferred units; (v) create or incur certain liens; (vi) enter into agreements that restrict distributions or other payments from the Nitrogen Fertilizer Partnership's restricted subsidiaries to the Nitrogen Fertilizer Partnership; (vii) consolidate, merge or transfer all or substantially all of the Nitrogen Fertilizer Partnership's assets; (viii) engage in transactions with affiliates; and (ix) create unrestricted subsidiaries. As of December 31, 2016, the Nitrogen Fertilizer Partnership was in compliance with the covenants contained in the 2023 Notes.

Included in other current liabilities on the Consolidated Balance Sheets is accrued interest payable totaling approximately \$2.7 million as of December 31, 2016 related to the 2023 Notes. At December 31, 2016, the estimated fair value of the 2023 Notes was approximately \$664.4 million. This estimate of fair value is Level 2 as it was determined by quotations obtained from a broker-dealer who makes a market in these and similar securities.

2021 Notes

The \$320.0 million 2021 Notes were issued by CVR Nitrogen and CVR Nitrogen Finance (the "2021 Notes Issuers") prior to the East Dubuque Merger. The 2021 Notes bear interest at a rate of 6.5% per annum, payable semi-annually in arrears on April 15 and October 15 of each year. The 2021 Notes are scheduled to mature on April 15, 2021, unless repurchased or redeemed earlier in accordance with their terms.

On April 29, 2016, the 2021 Notes Issuers commenced a cash tender offer (the "Tender Offer") to purchase any and all of the outstanding 2021 Notes. In connection with the Tender Offer, the 2021 Notes Issuers solicited the consents of holders of the notes to certain proposed amendments to the indenture governing the notes (the "Consent Solicitation"). As a result of the Tender Offer, on June 10, 2016, the 2021 Notes Issuers repurchased approximately \$315.2 million of 2021 Notes, representing approximately 98.5% of the total outstanding principal amount of the notes at a purchase price of \$1,015 per \$1,000 in principal amount. The total amount paid related to the Tender Offer was approximately \$320.0 million, including an approximate \$4.7 million premium. Additionally, the 2021 Notes Issuers paid \$3.1 million for accrued and unpaid interest for the tendered notes up to the settlement date. The Nitrogen Fertilizer Partnership received the requisite consents in respect of the 2021 Notes in connection with the Consent Solicitation to amend the indenture governing the 2021 Notes. As a result, the 2021 Notes Issuers executed a supplemental indenture, dated as of June 10, 2016, which eliminated or modified substantially all of the restrictive covenants relating to CVR Nitrogen and its subsidiaries, eliminated all events of default other than failure to pay principal, premium or interest on the 2021 Notes, eliminated all conditions to satisfaction and discharge, and released the liens on the collateral securing the 2021 Notes. The repurchase of a portion of the 2021 Notes resulted in a loss on extinguishment of debt of approximately \$5.1 million during the second quarter of 2016, which includes the Tender Offer premium of \$4.7 million and the write-off of the unamortized portion of the purchase accounting adjustment of \$0.4 million.

Concurrently with, but separately from the Tender Offer, the 2021 Notes Issuers also commenced an offer to purchase all of the outstanding 2021 Notes at a price equal to 101% of the principal amount thereof, as required as a result of the East Dubuque Merger (the "Change of Control Offer"). The offer expired on June 28, 2016. As a result of the Change of Control Offer, the Nitrogen Fertilizer Partnership repurchased \$0.6 million of 2021 Notes at a purchase price of \$1,010 per \$1,000 in principal amount. The total amount paid related to the Change of Control offer was approximately \$0.6 million, including a nominal amount of premium and accrued and unpaid interest. In November 2016, the Nitrogen Fertilizer Partnership repurchased \$1.9 million principal amount of 2021 Notes, resulting in a \$0.2 million gain on extinguishment of debt.

As of December 31, 2016, \$2.2 million of principal amount of the 2021 Notes that remained outstanding and accrued interest was nominal.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Asset Based (ABL) Credit Facility

On December 31, 2016, the ABL Credit Facility has an aggregate principal amount of availability of up to \$50.0 million with an incremental facility, which permits an increase in borrowings of up to \$25.0 million in the aggregate subject to additional lender commitments and certain other conditions. The proceeds of the loans may be used for capital expenditures and working capital and general corporate purposes of the Nitrogen Fertilizer Partnership and its subsidiaries. The ABL Credit Facility provides for loans and standby letters of credit in an amount up to the aggregate availability under the facility, subject to meeting certain borrowing base conditions, with sub-limits of the lesser of 10.0% of the total facility commitment and \$5.0 million for swingline loans and \$10.0 million for letters of credit. The ABL Credit Facility is scheduled to mature on September 30, 2021.

At the option of the borrowers, loans under the ABL Credit Facility initially bear interest at an annual rate equal to (i) 2.0% plus LIBOR or (ii) 1.0% plus a base rate, subject to a 0.5% step-down based on the previous quarter's excess availability. The borrowers must also pay a commitment fee on the unutilized commitments and also pay customary letter of credit fees.

The ABL Credit Facility also contains customary covenants for a financing of this type that limit the ability of the Nitrogen Fertilizer Partnership and its subsidiaries to, among other things, incur liens, engage in a consolidation, merger, purchase or sale of assets, pay dividends, incur indebtedness, make advances, investments and loans, enter into affiliate transactions, issue equity interests or create subsidiaries and unrestricted subsidiaries. The ABL Credit Facility also contains a fixed charge coverage ratio financial covenant, as defined therein. The Nitrogen Fertilizer Partnership was in compliance with the covenants of the ABL Credit Facility as of December 31, 2016.

In connection with the ABL Credit Facility, the Nitrogen Fertilizer Partnership incurred lender and other third-party costs of approximately 1.2 million, which are being deferred and amortized to interest expense and other financing costs using the straight-line method over the term of the facility.

As of December 31, 2016, the Nitrogen Fertilizer Partnership and its subsidiaries had availability under the ABL Credit Facility of 49.3 million. There were no borrowings outstanding under the ABL Credit Facility as of December 31, 2016.

Nitrogen Fertilizer Partnership Credit Facility

The Nitrogen Fertilizer Partnership credit facility includes a term loan facility of \$125.0 million and a revolving credit facility of \$25.0 million with an uncommitted incremental facility of up to \$50.0 million. There is no scheduled amortization. The carrying value of the Nitrogen Fertilizer Partnership's debt approximates fair value. The principal portion of the term loan is presented as current debt on the Consolidated Balance Sheet as of December 31, 2015.

The credit facility was scheduled to mature on April 13, 2016. On April 1, 2016, in connection with the completion of the East Dubuque Merger, the Nitrogen Fertilizer Partnership repaid all amounts outstanding under the Credit Agreement and paid \$0.3 million for accrued and unpaid interest. Effective upon such repayment, the Credit Agreement and all related loan documents and security interests were terminated and released. The repayment was funded from amounts drawn on a senior term loan credit facility with CRLLC. The Nitrogen Fertilizer Partnership recognized a nominal loss on debt extinguishment in connection with the termination of the Credit Agreement.

Previous borrowings under the credit facility bore interest based on a pricing grid determined by the trailing four quarter leverage ratio. The initial pricing for Eurodollar rate loans under the credit facility was the Eurodollar rate plus a margin of 3.50% or, for base rate loans, the prime rate plus 2.50%. Under its terms, the lenders under the credit facility were granted a perfected, first priority security interest (subject to certain customary exceptions) in substantially all of the assets of CRNF and the Nitrogen Fertilizer Partnership. At December 31, 2015 the effective

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

rate was approximately 4.60%, inclusive of the impact of interest rate swaps discussed in Note 16 ("Derivative Financial Instruments")

Deferred Financing Costs

For the years ended December 31, 2016, 2015 and 2014, amortization of deferred financing costs reported as interest expense and other financing costs totaled approximately \$3.6 million, \$2.8 million and \$2.8 million, respectively.

Capital Lease Obligations

The Refining Partnership maintains two leases, accounted for as a capital lease and a financial obligation, which related to the Magellan Pipeline Terminals, L.P. ("Magellan Pipeline") and Excel Pipeline LLC ("Excel Pipeline"). The underlying assets and related depreciation were included in property, plant and equipment. The capital lease which relates to a sales-lease back agreement with Sunoco Pipeline, L.P. for its membership interest in the Excel Pipeline, has 154 months remaining of its term and will expire in September 2029. The financing agreement, which relates to the Magellan Pipeline terminals, bulk terminal and loading facility, has 153 months remaining lease term and will expire in September 2029. As of December 31, 2016, the outstanding obligation associated with these arrangements totaled approximately \$46.9 million, of which \$45.1 million is included in long-term liabilities and \$1.8 million is included in current liabilities in the Consolidated Balance Sheets.

Future payments required under capital lease at December 31, 2016 are as follows:

<u>Year Ending December 31,</u>	<u>Capital Lease</u> <u>(in millions)</u>
2017	\$ 6.4
2018	6.5
2019	6.5
2020	6.5
2021	6.5
2022 and thereafter	50.8
Total future payments	<u>83.2</u>
Less: amount representing interest	<u>36.3</u>
Present value of future minimum payments	46.9
Less: current portion	<u>1.8</u>
Long-term portion	<u>\$ 45.1</u>

(11) Dividends

On January 24, 2013, the board of directors of the Company adopted a quarterly cash dividend policy. Dividends are subject to change at the discretion of the board of directors. The Company began paying regular quarterly dividends in the second quarter of 2013. Additionally, the Company declared and paid one special cash dividend during the year ended December 31, 2014.

CVR Energy, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following is a summary of the quarterly and special dividends paid to stockholders during the years ended December 31, 2016 and 2015:

	December 31, 2015	March 31, 2016	June 30, 2016	September 30, 2016	Total Dividends Paid in 2016
	(in millions, except per share data)				
Dividend type	Quarterly	Quarterly	Quarterly	Quarterly	
Amount paid to IEP	\$ 35.6	\$ 35.6	\$ 35.6	\$ 35.6	\$ 142.4
Amounts paid to public stockholders	7.8	7.8	7.8	7.8	31.2
Total amount paid	<u>\$ 43.4</u>	<u>\$ 43.4</u>	<u>\$ 43.4</u>	<u>\$ 43.4</u>	<u>\$ 173.6</u>
Per common share	<u>\$ 0.50</u>	<u>\$ 0.50</u>	<u>\$ 0.50</u>	<u>\$ 0.50</u>	<u>\$ 2.00</u>
Shares outstanding	<u>86.8</u>	<u>86.8</u>	<u>86.8</u>	<u>86.8</u>	

	December 31, 2014	March 31, 2015	June 30, 2015	September 30, 2015	Total Dividends Paid in 2015
	(in millions, except per share data)				
Dividend type	Quarterly	Quarterly	Quarterly	Quarterly	
Amount paid to IEP	\$ 35.6	\$ 35.6	\$ 35.6	\$ 35.6	\$ 142.4
Amounts paid to public stockholders	7.8	7.8	7.8	7.8	31.3
Total amount paid	<u>\$ 43.4</u>	<u>\$ 43.4</u>	<u>\$ 43.4</u>	<u>\$ 43.4</u>	<u>\$ 173.7</u>
Per common share	<u>\$ 0.50</u>	<u>\$ 0.50</u>	<u>\$ 0.50</u>	<u>\$ 0.50</u>	<u>\$ 2.00</u>
Shares outstanding	<u>86.8</u>	<u>86.8</u>	<u>86.8</u>	<u>86.8</u>	

(12) Earnings Per Share

The computations of the basic and diluted earnings per share for the years ended December 31, 2016, 2015 and 2014 are as follows:

	For the Year Ended December 31,		
	2016	2015	2014
	(in millions, except per share data)		
Net income attributable to CVR Energy stockholders	\$ 24.7	\$ 169.6	\$ 173.9
Weighted-average shares of common stock outstanding - Basic and Diluted	86.8	86.8	86.8
Basic and Diluted earnings per share	\$ 0.28	\$ 1.95	\$ 2.00

There were no dilutive awards outstanding during the years ended December 31, 2016, 2015 and 2014 as all unvested awards under the LTIP were liability-classified awards. See Note 4 ("Share-Based Compensation").

(13) Benefit Plans

CVR sponsors and administers two defined-contribution 401(k) plans, the CVR Energy 401(k) Plan and the CVR Energy 401(k) Plan for Represented Employees (the "Plans"), in which CVR employees may participate. Participants in the Plans may elect to contribute a designated percentage of their eligible compensation in accordance with the Plans, subject to statutory limits. CVR provides a matching contribution of 100% of the first 6% of eligible compensation contributed by participants. Contributions to the represented plan are determined in accordance with provisions of negotiated labor contracts. Participants in both Plans are immediately vested in their individual contributions. Both Plans provide for a three-year vesting schedule for CVR's matching contributions and

CVR Energy, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

contain a provision to count service with predecessor organizations. CVR's contributions under the Plans were approximately \$8.1 million, \$7.3 million and \$6.6 million for the years ended December 31, 2016, 2015 and 2014, respectively.

Beginning April 1, 2016 as a result of the East Dubuque Merger, the Nitrogen Fertilizer Partnership acquired the Rentech Nitrogen GP, LLC Union 401(k) Plan (the "Union Plan"), which is sponsored by CVR Nitrogen GP, LLC. The Union Plan is administered by a subsidiary of CVR Energy and is maintained for the benefit of union employees at the East Dubuque Facility. Contributions to the represented plan are determined in accordance with provisions of the negotiated labor contract. Participants in the Union Plan are immediately vested in their individual contributions as well as the Nitrogen Fertilizer Partnership's contributions on their behalf. The Nitrogen Fertilizer Partnership's contributions under the Union Plan were approximately \$0.1 million for the period April 1 - December 31, 2016.

(14) Commitments and Contingencies

The minimum required payments for CVR's operating lease agreements and unconditional purchase obligations are as follows:

<u>Year Ending December 31,</u>	<u>Operating Leases</u>	<u>Unconditional Purchase Obligations⁽¹⁾</u>
	(in millions)	
2017.....	\$ 6.6	\$ 149.5
2018.....	5.6	129.3
2019.....	5.0	126.4
2020.....	4.6	109.0
2021.....	4.4	97.4
Thereafter	6.8	639.7
	<u>\$ 33.0</u>	<u>\$ 1,251.3</u>

(1) This amount includes approximately \$733.7 million payable ratably over fourteen years pursuant to petroleum transportation service agreements between Coffeyville Resources Refining Marketing, LLC ("CRRM") and each of TransCanada Keystone Pipeline Limited Partnership and TransCanada Keystone Pipeline, LP (together "TransCanada"). The purchase obligation reflects the exchange rate between the Canadian dollar and the U.S. dollar as of December 31, 2016, where applicable. Under the agreements, CRRM receives transportation of at least 25,000 barrels per day of crude oil with a delivery point at Cushing, Oklahoma for a term of twenty years on TransCanada's Keystone pipeline system. CRRM began receiving crude oil under the agreements in the first quarter of 2011.

CVR leases various equipment, including railcars and real properties, under long-term operating leases expiring at various dates. For the years ended December 31, 2016, 2015 and 2014, lease expense totaled approximately \$8.2 million, \$8.7 million and \$9.3 million, respectively. The lease agreements have various remaining terms. Some agreements are renewable, at CVR's option, for additional periods. It is expected, in the ordinary course of business, that leases will be renewed or replaced as they expire.

Additionally, in the normal course of business, the Company has long-term commitments to purchase oxygen, nitrogen, electricity, storage capacity, water and pipeline transportation services. For the years ended December 31, 2016, 2015 and 2014, total expense of \$150.5 million, \$135.9 million and \$137.8 million, respectively, was incurred related to long-term commitments.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Crude Oil Supply Agreement

On August 31, 2012, CRRM and Vitol Inc. ("Vitol"), entered into an Amended and Restated Crude Oil Supply Agreement (as amended, the "Vitol Agreement"). Under the Vitol Agreement, Vitol supplies the petroleum business with crude oil and intermediation logistics, which helps to reduce the Refining Partnership's inventory position and mitigate crude oil pricing risk. The Vitol Agreement will automatically renew for successive one-year terms (each such term, a "Renewal Term") unless either party provides the other with notice of nonrenewal at least 180 days prior to expiration of any Renewal Term. The Vitol Agreement currently extends through December 31, 2017.

Litigation

From time to time, the Company is involved in various lawsuits arising in the normal course of business, including matters such as those described below under, "Environmental, Health, and Safety ("EHS") Matters." Liabilities related to such litigation are recognized when the related costs are probable and can be reasonably estimated. These provisions are reviewed at least quarterly and adjusted to reflect the impacts of negotiations, settlements, rulings, advice of legal counsel, and other information and events pertaining to a particular case. It is possible that management's estimates of the outcomes will change within the next year due to uncertainties inherent in litigation and settlement negotiations. In the opinion of management, the ultimate resolution of any other litigation matters is not expected to have a material adverse effect on the accompanying consolidated financial statements. There can be no assurance that management's beliefs or opinions with respect to liability for potential litigation matters will prove to be accurate.

East Dubuque Merger Litigation

On August 29, 2015, Mike Mustard, a purported unitholder of Rentech Nitrogen Partners, L.P. ("Rentech Nitrogen"), filed a class action complaint on behalf of the public unitholders of Rentech Nitrogen against Rentech Nitrogen, Rentech Nitrogen GP, LLC ("Rentech Nitrogen GP"), Rentech Nitrogen Holdings, Inc., Rentech, Inc., DSHC, LLC, CVR Partners, two subsidiaries of CVR Partners, and the members of the board of directors of Rentech Nitrogen GP (the "Rentech Nitrogen Board"), in the Court of Chancery of the State of Delaware (the "Mustard Lawsuit"). On October 6, 2015, Jesse Sloan, a purported unitholder of Rentech Nitrogen, filed a class action complaint on behalf of the public unitholders of Rentech Nitrogen against Rentech Nitrogen, Rentech Nitrogen GP, CVR Partners, two subsidiaries of CVR Partners, and the members of the Rentech Nitrogen Board, in the United States District Court for the Central District of California (the "Sloan Lawsuit"). Both lawsuits alleged, among other things, that the attempted sale of Rentech Nitrogen to CVR Partners was conducted by means of an unfair process and for an unfair price. In July 2016, the Mustard Lawsuit was dismissed. In October 2016, the United States District Court for the Central District of California issued an order and judgment approving the settlement of the Sloan Lawsuit. Under the terms of the settlement, the defendants made certain supplemental disclosures related to the East Dubuque Merger, and in return, the settlement resolves and releases all claims by unitholders of Rentech Nitrogen challenging the East Dubuque Merger.

Property Tax Matter

CRNF received a ten-year property tax abatement from Montgomery County, Kansas (the "County") in connection with the construction of the Coffeyville Fertilizer Facility that expired on December 31, 2007. In connection with the expiration of the abatement, the County reclassified and reassessed CRNF's nitrogen fertilizer plant for property tax purposes. The reclassification and reassessment resulted in an increase in CRNF's annual property tax expense by an average of approximately \$10.7 million per year for the years ended December 31, 2008 and December 31, 2009, \$11.7 million for the year ended December 31, 2010, \$11.4 million for the year ended December 31, 2011 and \$11.3 million for the year ended December 31, 2012. CRNF protested the classification and resulting valuation for each of those years to the Kansas Board of Tax Appeals ("BOTA"), followed by an appeal to the Kansas Court of Appeals. However, CRNF fully accrued and paid the property taxes the county claims are owed for the years ended December 31, 2008 through 2012. The Kansas Court of Appeals, in a memorandum opinion dated August 9, 2013, reversed the BOTA decision in part and remanded the case to BOTA, instructing BOTA to classify each asset on an asset by asset basis instead of making a broad determination that the entire plant was real

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

property as BOTA did originally. The County filed a motion for rehearing with the Kansas Court of Appeals and a petition for review with the Kansas Supreme Court, both of which have been denied.

In March 2015, BOTA concluded that based upon an asset by asset determination, a substantial majority of the assets in dispute will be classified as personal property for the 2008 tax year. The parties stipulated to the value of the real property, following which BOTA issued its final decision. The County has appealed the decision with respect to classification to the Kansas Court of Appeals. No amounts have been received or recognized in these consolidated financial statements related to the 2008 property tax matter or BOTA's decision.

On February 25, 2013, the County and CRNF agreed to a settlement for tax years 2009 through 2012, which has lowered and will lower CRNF's property taxes by about \$10.7 million per year (as compared to the 2012 tax year) for tax years 2013 to 2016 based on current mill levy rates. In addition, the settlement provides the County will support CRNF's application before BOTA for a ten-year tax exemption for the UAN expansion. Finally, the settlement provides that CRNF will continue its appeal of the 2008 reclassification and reassessment discussed above.

SEC Matter

The SEC conducted an investigation in connection with the Company's disclosures (which were prepared by the Company's outside counsel) following the announcement of a tender offer for the Company's stock initiated in February 2012. The Company cooperated with the SEC and produced, at the SEC's request, documents pertaining to the tender offer and the Company's disclosures. On February 14, 2017, the SEC issued an order instituting cease and desist proceedings that require the Company to prospectively comply with certain disclosure obligations in response to tender offers for the Company's securities. No civil penalty was issued.

Flood, Crude Oil Discharge and Insurance

Crude oil was discharged from the Coffeyville refinery on July 1, 2007, due to the short amount of time available to shutdown and secure the refinery in preparation for the flood that occurred on June 30, 2007. On October 25, 2010, the Company received a letter from the United States Coast Guard on behalf of the EPA seeking approximately \$1.8 million in oversight cost reimbursement. The Company responded by asserting defenses to the Coast Guard's claim for oversight costs. On September 23, 2011, the United States Department of Justice ("DOJ"), acting on behalf of the EPA and the United States Coast Guard, filed suit against CRRM in the United States District Court for the District of Kansas seeking recovery from CRRM related to alleged non-compliance with the Clean Air Act's Risk Management Program ("RMP"), the Clean Water Act ("CWA") and the Oil Pollution Act of 1990 ("OPA"). CRRM reached an agreement with the DOJ resolving its claims under CWA and OPA. The agreement was memorialized in a Consent Decree that was filed with and approved by the Court on February 12, 2013 and March 25, 2013, respectively (the "2013 Consent Decree"). On April 19, 2013, CRRM paid a civil penalty (including accrued interest) in the amount of \$0.6 million related to the CWA claims and reimbursed the Coast Guard for oversight costs under OPA in the amount of \$1.7 million. The 2013 Consent Decree also requires CRRM to make small capital upgrades to the Coffeyville refinery crude oil tank farm, develop flood procedures and provide employee training, the majority of which have already been completed.

The parties also reached an agreement to settle DOJ's claims related to alleged non-compliance with RMP. The agreement was memorialized in a separate consent decree that was filed with and approved by the Court on May 21, 2013 and July 2, 2013, respectively, and provided for a civil penalty of \$0.3 million. On July 29, 2013, CRRM paid the civil penalty related to the RMP claims. In 2015, CRRM continued to implement the recommendations of several audits required by the RMP Consent Decree, which were related to compliance with RMP requirements.

CRRM sought insurance coverage for the crude oil release and for the ultimate costs for remediation and third-party property damage claims. On July 10, 2008, the Company filed a lawsuit in the United States District Court for the District of Kansas against certain of the Company's environmental insurance carriers requesting insurance coverage indemnification for the June/July 2007 flood and crude oil discharge losses. Each insurer reserved its rights under various policy exclusions and limitations and cited potential coverage defenses. The Court issued summary

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

judgment opinions that eliminated the majority of the insurance defendants' reservations and defenses. CRRM has received \$25.0 million of insurance proceeds under its primary environmental liability insurance policy, which constitutes full payment of the primary pollution liability policy limit. During the second quarter of 2015, CRRM entered into a settlement agreement and release with the insurance carriers involved in the lawsuit, pursuant to which (i) CRRM received settlement proceeds of approximately \$31.3 million, (ii) the parties mutually released each other from all claims relating to the flood and crude oil discharge and (iii) all pending appeals have been dismissed. Of the settlement proceeds received, \$27.3 million were recorded as a flood insurance recovery in the Consolidated Statements of Operations for the year ended December 31, 2015. The remaining \$4.0 million of settlement proceeds reduced CVR Refining's \$4.0 million receivable related to this matter, which was included in other assets on the Consolidated Balance Sheets as of December 31, 2014.

Environmental, Health, and Safety ("EHS") Matters

The petroleum and nitrogen fertilizer businesses are subject to various stringent federal, state, and local EHS rules and regulations. Liabilities related to EHS matters are recognized when the related costs are probable and can be reasonably estimated. Estimates of these costs are based upon currently available facts, existing technology, site-specific costs, and currently enacted laws and regulations. In reporting EHS liabilities, no offset is made for potential recoveries.

CRRM, CRNF, Coffeyville Resources Crude Transportation, LLC ("CRCT"), Wynnewood Refining Company, LLC ("WRC"), East Dubuque Nitrogen Fertilizers, LLC ("EDNF") and Coffeyville Resources Terminal, LLC ("CRT") own and/or operate manufacturing and ancillary operations at various locations directly related to petroleum refining and distribution and nitrogen fertilizer manufacturing. Therefore, CRRM, CRNF, CRCT, WRC, EDNF and CRT have exposure to potential EHS liabilities related to past and present EHS conditions at these locations. Under the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), the Resource Conservation and Recovery Act ("RCRA"), and related state laws, certain persons may be liable for the release or threatened release of hazardous substances. These persons can include the current owner or operator of property where a release or threatened release occurred, any persons who owned or operated the property when the release occurred, and any persons who disposed of, or arranged for the transportation or disposal of, hazardous substances at a contaminated property. Liability under CERCLA is strict, and under certain circumstances, joint and several, so that any responsible party may be held liable for the entire cost of investigating and remediating the release of hazardous substances. Similarly, the Oil Pollution Act generally subjects owners and operators of facilities to strict, joint and several liability for all containment and clean-up costs, natural resource damages, and potential governmental oversight costs arising from oil spills into the waters of the United States, which has been broadly interpreted to include most water bodies including intermittent streams.

CRRM, CRNF, CRCT, WRC, EDNF and CRT are subject to extensive and frequently changing federal, state and local environmental and health and safety laws and regulations governing the emission and release of hazardous substances into the environment, the treatment and discharge of waste water, and the storage, handling, use and transportation of petroleum and nitrogen products, and the characteristics and composition of gasoline and diesel fuels. The ultimate impact of complying with evolving laws and regulations is not always clearly known or determinable due in part to the fact that our operations may change over time and certain implementing regulations for laws, such as the federal Clean Air Act, have not yet been finalized, are under governmental or judicial review or are being revised. These laws and regulations could result in increased capital, operating and compliance costs.

On August 1, 2016, CRCT received a Notice of Probable Violation, Proposed Civil Penalty and Proposed Compliance Order (the "NOPV") from the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (the "PHMSA"). The NOPV alleges violations of the Pipeline Safety Regulations, Title 49, Code of Federal Regulations. The alleged violations include alleged failures (during various time periods) to (i) conduct quarterly notification drills, (ii) maintain certain required records, (iii) utilize certain required safety equipment (including line markers), (iv) take certain pipeline integrity management activities, (v) conduct certain cathodic protection testing, and (vi) make certain atmospheric corrosion inspections. The preliminary assessed civil penalty is approximately \$0.5 million and the NOPV contained a compliance order outlining remedial compliance steps to be undertaken by CRCT. CRCT paid approximately \$160,000 of the preliminary assessed civil penalty, is

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

contesting and requesting mitigation of the remainder, and is also requesting reconsideration of the proposed compliance order. Although CVR Refining cannot predict with certainty the ultimate resolution of the claims asserted, CVR Refining does not believe that the claims in the NOPV will have a material adverse effect on CVR Refining's business, financial condition or results of operations.

CRRM and CRT have agreed to perform corrective actions at the Coffeyville, Kansas refinery and the now-closed Phillipsburg, Kansas terminal facility, pursuant to Administrative Orders on Consent issued under RCRA to address historical contamination by the prior owners (RCRA Docket No. VII-94-H-20 and Docket No. VII-95-H-11, respectively). WRC and the Oklahoma Department of Environmental Quality ("ODEQ") have entered into a Consent Order (Case No. 15-056) to resolve certain legacy environmental issues related to historical groundwater contamination and the operation of a wastewater conveyance. As of December 31, 2016 and 2015, environmental accruals of approximately \$4.8 million and \$3.6 million, respectively, were reflected in the Consolidated Balance Sheets for probable and estimated costs for remediation of environmental contamination under the RCRA Administrative Orders and the ODEQ Consent Order, for which approximately \$0.2 million and \$2.0 million, respectively, are included in other current liabilities. Accruals were determined based on an estimate of payment costs through 2026, for which the scope of remediation was arranged with the EPA and ODEQ, and were discounted at the appropriate risk free rates at December 31, 2016 and 2015, respectively. The accruals include estimated closure and post-closure costs of approximately \$0.4 million and \$0.4 million for two landfills at December 31, 2016 and 2015, respectively. The estimated future payments for these required obligations are as follows:

<u>Year Ending December 31,</u>	<u>Amount</u>
	<u>(in millions)</u>
2017	\$ 1.5
2018	1.6
2019	1.3
2020	0.1
2021	0.1
Thereafter	0.3
Undiscounted total	<u>4.9</u>
Less amounts representing interest at 1.47%	0.1
Accrued environmental liabilities at December 31, 2016	<u>\$ 4.8</u>

Management periodically reviews and, as appropriate, revises its environmental accruals. Based on current information and regulatory requirements, management believes that the accruals established for environmental expenditures are adequate.

Mobile Source Air Toxic II Emissions

In 2007, the EPA promulgated the Mobile Source Air Toxic II ("MSAT II") rule that requires the reduction of benzene in gasoline by 2011. The MSAT II projects for CRRM and WRC were completed within the compliance deadline of November 1, 2014. The projects were completed at a total cost of approximately \$48.3 million and \$89.0 million, excluding capitalized interest, by CRRM and WRC, respectively.

Tier 3 Motor Vehicle Emission and Fuel Standards

In April 2014, the EPA promulgated the Tier 3 Motor Vehicle Emission and Fuel Standards, which will require that gasoline contain no more than ten parts per million of sulfur on an annual average basis. Refineries must be in compliance with the more stringent emission standards by January 1, 2017; however, compliance with the rule is extended until January 1, 2020 for approved small volume refineries and small refiners. In March 2015, the EPA approved the Wynnewood refinery's application requesting "small volume refinery" status. In June 2016, because it exceeded the EPA's specified throughput limit for a "small volume refinery," the Wynnewood refinery became disqualified as a "small volume refinery." Therefore, the Wynnewood refinery's compliance deadline was

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

accelerated to December 21, 2018. It is not anticipated that the refineries will require additional controls or capital expenditures to meet the anticipated new standard.

Renewable Fuel Standards

CVR Refining is subject to the Renewable Fuel Standard ("RFS") which requires refiners to either blend "renewable fuels" in with their transportation fuels or purchase renewable fuel credits, known as RINs in lieu of blending. Due to mandates in the RFS requiring increasing volumes of renewable fuels to replace petroleum products in the U.S. transportation fuel market, there may be a decrease in demand for petroleum products. Beginning in 2011, the Coffeyville refinery was required to blend renewable fuels into its transportation fuel or purchase RINs in lieu of blending. In 2013, the Wynnewood refinery was subject to the RFS for the first time. CVR Refining is not able to blend the substantial majority of its transportation fuels and has to purchase RINs on the open market, as well as waiver credits for cellulosic biofuels from the EPA, in order to comply with the RFS.

The cost of RINs has been extremely volatile as the EPA's proposed renewable fuel volume mandates approached the "blend wall." The blend wall refers to the point at which the amount of ethanol blended into the transportation fuel supply exceeds the demand for transportation fuel containing such levels of ethanol. The blend wall is generally considered to be reached when more than 10% ethanol by volume ("E10 gasoline") is blended into transportation fuel.

On December 14, 2015, the EPA published in the Federal Register a final rule establishing the renewable fuel volume mandates for 2014, 2015 and 2016, and the biomass-based diesel mandate for 2017. On December 12, 2016, the EPA published in the Federal Register a final rule establishing the renewable fuel volume mandates for 2017, and the biomass-based diesel mandate for 2018. The volumes included in the EPA's final rule increase each year, but are lower, with the exception of the volumes for biomass-based diesel, than the volumes required by the Clean Air Act. The EPA used its waiver authorities to lower the volumes, but its decision to do so for the 2014-2016 compliance years has been challenged in the U.S. Court of Appeals for the District of Columbia Circuit. In addition, the EPA has articulated a policy to incentivize additional investments in renewable fuel blending and distribution infrastructure by increasing the price of RINs.

The cost of RINs for the years ended December 31, 2016, 2015 and 2014 was approximately \$205.9 million, \$123.9 million and \$127.2 million, respectively. As of December 31, 2016 and 2015, CVR Refining's biofuel blending obligation was approximately \$186.3 million and \$9.5 million, respectively, which is recorded in other current liabilities in the Consolidated Balance Sheets. The price of RINs has been extremely volatile and has increased over the last year. The future cost of RINs for the petroleum business is difficult to estimate. Additionally, the cost of RINs is dependent upon a variety of factors, which include the availability of RINs for purchase, the price at which RINs can be purchased, transportation fuel production levels, the mix of the petroleum business' petroleum products, as well as the fuel blending performed at its refineries and downstream terminals, all of which can vary significantly from period to period.

Coffeyville Second Consent Decree

In March 2004, CRRM and CRT entered into a Consent Decree (the "2004 Consent Decree") with the EPA and the Kansas Department of Health and Environment (the "KDHE") to resolve air compliance concerns raised by the EPA and KDHE related to Farmland Industries Inc.'s prior ownership and operation of the Coffeyville crude oil refinery and the now-closed Phillipsburg terminal facilities. Under the 2004 Consent Decree, CRRM agreed to reduce emissions of sulfur dioxide ("SO₂"), nitrogen oxides and particulate matter from its FCCU by January 1, 2011. In addition, pursuant to the 2004 Consent Decree, CRRM and CRT assumed clean-up obligations at the Coffeyville refinery and the now-closed Phillipsburg terminal facilities.

In March 2012, CRRM entered into a second consent decree (the "Second Consent Decree") with the EPA and KDHE, which replaced the 2004 Consent Decree (other than certain financial assurance provisions associated with corrective action at the refinery and terminal under RCRA). The Second Consent Decree was entered by the U.S. District Court for the District of Kansas on April 19, 2012. The Second Consent Decree gave CRRM more time to

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install the FCCU controls from the 2004 Consent Decree and expands the scope of the settlement so that it is now considered a "global settlement" under the EPA's "National Petroleum Refining Initiative." Under the National Petroleum Refining Initiative, the EPA alleged industry-wide non-compliance with four "marquee" issues under the Clean Air Act: New Source Review, Flaring, Leak Detection and Repair, and Benzene Waste Operations NESHAP. The National Petroleum Refining Initiative has resulted in most U.S. refineries (representing more than 95% of the U.S. refining capacity) entering into consent decrees requiring the payment of civil penalties and the installation of air pollution control equipment and enhanced operating procedures. Under the Second Consent Decree, CRRM was required to pay a civil penalty of approximately \$0.7 million and complete the installation of FCCU controls required under the 2004 Consent Decree, add controls to certain heaters and boilers and enhance certain work practices relating to wastewater and fugitive emissions. In March 2016, the United States District Court for the District of Kansas approved a modification to the Second Consent Decree memorializing an agreement with the EPA and KDHE to modify provisions in the Second Consent Decree relating to the installation of controls to reduce air emissions of sulfur dioxide from the refinery's FCCU. Pursuant to the terms of the modification, CRRM is permitted to use alternative means of control to those currently specified in the Second Consent Decree provided it can meet the limits specified in the modification. As the modification does not require the controls specified in the Second Consent Decree, compliance costs have been reduced by approximately \$35.0 million. The additional incremental capital expenditures associated with the Second Consent Decree are expected to be approximately \$6.0 million.

RCRA Compliance Matters

In January 2014, the EPA issued an inspection report to the Wynnewood refinery related to a RCRA compliance evaluation inspection conducted in March 2013. In February 2014, ODEQ notified WRC that it concurred with the EPA's inspection findings and would be pursuing enforcement. WRC and ODEQ entered into a Consent Order in June 2015 resolving all alleged non-compliance associated with the RCRA compliance evaluation inspection, as well as issues related to possible soil and groundwater contamination associated with the prior owner's operation of the refinery. The Consent Order requires WRC to take certain corrective actions, including specified groundwater remediation and monitoring measures pursuant to a work plan and replacement of a wastewater conveyance to be approved by ODEQ. ODEQ approved the work plan submitted by WRC on February 1, 2016 and the replacement of a wastewater conveyance on August 15, 2016. WRC is in the process of implementing the specified groundwater remediation and monitoring measures. The costs of complying with the Consent Order are estimated to be approximately \$3.9 million.

Environmental expenditures are capitalized when such expenditures are expected to result in future economic benefits. For the years ended December 31, 2016, 2015 and 2014, capital expenditures were approximately \$17.2 million, \$35.7 million and \$100.6 million, respectively, and were incurred to improve the environmental compliance and efficiency of the operations.

CRRM, CRNF, CRCT, WRC, EDNF and CRT each believe it is in substantial compliance with existing EHS rules and regulations. There can be no assurance that the EHS matters described above or other EHS matters which may develop in the future will not have a material adverse effect on the business, financial condition, or results of operations.

Wynnewood Refinery Incident

On September 28, 2012, the Wynnewood refinery experienced an explosion in a boiler unit during startup after a short outage as part of the turnaround process. Two employees were fatally injured. Damage at the refinery was limited to the boiler. Additionally, there has been no evidence of environmental impact. The refinery was in the final stages of shutdown for turnaround maintenance at the time of the incident. WRC completed an internal investigation of the incident and cooperated with OSHA in its investigation. OSHA also conducted a general inspection of the facility during the boiler incident investigation. In March 2013, OSHA completed its investigation and communicated its citations to WRC. OSHA also placed WRC in its Severe Violators Enforcement Program ("SVEP"). WRC is vigorously contesting the citations and OSHA's placement of WRC in the SVEP. Any penalties associated with OSHA's citations are not expected to have a material adverse effect on the consolidated financial statements.

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Affiliate Pension Obligations

Mr. Icahn, through certain affiliates, owns approximately 82% of the Company's capital stock. Applicable pension and tax laws make each member of a "controlled group" of entities, generally defined as entities in which there is at least an 80% common ownership interest, jointly and severally liable for certain pension plan obligations of any member of the controlled group. These pension obligations include ongoing contributions to fund the plan, as well as liability for any unfunded liabilities that may exist at the time the plan is terminated. In addition, the failure to pay these pension obligations when due may result in the creation of liens in favor of the pension plan or the Pension Benefit Guaranty Corporation ("PBGC") against the assets of each member of the controlled group.

As a result of the more than 80% ownership interest in CVR Energy by Mr. Icahn's affiliates, the Company is subject to the pension liabilities of all entities in which Mr. Icahn has a direct or indirect ownership interest of at least 80%. Two such entities, ACF Industries LLC ("ACF") and Federal-Mogul, are the sponsors of several pension plans. All the minimum funding requirements of the Code and the Employee Retirement Income Security Act of 1974, as amended by the Pension Protection Act of 2006, for these plans have been met as of December 31, 2016. If the ACF and Federal-Mogul plans were voluntarily terminated, they would be collectively underfunded by approximately \$613.4 million and \$589.2 million as of December 31, 2016 and 2015, respectively. These results are based on the most recent information provided by Mr. Icahn's affiliates based on information from the plans' actuaries. These liabilities could increase or decrease, depending on a number of factors, including future changes in benefits, investment returns, and the assumptions used to calculate the liability. As members of the controlled group, CVR Energy would be liable for any failure of ACF and Federal-Mogul to make ongoing pension contributions or to pay the unfunded liabilities upon a termination of their respective pension plans. In addition, other entities now or in the future within the controlled group that includes CVR Energy may have pension plan obligations that are, or may become, underfunded, and the Company would be liable for any failure of such entities to make ongoing pension contributions or to pay the unfunded liabilities upon a termination of such plans. The current underfunded status of the ACF and Federal-Mogul pension plans requires such entities to notify the PBGC of certain "reportable events," such as if CVR Energy were to cease to be a member of the controlled group, or if CVR Energy makes certain extraordinary dividends or stock redemptions. The obligation to report could cause the Company to seek to delay or reconsider the occurrence of such reportable events. Based on the contingent nature of potential exposure related to these affiliate pension obligations, no liability has been recorded in the consolidated financial statements.

Joint Venture Agreement

On September 19, 2016, Coffeyville Resources Pipeline, LLC ("CRPLLC"), an indirect wholly-owned subsidiary of CVR Refining, entered into an agreement with Velocity Central Oklahoma Pipeline LLC ("Velocity") related to their joint ownership of Velocity Pipeline Partners, LLC ("VPP"), which will construct, own and operate a crude oil pipeline. CRPLLC holds a 40% interest in VPP. Velocity holds a 60% interest in VPP and serves as the day-to-day operator of VPP. As of December 31, 2016, CRPLLC has contributed \$5.6 million to VPP, which is recorded in other long-term assets on the Consolidated Balance Sheet, and expects to contribute a total of approximately \$9.3 million during the pipeline construction.

(15) Fair Value Measurements

ASC Topic 820 — *Fair Value Measurements and Disclosures* ("ASC 820") established a single authoritative definition of fair value when accounting rules require the use of fair value, set out a framework for measuring fair value and required additional disclosures about fair value measurements. ASC 820 clarifies that fair value is an exit price, representing the amount from the perspective of a market participant that holds the asset or owes the liability at the measurement date.

ASC 820 discusses valuation techniques, such as the market approach (prices and other relevant information generated by market transactions involving identical or comparable assets, liabilities or a group of assets and liabilities such as a business), the income approach (techniques to convert future amounts to a single current amount based on market expectations about those future amounts including present value techniques and option pricing),

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and the cost approach (amount that would be required currently to replace the service capacity of an asset which is often referred to as a replacement cost). ASC 820 utilizes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three broad levels. The following is a brief description of those three levels:

- Level 1 — Quoted prices in active markets for identical assets and liabilities
- Level 2 — Other significant observable inputs (including quoted prices in active markets for similar assets or liabilities)
- Level 3 — Significant unobservable inputs (including the Company's own assumptions in determining the fair value)

The following table sets forth the assets and liabilities measured at fair value on a recurring basis, by input level, as of December 31, 2016 and 2015:

<u>Location and Description</u>	December 31, 2016			
	Level 1	Level 2	Level 3	Total
	(in millions)			
Cash equivalents	\$ 15.8	\$ —	\$ —	\$ 15.8
Other current assets (investments)	0.1	—	—	0.1
Other current assets (derivative agreements)	—	—	—	—
Total Assets	\$ 15.9	\$ —	\$ —	\$ 15.9
Other current liabilities (other derivative agreements)	—	(11.1)	—	(11.1)
Other current liabilities (biofuel blending obligation & benzene obligation)	—	(187.0)	—	(187.0)
Total Liabilities	\$ —	\$ (198.1)	\$ —	\$ (198.1)

<u>Location and Description</u>	December 31, 2015			
	Level 1	Level 2	Level 3	Total
	(in millions)			
Cash equivalents	\$ 15.7	\$ —	\$ —	\$ 15.7
Other current assets (investments)	0.1	—	—	0.1
Other current assets (derivative agreements)	—	44.7	—	44.7
Total Assets	\$ 15.8	\$ 44.7	\$ —	\$ 60.5
Other current liabilities (derivative agreements)	—	(0.1)	—	(0.1)
Other current liabilities (interest rate swaps)	—	(0.1)	—	(0.1)
Other current liabilities (biofuel blending obligations)	—	(2.7)	—	(2.7)
Total Liabilities	\$ —	\$ (2.9)	\$ —	\$ (2.9)

As of December 31, 2016 and 2015, the only financial assets and liabilities that are measured at fair value on a recurring basis are the Company's cash equivalents, investments, derivative instruments, uncommitted biofuel blending obligation and benzene obligations. Additionally, the fair value of the Company's debt issuances is disclosed in Note 10 ("Long-Term Debt"). The Refining Partnership's commodity derivative contracts, uncommitted biofuel blending obligation and the benzene obligation, which use fair value measurements and are valued using broker quoted market prices of similar instruments, are considered Level 2 inputs. The Nitrogen Fertilizer

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Partnership's interest rate swaps, which were terminated in February 2016, were measured at fair value on a recurring basis using Level 2 inputs. The fair value of these interest rate swap instruments were based on discounted cash flow models that incorporate the cash flows of the derivatives, as well as the current LIBOR rate and a forward LIBOR curve, along with other observable market inputs. The Company had no transfers of assets or liabilities between any of the above levels during the year ended December 31, 2016.

In March 2016, CVR Energy purchased 400,000 CVR Nitrogen common units in the public market. During the first quarter of 2016, the fair value of the common units were based on quoted prices for the identical securities (Level 1 inputs). As a result of the East Dubuque Merger, the carrying amount of the investment in the CVR Nitrogen common units was reclassified as an investment in consolidated subsidiary and is eliminated in consolidation. Subsequent to the East Dubuque Merger, the Nitrogen Fertilizer Partnership purchased the 400,000 CVR Nitrogen common units from CVR Energy during the second quarter of 2016. During the year ended December 31, 2016, the Company purchased shares of an unaffiliated public company's common units in the public market at an aggregate cost basis of \$14.4 million. During 2016, the Company received proceeds of \$19.3 million for the sale of this investment in available-for-sale securities. Upon the sale of the available-for-sale securities, the Company reclassified an unrealized gain of \$0.5 million from accumulated other comprehensive income ("AOCI") and recognized a realized gain of \$4.9 million in other income in the Consolidated Statements of Operations for the year ended December 31, 2016.

During the year ended December 31, 2015, the Company received proceeds of \$68.0 million for the sale of a portion of its investment in available-for-sale securities. The aggregate cost basis for the available-for-sale securities sold was approximately \$47.9 million. Upon the sale of the available-for-sale securities, the Company reclassified an unrealized gain of \$20.1 million from AOCI and recognized a realized gain in other income in the Consolidated Statements of Operations for the year ended December 31, 2015. At the end of the first quarter of 2015, the Company's remaining available-for-sale securities with an aggregate cost basis of approximately \$25.7 million were reclassified to trading securities based on management's ability and intent with respect to the securities. In connection with the transfer to trading securities, an unrealized gain previously recorded in AOCI of \$11.7 million was reclassified to other income and was reflected in the Consolidated Statements of Operations for the year ended December 31, 2015. During the second quarter of 2015, the trading securities were sold, and the Company received proceeds of 37.8 million and recognized an additional realized gain of \$0.4 million in other income for the year ended December 31, 2015. As of December 31, 2015, the Company did not hold any further investments in available-for-sale securities.

As of December 31, 2014, the aggregate cost basis for the available-for-sale securities sold was approximately \$73.6 million following an other-than-temporary impairment of \$4.7 million during the year ended December 31, 2014.

(16) Derivative Financial Instruments

Gain (loss) on derivatives, net and current period settlements on derivative contracts were as follows:

	Year Ended December 31,		
	2016	2015	2014
	(in millions)		
Current period settlement on derivative contracts	\$ 36.4	\$ (26.0)	\$ 122.2
Gain (loss) on derivatives, net.	(19.4)	(28.6)	185.6

The Refining Partnership and Nitrogen Fertilizer Partnership are subject to price fluctuations caused by supply conditions, weather, economic conditions, interest rate fluctuations and other factors. To manage price risk on crude oil and other inventories and to fix margins on certain future production, the Refining Partnership from time to time enters into various commodity derivative transactions.

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The Refining Partnership has adopted accounting standards which impose extensive record-keeping requirements in order to designate a derivative financial instrument as a hedge. The Refining Partnership holds derivative instruments, such as exchange-traded crude oil futures and certain over-the-counter forward swap agreements, which it believes provide an economic hedge on future transactions, but such instruments are not designated as hedges for GAAP purposes. Gains or losses related to the change in fair value and periodic settlements of these derivative instruments are classified as gain (loss) on derivatives, net in the Consolidated Statements of Operations. There are no premiums paid or received at inception of the derivative contracts and upon settlement, there is no cost recovery associated with these contracts.

The Refining Partnership maintains a margin account to facilitate other commodity derivative activities. A portion of this account may include funds available for withdrawal. These funds are included in cash and cash equivalents within the Consolidated Balance Sheets. The maintenance margin balance is included within other current assets within the Consolidated Balance Sheets. Dependent upon the position of the open commodity derivatives, the amounts are accounted for as other current assets or other current liabilities within the Consolidated Balance Sheets. From time to time, the Refining Partnership may be required to deposit additional funds into this margin account. There were no open commodity positions as of December 31, 2016 or 2015. For the years ended December 31, 2016, 2015 and 2014, the Refining Partnership recognized a net loss of \$0.5 million, and net gains of \$3.2 million and \$0.3 million, respectively, which are recorded in gain (loss) on derivatives, net in the Consolidated Statements of Operations.

Commodity Swaps

The Refining Partnership enters into commodity swap contracts in order to fix the margin on a portion of future production. Additionally, the Refining Partnership may enter into price and basis swaps in order to fix the price on a portion of its commodity purchases and product sales. The physical volumes are not exchanged and these contracts are net settled with cash. The contract fair value of the commodity swaps is reflected on the Consolidated Balance Sheets with changes in fair value currently recognized in the Consolidated Statements of Operations. Quoted prices for similar assets or liabilities in active markets (Level 2) are considered to determine the fair values for the purpose of marking to market the hedging instruments at each period end. At December 31, 2016 and 2015, the Refining Partnership had open commodity hedging instruments consisting of 4.0 million and 2.5 million barrels of crack spreads, respectively, primarily to fix the margin on a portion of its future gasoline and distillate production. Additionally, at December 31, 2015, the Refining Partnership had open commodity hedging instruments consisting of \$1.4 million barrels primarily to fix the price on a portion of its future crude oil purchase or the basis on a portion of its future product sales. The fair value of the outstanding contracts at December 31, 2016 was a net unrealized loss of \$11.1 million, of which the entire balance is included in other current liabilities. The fair value of the outstanding contracts at December 31, 2015 was a net unrealized gain of \$44.6 million, of which \$44.7 million is included in current assets and \$0.1 million is included in other current liabilities. For the years ended December 31, 2016, 2015 and 2014, the Refining Partnership recognized a net loss of \$18.9 million, \$36.4 million and a net gain of \$187.4 million, respectively, which are recorded in gain (loss) on derivatives, net in the Consolidated Statements of Operations.

Nitrogen Fertilizer Partnership Interest Rate Swaps

CRNF has two floating-to-fixed interest rate swap agreements for the purpose of hedging the interest rate risk associated with a portion of the nitrogen fertilizer business' \$125.0 million floating rate term debt which matures in April 2016, as further discussed in Note 10 ("Long-Term Debt"). The aggregate notional amount covered under these agreements, which commenced on August 12, 2011 and expired on February 12, 2016, totals \$62.5 million (split evenly between the two agreements). Under the terms of the interest rate swap agreement entered into on June 30, 2011, CRNF will receive a floating rate based on three-month LIBOR and pay a fixed rate of 1.94%. Under the terms of the interest rate swap agreement entered into on July 1, 2011, CRNF will receive a floating rate based on three-month LIBOR and pay a fixed rate of 1.975%. Both swap agreements will be settled every 90 days. The effect of these swap agreements is to lock in a fixed rate of interest of approximately 1.96% plus the applicable margin paid to lenders over three month LIBOR as governed by the CRNF credit facility. The agreements were designated as cash flow hedges at inception and accordingly, the effective portion of the gain or loss on the swap is

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

reported as a component of AOCI, and will be reclassified into interest expense when the interest rate swap transaction affects earnings. Any ineffective portion of the gain or loss will be recognized immediately in interest expense on the Consolidated Statements of Operations. The interest rate swaps agreement terminated in February 2016.

The realized loss on the interest rate swap re-classed from AOCI into interest expense and other financing costs on the Consolidated Statements of Operations was \$0.1 million for the year ended December 31, 2016 and \$1.1 million for each of the years ended December 31, 2015 and 2014. For the years ended December 31, 2016, 2015 and 2014, the Nitrogen Fertilizer Partnership recognized a decrease in the fair value of the interest rate swap agreements of \$0.0 million, \$0.1 million and \$0.2 million, respectively, which was unrealized in AOCI.

Counterparty Credit Risk

The Refining Partnership's exchange-traded crude oil futures and certain over-the-counter forward swap agreements are potentially exposed to concentrations of credit risk as a result of economic conditions and periods of uncertainty and illiquidity in the credit and capital markets. The Refining Partnership manages credit risk on its exchange-traded crude oil futures by completing trades with an exchange clearinghouse, which subjects the trades to mandatory margin requirements until the contract settles. The Refining Partnership also monitors the creditworthiness of its commodity swap counterparties and assesses the risk of nonperformance on a quarterly basis. Counterparty credit risk identified as a result of this assessment is recognized as a valuation adjustment to the fair value of the commodity swaps recorded in the Consolidated Balance Sheets. As of December 31, 2016, the counterparty credit risk adjustment was not material to the consolidated financial statements. Additionally, the Refining Partnership does not require any collateral to support commodity swaps into which it enters; however, it does have master netting arrangements that allow for the setoff of amounts receivable from and payable to the same party, which mitigates the risk associated with nonperformance.

Offsetting Assets and Liabilities

The commodity swaps and other commodity derivatives agreements discussed above include multiple derivative positions with a number of counterparties for which the Refining Partnership has entered into agreements governing the nature of the derivative transactions. Each of the counterparty agreements provides for the right to setoff each individual derivative position to arrive at the net receivable due from the counterparty or payable owed by the Refining Partnership. As a result of the right to setoff, the Refining Partnership's recognized assets and liabilities associated with the outstanding derivative positions have been presented net in the Consolidated Balance Sheets. The interest rate swap agreements held by the Nitrogen Fertilizer Partnership also provide for the right to setoff. However, as the interest rate swaps are in a liability position, there are no amounts offset in the Consolidated Balance Sheets as of December 31, 2016 and 2015. In accordance with guidance issued by the FASB related to "Disclosures about Offsetting Assets and Liabilities," the tables below outline the gross amounts of the recognized assets and liabilities and the gross amounts offset in the Consolidated Balance Sheets for the various types of open derivative positions at the Refining Partnership.

The offsetting assets and liabilities for the Refining Partnership's derivatives as of December 31, 2016 are recorded as current assets and current liabilities in prepaid expenses and other current assets and other current liabilities, respectively, in the Consolidated Balance Sheets as follows:

<u>Description</u>	As of December 31, 2016				
	Gross Current Liabilities	Gross Amounts Offset	Net Current Liabilities Presented	Cash Collateral Not Offset	Net Amount
	(in millions)				
Commodity Swaps	\$ 11.1	\$ —	\$ 11.1	\$ —	\$ 11.1
Total	\$ 11.1	\$ —	\$ 11.1	\$ —	\$ 11.1

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The offsetting assets and liabilities for the Refining Partnership's derivatives as of December 31, 2015 are recorded as current assets and non-current assets in prepaid expenses and other current assets and other long-term assets, respectively, in the Consolidated Balance Sheets as follows:

<u>Description</u>	As of December 31, 2015				
	<u>Gross Current Assets</u>	<u>Gross Amounts Offset</u>	<u>Net Current Assets Presented</u>	<u>Cash Collateral Not Offset</u>	<u>Net Amount</u>
			(in millions)		
Commodity Swaps	\$ 44.8	\$ (0.1)	\$ 44.7	\$ —	\$ 44.7
Total	\$ 44.8	\$ (0.1)	\$ 44.7	\$ —	\$ 44.7

<u>Description</u>	As of December 31, 2015				
	<u>Gross Current Liabilities</u>	<u>Gross Amounts Offset</u>	<u>Net Current Liabilities Presented</u>	<u>Cash Collateral Not Offset</u>	<u>Net Amount</u>
			(in millions)		
Commodity Swaps	\$ 0.1	\$ —	\$ 0.1	\$ —	\$ 0.1
Total	\$ —	\$ —	\$ —	\$ —	\$ —

(17) Related Party Transactions

In May 2012, IEP announced that it had acquired control of CVR pursuant to a tender offer to purchase all of the issued and outstanding shares of the Company's common stock. As of December 31, 2016, IEP owned approximately 82% of all common shares outstanding. See Note 1 ("Organization and History of the Company") for additional discussion.

American Railcar Entities

In the second quarter of 2016, the Nitrogen Fertilizer Partnership entered into agreements to lease a total of 115 UAN railcars from American Railcar Leasing LLC ("ARL"). The lease agreements have a term of approximately seven years. The Nitrogen Fertilizer Partnership received the 115 UAN railcars during the second half of 2016. For the year ended December 31, 2016, rent expense of \$0.3 million was recorded related to these agreements and was included in cost of materials and other in the Consolidated Statements of Operations.

In 2014, the Nitrogen Fertilizer Partnership purchased 50 new UAN railcars from American Railcar Industries, Inc. ("ARI"), an affiliate of IEP, for approximately \$6.7 million and 12 used UAN railcars from ARL for approximately \$1.1 million.

Tax Allocation Agreement

CVR is a member of the consolidated federal tax group of AEPC, a wholly-owned subsidiary of IEP, and has entered into a Tax Allocation Agreement. Refer to Note 9 ("Income Taxes") for a discussion of related party transactions under the Tax Allocation Agreement.

Insight Portfolio Group

Insight Portfolio Group LLC is an entity formed and controlled by Mr. Icahn in order to maximize the potential buying power of a group of entities with which Mr. Icahn has a relationship in negotiating with a wide range of suppliers of goods, services and tangible and intangible property at negotiated rates. CVR Energy was a member of the buying group in 2012. In January 2013, CVR Energy acquired a minority equity interest in Insight Portfolio

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Group and agreed to pay a portion of Insight Portfolio Group's operating expenses in 2013. The Company paid Insight Portfolio Group approximately \$0.2 million, \$0.1 million and \$0.4 million during the years ended December 31, 2016, 2015 and 2014, respectively. The Company may purchase a variety of goods and services as members of the buying group at prices and terms that management believes would be more favorable than those which would be achieved on a stand-alone basis.

CRLLC Guaranty

On February 9, 2016, CRLLC and the Nitrogen Fertilizer Partnership entered into a guaranty, pursuant to which CRLLC agreed to guaranty the indebtedness outstanding under the Nitrogen Fertilizer Partnership's credit facility. In conjunction with the Nitrogen Fertilizer Partnership's entry into the CRLLC Facility (defined and discussed below), the CRLLC guaranty was terminated.

Commitment Letter

Simultaneously with the execution of the Merger Agreement, the Nitrogen Fertilizer Partnership entered into a commitment letter (the "Commitment Letter") with CRLLC, pursuant to which CRLLC committed to, on the terms and subject to the conditions set forth in the Commitment Letter, make available to the Nitrogen Fertilizer Partnership term loan financing of up to \$150.0 million, which amounts would be available solely to fund the repayment of all of the loans outstanding under the Wells Fargo Credit Agreement, the cash consideration and expenses associated with the East Dubuque Merger. The term loan facility, if drawn, would have a one year term and would bear interest at a rate of three-month LIBOR plus 3.0% per annum. Calculation of interest would be on the basis of the actual number of days elapsed over a 360-day year. In connection with the Nitrogen Fertilizer Partnership's entry into the CRLLC Facility (defined and discussed below), the Commitment Letter was terminated.

CRLLC Facility with the Nitrogen Fertilizer Partnership

On April 1, 2016, in connection with the closing of the East Dubuque Merger, the Nitrogen Fertilizer Partnership entered into a \$300.0 million senior term loan credit facility (the "CRLLC Facility") with CRLLC as the lender, the proceeds of which were used by the Nitrogen Fertilizer Partnership (i) to fund the repayment of amounts outstanding under the Wells Fargo Credit Agreement discussed in Note 3 ("Acquisition") (ii) to pay the cash consideration and to pay fees and expenses in connection with the East Dubuque Merger and related transactions and (iii) to repay all of the loans outstanding under the Nitrogen Fertilizer Partnership credit facility. The CRLLC Facility had a term of two years and an interest rate of 12.0% per annum. Interest was calculated on the basis of the actual number of days elapsed over a 360-day year and payable quarterly. In April 2016, the Nitrogen Fertilizer Partnership borrowed \$300.0 million under the CRLLC Facility. On June 10, 2016, the Nitrogen Fertilizer Partnership paid off the \$300.0 million outstanding under the CRLLC Facility, paid \$7.0 million in interest and the CRLLC Facility was terminated.

AEPC Facility with the Nitrogen Fertilizer Partnership

On April 1, 2016, in connection with the closing of the East Dubuque Merger, the Nitrogen Fertilizer Partnership entered into a \$320.0 million senior term loan facility (the "AEPC Facility") with American Entertainment Properties Corporation ("AEPC"), an affiliate of IEP, as the lender, which was to be used (i) by CVR Partners to provide funds to CVR Nitrogen to make a change of control offer and, if applicable, a "clean-up" redemption in accordance with the indenture governing the 2021 Notes or (ii) by CVR Partners or CVR Nitrogen to make a tender offer for the 2021 Notes and, in each case, pay fees and expenses related thereto. The AEPC Facility had a term of two years and bore interest at a rate of 12.0% per annum. Calculation of interest was on the basis of the actual number of days elapsed over a 360-day year and payable quarterly. The Nitrogen Fertilizer Partnership was permitted to voluntarily prepay in whole or in part the borrowings under the AEPC Facility without premium or penalty. In connection with the repayment of the substantial majority of the 2021 Notes, the AEPC Facility was terminated.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

XO Communications Services, LLC

XO Communications Services, LLC (“XO”) is a privately-owned company that is an affiliate of IEP. During the twelve-month period ending December 31, 2016, the Company paid approximately \$0.3 million to XO for various communication services. As of December 31, 2016 there was no outstanding balance due to or from XO.

Joint Venture Agreement

On September 19, 2016, CRPLLC entered into an agreement with Velocity related to their joint ownership of VPP. Refer to Note 14 (“Commitments and Contingencies”) for additional discussion of the joint venture.

(18) Business Segments

The Company measures segment profit as operating income for petroleum and nitrogen fertilizer, CVR’s two reporting segments, based on the definitions provided in ASC Topic 280 — *Segment Reporting*. All operations of the segments are located within the United States.

Petroleum

Principal products of the petroleum segment are refined fuels, propane, and petroleum refining by-products, including pet coke. The petroleum segment’s Coffeyville refinery sells pet coke to the Nitrogen Fertilizer Partnership for use in the manufacture of nitrogen fertilizer at the adjacent nitrogen fertilizer plant. For the petroleum segment, a per-ton transfer price is used to record intercompany sales on the part of the petroleum segment and corresponding intercompany cost of materials and other for the nitrogen fertilizer segment. The per ton transfer price paid, pursuant to the pet coke supply agreement that became effective October 24, 2007, is based on the lesser of a pet coke price derived from the price received by the nitrogen fertilizer segment for UAN (subject to a UAN based price ceiling and floor) or a pet coke price index for pet coke. The intercompany transactions are eliminated in the other segment. Intercompany sales included in petroleum net sales were approximately \$1.8 million, \$6.8 million and \$8.7 million for the years ended December 31, 2016, 2015 and 2014, respectively.

The petroleum segment recorded intercompany cost of materials and other for the hydrogen purchases described below under “Nitrogen Fertilizer” of approximately \$3.2 million, \$11.8 million and \$10.1 million for the years ended December 31, 2016, 2015 and 2014, respectively. The petroleum segment recorded intercompany revenue for the hydrogen sale of \$0.2 million for the year ended December 31, 2016.

Nitrogen Fertilizer

The principal product of the nitrogen fertilizer segment is nitrogen fertilizer. Intercompany cost of materials and other for the pet coke transfer described above was approximately \$2.1 million, \$6.6 million and \$9.2 million for the years ended December 31, 2016, 2015 and 2014, respectively.

Pursuant to the feedstock agreement, the Company’s segments have the right to transfer hydrogen between the Coffeyville refinery and the Coffeyville Fertilizer Facility. Sales of hydrogen to the petroleum segment have been reflected as net sales for the nitrogen fertilizer segment. Receipts of hydrogen from the petroleum segment have been reflected in cost of materials and other for the nitrogen fertilizer segment. For the years ended December 31, 2016, 2015 and 2014, the net sales generated from intercompany hydrogen sales were \$3.0 million, \$11.8 million and \$10.1 million, respectively. As intercompany sales and cost of materials and other are eliminated, there is no financial statement impact on the consolidated financial statements.

Other Segment

The other segment reflects intercompany eliminations, corporate cash and cash equivalents, income tax activities and other corporate activities that are not allocated to the operating segments.

CVR Energy, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following table summarizes certain operating results and capital expenditures information by segment:

	Year Ended December 31,		
	2016	2015	2014
	(in millions)		
Net sales			
Petroleum	\$ 4,431.3	\$ 5,161.9	\$ 8,829.7
Nitrogen Fertilizer	356.3	289.2	298.7
Intersegment elimination	(5.2)	(18.6)	(18.9)
Total	<u>\$ 4,782.4</u>	<u>\$ 5,432.5</u>	<u>\$ 9,109.5</u>
Cost of materials and other			
Petroleum	\$ 3,759.2	\$ 4,143.6	\$ 8,013.4
Nitrogen Fertilizer	93.7	65.2	72.0
Intersegment elimination	(5.4)	(18.4)	(19.4)
Total	<u>\$ 3,847.5</u>	<u>\$ 4,190.4</u>	<u>\$ 8,066.0</u>
Direct operating expenses (exclusive of depreciation and amortization)			
Petroleum	\$ 393.4	\$ 478.5	\$ 416.0
Nitrogen Fertilizer	148.3	106.1	98.9
Other	0.1	0.1	0.2
Total	<u>\$ 541.8</u>	<u>\$ 584.7</u>	<u>\$ 515.1</u>
Depreciation and amortization			
Petroleum	\$ 129.0	\$ 130.2	\$ 122.5
Nitrogen Fertilizer	58.2	28.4	27.3
Other	5.9	5.5	4.6
Total	<u>\$ 193.1</u>	<u>\$ 164.1</u>	<u>\$ 154.4</u>
Operating income			
Petroleum	\$ 77.8	\$ 361.7	\$ 207.2
Nitrogen Fertilizer	26.8	68.7	82.8
Other	(13.7)	(8.8)	(25.7)
Total	<u>\$ 90.9</u>	<u>\$ 421.6</u>	<u>\$ 264.3</u>
Capital expenditures			
Petroleum	\$ 102.3	\$ 194.7	\$ 191.3
Nitrogen fertilizer	23.2	17.0	21.1
Other	7.2	7.0	6.0
Total	<u>\$ 132.7</u>	<u>\$ 218.7</u>	<u>\$ 218.4</u>

CVR Energy, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	Year Ended December 31,		
	2016	2015	2014
	(in millions)		
Total assets*			
Petroleum	\$ 2,331.9	\$ 2,189.0	\$ 2,410.7
Nitrogen Fertilizer.....	1,312.2	536.3	577.8
Other	406.1	574.1	465.8
Total	<u>\$ 4,050.2</u>	<u>\$ 3,299.4</u>	<u>\$ 3,454.3</u>
Goodwill			
Petroleum	\$ —	\$ —	\$ —
Nitrogen Fertilizer.....	41.0	41.0	41.0
Other	—	—	—
Total	<u>\$ 41.0</u>	<u>\$ 41.0</u>	<u>\$ 41.0</u>

(*) Prior period amounts have been retrospectively adjusted for Accounting Standard Update No. 2015-03, which requires that costs incurred to issue debt be presented in the balance sheet as a direct reduction from the carrying value of the debt.

(19) Major Customers and Suppliers

Sales to major customers as a percentage of the respective segment's sales were as follows:

	Year Ended December 31,		
	2016	2015	2014
Petroleum			
Customer A	15%	14%	13%
Nitrogen Fertilizer			
Customer B	10%	10%	17%
Customer C	10%	14%	10%
	<u>20%</u>	<u>24%</u>	<u>27%</u>

The petroleum segment obtained crude oil from one third-party supplier under a long-term supply agreement during 2016, 2015 and 2014. The crude oil purchased from this supplier is governed by a long-term contract. Volume contracted as a percentage of the total crude oil purchases (in barrels) for each of the periods was as follows:

	Year Ended December 31,		
	2016	2015	2014
Petroleum			
Supplier A	61%	61%	67%

CVR Energy, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(20) Selected Quarterly Financial Information (unaudited)

Summarized quarterly financial data for December 31, 2016 and 2015.

	Year Ended December 31, 2016			
	Quarter			
	First	Second	Third	Fourth
	(in millions, except per share data)			
Net sales	\$ 905.5	\$ 1,283.2	\$ 1,240.3	\$ 1,353.4
Operating costs and expenses:				
Cost of materials and other	736.8	976.9	1,005.7	1,128.1
Direct operating expenses (exclusive of depreciation and amortization as reflected below)	141.4	138.3	129.5	132.6
Depreciation and amortization	37.9	48.5	48.2	49.9
Cost of sales	916.1	1,163.7	1,183.4	1,310.6
Flood insurance recovery	—	—	—	—
Selling, general and administrative (exclusive of depreciation and amortization as reflected below)	27.2	26.6	27.8	27.5
Depreciation and amortization	2.1	2.2	1.9	2.4
Total operating costs and expenses	945.4	1,192.5	1,213.1	1,340.5
Operating income (loss)	(39.9)	90.7	27.2	12.9
Other income (expense):				
Interest expense and other financing costs	(12.1)	(18.5)	(26.2)	(27.1)
Interest income	0.2	0.1	0.2	0.2
Loss on derivatives, net	(1.2)	(1.9)	(1.7)	(14.6)
Gain (loss) on extinguishment of debt	—	(5.1)	—	0.2
Other income, net	0.3	0.1	5.0	0.3
Total other expense	(12.8)	(25.3)	(22.7)	(41.0)
Income (loss) before income taxes	(52.7)	65.4	4.5	(28.1)
Income tax expense (benefit)	(21.8)	21.6	2.5	(22.1)
Net income (loss)	(30.9)	43.8	2.0	(6.0)
Less: Net income (loss) attributable to noncontrolling interest	(14.7)	15.4	(3.4)	(13.1)
Net income (loss) attributable to CVR Energy stockholders	\$ (16.2)	\$ 28.4	\$ 5.4	\$ 7.1
Basic and diluted earnings (loss) per share	\$ (0.19)	\$ 0.33	\$ 0.06	\$ 0.08
Dividends declared per share	\$ 0.50	\$ 0.50	\$ 0.50	\$ 0.50
Weighted-average common shares outstanding - basic and diluted	86.8	86.8	86.8	86.8

CVR Energy, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	Year Ended December 31, 2015			
	Quarter			
	First	Second	Third	Fourth
	(in millions, except per share data)			
Net sales	\$ 1,388.9	\$ 1,624.2	\$ 1,408.8	\$ 1,010.6
Operating costs and expenses:				
Cost of materials and other.	1,073.6	1,192.2	1,076.7	847.9
Direct operating expenses (exclusive of depreciation and amortization as reflected below)	111.4	115.4	145.8	212.1
Depreciation and amortization	40.3	40.6	36.9	38.7
Cost of sales.	1,225.3	1,348.2	1,259.4	1,098.7
Flood insurance recovery	—	(27.3)	—	—
Selling, general and administrative (exclusive of depreciation and amortization as reflected below)	25.3	27.2	26.1	20.4
Depreciation and amortization	1.7	1.9	1.8	2.2
Total operating costs and expenses	1,252.3	1,350.0	1,287.3	1,121.3
Operating income (loss)	136.6	274.2	121.5	(110.7)
Other income (expense):				
Interest expense and other financing costs.	(12.7)	(11.9)	(11.9)	(11.9)
Interest income	0.2	0.3	0.3	0.2
Gain (loss) on derivatives, net	(51.4)	(12.6)	11.8	23.6
Other income, net.	36.0	0.2	0.3	0.2
Total other income (expense)	(27.9)	(24.0)	0.5	12.1
Income (loss) before income taxes	108.7	250.2	122.0	(98.6)
Income tax expense (benefit)	24.0	58.1	23.1	(20.7)
Net income (loss)	84.7	192.1	98.9	(77.9)
Less: Net income (loss) attributable to noncontrolling interest.	29.8	90.2	41.0	(32.9)
Net income (loss) attributable to CVR Energy stockholders.	\$ 54.9	\$ 101.9	\$ 57.9	\$ (45.0)
Basic and diluted earnings (loss) per share	\$ 0.63	\$ 1.17	\$ 0.67	\$ (0.52)
Dividends declared per share.	\$ 0.50	\$ 0.50	\$ 0.50	\$ 0.50
Weighted-average common shares outstanding				
Basic and diluted	86.8	86.8	86.8	86.8

Factors Impacting the Comparability of Quarterly Results of Operations

As discussed in Note 2 ("Summary of Significant Accounting Policies"), the Refining business's Coffeyville refinery completed the second phase of its most recent major scheduled turnaround during the first quarter of 2016 at a total cost of approximately \$31.5 million for the year ended December 31, 2016, of which approximately \$29.4 million and \$2.1 million were incurred in the first and second quarters of 2016, respectively. The Coffeyville refinery completed the first phase of its major scheduled turnaround in mid-November 2015 at a total cost of approximately \$102.2 million of major scheduled turnaround expenses for the year ended December 31, 2015, of which approximately \$1.7 million, \$15.6 million and \$84.9 million were incurred in the second, third and fourth quarters of 2015, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

As discussed in Note 2 ("Summary of Significant Accounting Policies"), the Nitrogen Fertilizer Partnership's Coffeyville fertilizer facility had a full facility turnaround in 2015 at a total cost of \$7.0 million, of which \$0.4 million was incurred in the second quarter of 2015 and \$6.6 million was incurred in the third quarter of 2015. During the second quarter of 2016, the East Dubuque Facility completed a major scheduled turnaround during which the ammonia and UAN units were down for approximately 28 days. Overall results were negatively impacted due to the lost production during the downtime that resulted in lost sales and certain reduced variable expenses included in cost of materials and other and direct operating expenses (exclusive of depreciation and amortization). Costs, exclusive of the impacts due to the lost production during the downtime, were approximately \$6.6 million.

On April 1, 2016, the Nitrogen Fertilizer Partnership completed the East Dubuque Merger, whereby the Nitrogen Fertilizer Partnership acquired the East Dubuque Facility. The consolidated financial statements include the results of the East Dubuque Facility beginning on April 1, 2016, the date of the closing of the acquisition. See Note 3 ("Acquisition") for further discussion.

As discussed in Note 14 ("Commitments and Contingencies"), the Company received an insurance recovery from its environmental insurance carriers in the second quarter of 2015 as a result of the flood and crude oil discharge at the Coffeyville refinery on June/July 2007.

(21) Subsequent Events

Dividend

On February 15, 2017, the board of directors of the Company declared a cash dividend for the fourth quarter of 2016 to the Company's stockholders of \$0.50 per share, or \$43.4 million in aggregate. The dividend will be paid on March 6, 2017 to stockholders of record at the close of business on February 27, 2017. IEP will receive \$35.6 million in respect of its 82% ownership interest in the Company's shares.

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, 2016, we have evaluated, under the direction of our Chief Executive Officer and Chief Financial Officer, the effectiveness of our disclosure controls and procedures, as defined in Exchange Act Rule 13a-15(e). There are inherent limitations to the effectiveness of any system of disclosure controls and procedures, including the possibility of human error and the circumvention or overriding of the controls and procedures. Accordingly, even effective disclosure controls and procedures can only provide reasonable assurance of achieving their control objectives. Based upon and as of the date of that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Management's Report On Internal Control Over Financial Reporting. Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Because of its inherent limitations, internal control 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. Under the supervision and with the participation of management, the Company conducted an evaluation of the effectiveness of its internal control over financial reporting based on the framework in the 2013 *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that the Company's internal control over financial reporting was effective as of December 31, 2016. Our independent registered public accounting firm, that audited the consolidated financial statements included herein under Item 8, has issued a report on the effectiveness of our internal control over financial reporting. This report can be found under Item 8.

Changes in Internal Control Over Financial Reporting. There has been no change in our internal control over financial reporting required by Rule 13a-15 of the Exchange Act that occurred during the fiscal quarter ended December 31, 2016 that has materially affected or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. *Other Information*

None.

PART III

Item 10. *Directors, Executive Officers and Corporate Governance*

Information required by this Item regarding our directors, executive officers and corporate governance will be included under the captions "Corporate Governance," "Proposal 1 — Election of Directors," "Members and Nominees of the Board," "Executive Officers," "Information Concerning Executive Officers Who are Not Directors," "Section 16(a) Beneficial Ownership Reporting Compliance," and "Stockholder Proposals" contained in our proxy statement for the annual meeting of our stockholders, which will be filed with the SEC, and this information is incorporated herein by reference.

Item 11. *Executive Compensation*

Information about executive and director compensation will be included under the captions "Corporate Governance — Compensation Committee Interlocks and Insider Participation," "Proposal 1 — Election of Directors," "Director Compensation for 2016," "Compensation Discussion and Analysis," "Compensation Committee Report" and "Compensation of Executive Officers" contained in our proxy statement for the annual meeting of our stockholders, which will be filed with the SEC and this information is incorporated herein by reference.

Item 12. *Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters*

Information about security ownership of certain beneficial owners and management will be included under the captions "Compensation of Executive Officers," "Securities Ownership of Certain Beneficial Owners and Officers and Directors" and "Equity Compensation Plans" contained in our proxy statement for the annual meeting of our stockholders, which will be filed with the SEC, and this information is incorporated herein by reference.

Item 13. *Certain Relationships and Related Transactions, and Director Independence*

Information about related party transactions between CVR Energy and its directors, executive officers and 5% stockholders that occurred during the year ended December 31, 2016 will be included under the captions "Certain Relationships and Related Party Transactions" and "Corporate Governance — Director Independence" contained in our proxy statement for the annual meeting of our stockholders, which will be filed with the SEC, and this information is incorporated herein by reference.

Item 14. *Principal Accounting Fees and Services*

Information about principal accounting fees and services will be included under the captions "Proposal 2 — Ratification of Selection of Independent Registered Public Accounting Firm" and "Fees Paid to the Independent Registered Public Accounting Firm" contained in our proxy statement for the annual meeting of our stockholders, which will be filed with the SEC and this information is incorporated herein by reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a)(1) Financial Statements

See "Index to Consolidated Financial Statements" Contained in Part II, Item 8 of this Report.

(a)(2) Financial Statement Schedules

All schedules for which provision is made in the applicable accounting regulations of the Securities and Exchange Commission (the "SEC") are not required under the related instructions or are inapplicable and therefore have been omitted.

(a)(3) Exhibits

See the accompanying Exhibit Index and related note following the signature page to this Report for a list of exhibits filed or furnished with this Report, which Exhibit Index and related note are incorporated herein by reference.

<u>Exhibit Number</u>	<u>Exhibit Title</u>
2.1**	Agreement and Plan of Merger, dated as of August 9, 2015, by and among CVR Partners, LP, Lux Merger Sub 1, LLC, Lux Merger Sub 2, LLC, Rentech Nitrogen Partners, L.P., and Rentech Nitrogen GP, LLC (incorporated by reference to Exhibit 2.1 to the Form 8-K filed by CVR Partners, LP on August 13, 2015 (Commission File No. 001-35120) (Schedules have been omitted pursuant to Item 601(b)(2) of Regulation S-K. CVR Energy hereby undertakes to furnish supplemental copies of any of the omitted schedules upon request by the U.S. Securities and Exchange Commission.).
2.2**	Transaction Agreement among CVR Energy, Inc., IEP Energy LLC and each of the other Offeror Parties (as defined therein) dated as of April 18, 2012 (incorporated by reference to Exhibit 2.1 to the Company's Form 8-K filed on April 23, 2012).
3.1**	Amended and Restated Certificate of Incorporation of CVR Energy, Inc. (incorporated by reference to Exhibit 10.1 to the Company's Form 10-Q filed on December 6, 2007).
3.1.1**	Certificate of Designations, Rights and Preferences setting forth the terms of the Series A Preferred Stock of CVR Energy, Inc. (incorporated by reference to Exhibit 3.1 to the Company's Form 8-K filed on January 17, 2012).
3.2**	Amended and Restated Bylaws of CVR Energy, Inc. (incorporated by reference to Exhibit 3.1 to the Company's Form 8-K filed on July 20, 2011).
4.1**	Specimen Common Stock Certificate (incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-1/A, File No. 333-137588, filed on June 5, 2007).
4.2**	Indenture, dated as of October 23, 2012, among CVR Refining, LLC, Coffeyville Finance Inc., the Guarantors (as defined therein) and Wells Fargo Bank, National Association, as Trustee and Collateral Trustee (incorporated by reference to Exhibit 4.1 to the Company's Form 8-K filed on October 29, 2012).
4.3**	Forms of 6.500% Second Lien Senior Secured Notes due 2022 (included within the Indenture filed as Exhibit 4.2).
4.4**	Indenture, dated June 10, 2016, by and among CVR Partners, LP, CVR Nitrogen Finance Corporation, the Guarantors (as defined therein) and Wilmington Trust, National Association, as Trustee and Collateral Trustee (incorporated by reference to Exhibit 4.1 of the Form 8-K filed by CVR Partners, LP on June 16, 2016 (Commission File No. 001-35120)).
4.5**	Form of 9.250% Senior Secured Note due 2023 (included within the Indenture filed as Exhibit 4.4 and incorporated by reference to Exhibit 4.1 to the Form 8-K filed by CVR Partners, LP on June 16, 2016 (Commission File No. 001-35120)).
4.6**	Indenture, dated as April 12, 2013, among Rentech Nitrogen Partners, L.P., Rentech Nitrogen Finance Corporation, the guarantors named therein, Wells Fargo Bank, National Association, as Trustee, and Wilmington Trust, National Association, as Collateral Trustee (incorporated by reference to Exhibit 4.1 to the Form 8-K filed by Rentech Nitrogen Partners, L.P. on April 16, 2013 (Commission File No. 001-35334)).
4.7**	Forms of 6.5% Second Lien Senior Secured Notes due 2021 (incorporated by reference to Exhibit 4.2 to the Form 8-K filed by Rentech Nitrogen Partners, L.P. on April 16, 2013 (Commission File No. 001-35334)).
4.8**	First Supplemental Indenture, dated as of June 10, 2016, among CVR Nitrogen, LP, CVR Nitrogen Finance Corporation, the guarantors party thereto, Wells Fargo Bank, National Association, as Trustee, and Wilmington Trust, National Association, as Collateral Trustee (incorporated by reference to Exhibit 10.3 of the Form 8-K filed by CVR Partners, LP on June 16, 2016 (Commission File No. 001-35120)).

- 10.1** Amended and Restated ABL Credit Agreement, dated as of December 20, 2012, among Coffeyville Resources, LLC, CVR Refining, LP, CVR Refining, LLC, Coffeyville Resources Refining & Marketing, LLC, Coffeyville Resources Pipeline, LLC, Coffeyville Resources Crude Transportation, LLC, Coffeyville Resources Terminal, LLC, Wynnwood Energy Company, LLC, Wynnwood Refining Company, LLC and certain of their affiliates, the lenders from time to time party thereto, Wells Fargo Bank, National Association, as collateral agent and administrative agent (incorporated by reference to Exhibit 1.1 to the Company's Form 8-K filed on December 27, 2012).
- 10.2** Amended and Restated ABL Pledge and Security Agreement, dated as of December 20, 2012, among CVR Refining, LP, CVR Refining, LLC, Coffeyville Resources Refining & Marketing, LLC, Coffeyville Resources Pipeline, LLC, Coffeyville Resources Crude Transportation, LLC, Coffeyville Resources Terminal, LLC, Wynnwood Energy Company, LLC, Wynnwood Refining Company, LLC and certain of their affiliates, and Wells Fargo Bank, National Association, as collateral agent (incorporated by reference to Exhibit 1.2 to the Company's Form 8-K filed on December 27, 2012).
- 10.3** Amended and Restated First Lien Pledge and Security Agreement, dated as of December 28, 2006, among Coffeyville Resources, LLC, CL JV Holdings, LLC, Coffeyville Pipeline, Inc., Coffeyville Refining and Marketing, Inc., Coffeyville Nitrogen Fertilizers, Inc., Coffeyville Crude Transportation, Inc., Coffeyville Terminal, Inc., Coffeyville Resources Pipeline, LLC, Coffeyville Resources Refining & Marketing, LLC, Coffeyville Resources Crude Transportation, LLC and Coffeyville Resources Terminal, LLC, as grantors, and Credit Suisse, as collateral agent (incorporated by reference to Exhibit 10.2 to the Company's Registration Statement on Form S-1/A, File No. 333-137588, filed on February 12, 2007).
- 10.4** ABL Intercreditor Agreement, dated as of February 22, 2011, among Coffeyville Resources, LLC, Coffeyville Finance Inc., Deutsche Bank Trust Company Americas, as collateral agent for the ABL secured parties, Wells Fargo Bank, National Association, as collateral trustee for the secured parties in respect of the outstanding first lien obligations, and the outstanding second lien notes and certain subordinated liens, respectively, and the Guarantors (as defined therein) (incorporated by reference to Exhibit 1.3 to the Company's Form 8-K filed on February 28, 2011).
- 10.5** First Amended and Restated Collateral Trust and Intercreditor Agreement, dated as of April 6, 2010, among Coffeyville Resources, LLC, Coffeyville Finance Inc., the other grantors from time to time party thereto, Credit Suisse AG, Cayman Islands Branch, as administrative agent, Wells Fargo Bank, National Association, as indenture agent, J. Aron & Company, as hedging counterparty, each additional first lien representative and Wells Fargo Bank, National Association, as collateral trustee (incorporated by reference to Exhibit 10.33 to the Company's Form 10-K filed on February 29, 2012).
- 10.6** Omnibus Amendment Agreement and Consent under the Intercreditor Agreement, dated as of April 6, 2010, by and among Coffeyville Resources, LLC, Coffeyville Finance Inc., Coffeyville Pipeline, Inc., Coffeyville Refining & Marketing, Inc., Coffeyville Nitrogen Fertilizers, Inc., Coffeyville Crude Transportation, Inc., Coffeyville Terminal, Inc., CL JV Holdings, LLC, and certain subsidiaries of the foregoing as Guarantors, the Requisite Lenders, Credit Suisse AG, Cayman Islands Branch, as Administrative Agent, Collateral Agent and Revolving Issuing Bank, J. Aron & Company, as a hedge counterparty and Wells Fargo Bank, National Association, as Collateral Trustee (incorporated by reference to Exhibit 1.4 to the Company's Form 8-K filed on April 12, 2010).
- 10.7** License Agreement For Use of the Texaco Gasification Process, Texaco Hydrogen Generation Process, and Texaco Gasification Power Systems, dated as of May 30, 1997 by and between GE Energy (USA), LLC (as successor in interest to Texaco Development Corporation) and Coffeyville Resources Nitrogen Fertilizers, LLC (as successor in interest to Farmland Industries, Inc.), as amended (incorporated by reference to Exhibit 10.4 to the Company's Registration Statement on Form S-1/A, File No. 333-137588, filed on April 18, 2007) (Certain portions of this exhibit have been omitted and separately filed with the SEC pursuant to a request for confidential treatment which has been granted by the SEC.).

- 10.8** Amended and Restated On-Site Product Supply Agreement dated as of June 1, 2005, by and between The BOC Group, Inc. (n/k/a Linde LLC) and Coffeyville Resources Nitrogen Fertilizers, LLC (incorporated by reference to Exhibit 10.6 to the Company's Registration Statement on Form S-1/A, File No. 333-137588, filed on April 18, 2007) (Certain portions of this exhibit have been omitted and separately filed with the SEC pursuant to a request for confidential treatment which has been granted by the SEC.).
- 10.8.1** First Amendment to Amended and Restated On-Site Product Supply Agreement, dated as of October 31, 2008, by and between Coffeyville Resources Nitrogen Fertilizers, LLC and Linde, Inc. (n/k/a Linde LLC) (incorporated by reference to Exhibit 10.3 to the Company's Form 10-Q filed on November 13, 2008).
- 10.9** Amended and Restated Crude Oil Supply Agreement, dated August 31, 2012, by and between Vitol Inc. and Coffeyville Resources Refining & Marketing, LLC (incorporated by reference to Exhibit 10.2 to the Company's Form 10-Q filed on November 6, 2012) (Certain portions of this exhibit have been omitted and separately filed with the SEC pursuant to a request for confidential treatment which has been granted by the SEC.).
- 10.9.1** First Amendment to Amended and Restated Crude Oil Supply Agreement, dated as of June 8, 2015, by and between Vitol Inc. and Coffeyville Resources Refining & Marketing, LLC (incorporated by reference to Exhibit 10.1 to the Company's Form 10-Q filed on July 30, 2015).
- 10.10** Pipeline Construction, Operation and Transportation Commitment Agreement, dated February 11, 2004, as amended, by and between Plains Pipeline, L.P. and Coffeyville Resources Refining & Marketing, LLC (incorporated by reference to Exhibit 10.14 to the Company's Registration Statement on Form S-1/A, File No. 333-137588, filed on April 18, 2007) (Certain portions of this exhibit have been omitted and separately filed with the SEC pursuant to a request for confidential treatment which has been granted by the SEC.).
- 10.11** Amended and Restated Electric Services Agreement dated as of August 1, 2010, by and between Coffeyville Resources Nitrogen Fertilizers, LLC and the City of Coffeyville, Kansas (incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed on August 25, 2010).
- 10.12**+ Fifth Amended and Restated Employment Agreement, dated as of December 31, 2015, by and between CVR Energy, Inc. and John J. Lipinski (incorporated by reference to Exhibit 10.18 to CVR Partners, LP's Form 10-K filed on February 18, 2016 (Commission File No. 001-35120)).
- 10.13**+ Third Amended and Restated Employment Agreement, dated as of January 1, 2011, by and between CVR Energy, Inc. and Robert W. Haugen (incorporated by reference to Exhibit 10.5 to the Company's Form 10-Q filed on May 10, 2011).
- 10.13.1**+ Amendment Number 1 to Third Amended and Restated Employment Agreement, dated as of December 31, 2013, by and between CVR Energy, Inc. and Robert W. Haugen (incorporated by reference to Exhibit 10.17.1 to the Company's Form 10-K filed on February 26, 2014).
- 10.13.2**+ Amendment Number 2 to Third Amended and Restated Employment Agreement, dated as of December 18, 2013, by and between CVR Energy, Inc. and Robert W. Haugen (incorporated by reference to Exhibit 10.18.2 to the Company's Form 10-K filed on February 20, 2015).
- 10.14**+ Employment Agreement, dated as of December 1, 2014, by and between CVR Energy, Inc. and Martin J. Power (incorporated by reference to Exhibit 10.19 to the Company's Form 10-K filed on February 20, 2015).
- 10.15** Second Amended and Restated Agreement of Limited Partnership of CVR Partners, LP, dated April 13, 2011 (incorporated by reference to Exhibit 10.7 to the Company's Form 8-K/A filed on May 23, 2011).
- 10.16** Amended and Restated Contribution, Conveyance and Assumption Agreement, dated as of April 7, 2011, among Coffeyville Resources, LLC, CVR GP, LLC, Coffeyville Acquisition III LLC, CVR Special GP, LLC and CVR Partners, LP (incorporated by reference to Exhibit 10.1 to the Company's Form 8-K/A filed on May 23, 2011).
- 10.17** Environmental Agreement, dated as of October 25, 2007, by and between Coffeyville Resources Refining & Marketing, LLC and Coffeyville Resources Nitrogen Fertilizers, LLC (incorporated by reference to Exhibit 10.7 to the Company's Form 10-Q filed on December 6, 2007).

- 10.17.1** Supplement to Environmental Agreement, dated as of February 15, 2008, by and between Coffeyville Resources Refining and Marketing, LLC and Coffeyville Resources Nitrogen Fertilizers, LLC (incorporated by reference to Exhibit 10.17.1 to the Company's Form 10-K filed on March 28, 2008).
- 10.17.2** Second Supplement to Environmental Agreement, dated as of July 23, 2008, by and between Coffeyville Resources Refining and Marketing, LLC and Coffeyville Resources Nitrogen Fertilizers, LLC (incorporated by reference to Exhibit 10.1 to the Company's Form 10-Q filed on August 14, 2008).
- 10.18** Amended and Restated Feedstock and Shared Services Agreement, dated as of April 13, 2011, by and between Coffeyville Resources Refining & Marketing, LLC and Coffeyville Resources Nitrogen Fertilizers, LLC (incorporated by reference to Exhibit 10.4 to the Company's Form 8-K/A filed on May 23, 2011).
- 10.18.1** Amendment to Amended and Restated Feedstock and Shared Services Agreement, dated as of December 30, 2013, by and between Coffeyville Resources Refining & Marketing, LLC and Coffeyville Resources Nitrogen Fertilizers, LLC (incorporated by reference to Exhibit 10.21.1 to the Company's Form 10-K filed on February 26, 2014).
- 10.19** Raw Water and Facilities Sharing Agreement, dated as of October 25, 2007, by and between Coffeyville Resources Refining & Marketing, LLC and Coffeyville Resources Nitrogen Fertilizers, LLC (incorporated by reference to Exhibit 10.9 to the Company's Form 10-Q filed on December 6, 2007).
- 10.20** Second Amended and Restated Services Agreement, dated as of May 4, 2012, among CVR Partners, LP, CVR GP, LLC and CVR Energy, Inc. (incorporated by reference to Exhibit 10.2 to the Company's Form 10-Q filed on August 2, 2012).
- 10.20.1** Amendment to Second Amended and Restated Services Agreement, dated as of February 17, 2014, among CVR Partners, LP, CVR GP, LLC and CVR Energy, Inc. (incorporated by reference to Exhibit 10.1 to the Company's Form 10-Q filed on May 2, 2014).
- 10.21** Amended and Restated Omnibus Agreement, dated as of April 13, 2011, among CVR Energy, Inc., CVR GP, LLC and CVR Partners, LP (incorporated by reference to Exhibit 10.2 to the Company's Form 8-K/A filed on May 23, 2011).
- 10.22** Coke Supply Agreement, dated as of October 25, 2007, by and between Coffeyville Resources Refining & Marketing, LLC and Coffeyville Resources Nitrogen Fertilizers, LLC (incorporated by reference to Exhibit 10.5 to the Company's Form 10-Q filed on December 6, 2007).
- 10.23** Amended and Restated Cross-Easement Agreement, dated as of April 13, 2011, by and between Coffeyville Resources Refining & Marketing, LLC and Coffeyville Resources Nitrogen Fertilizers, LLC (incorporated by reference to Exhibit 10.5 to the Company's Form 8-K/A filed on May 23, 2011).
- 10.24** GP Services Agreement, dated as of November 29, 2011, by and between CVR Partners, LP, CVR GP, LLC and CVR Energy, Inc. (incorporated by reference to Exhibit 10.22 to the Form 10-K filed by CVR Partners, LP on February 24, 2012 (Commission File No. 001-35120)).
- 10.24.1** Amendment to GP Services Agreement, dated as of June 27, 2014, by and between CVR Partners, LP, CVR GP, LLC and CVR Energy, Inc. (incorporated by reference to Exhibit 10.1 to the Company's Form 10-Q filed on August 1, 2014).
- 10.25** Trademark License Agreement, dated as of April 13, 2011, by and between CVR Energy, Inc. and CVR Partners, LP (incorporated by reference to Exhibit 10.9 to the Company's Form 8-K/A filed on May 23, 2011).
- 10.26** Lease and Operating Agreement, dated as of May 4, 2012, by and between Coffeyville Resources Terminal, LLC and Coffeyville Resources Nitrogen Fertilizers, LLC (incorporated by reference to Exhibit 10.2 to the Company's Form 10-Q filed on August 2, 2012).
- 10.27** Form of Indemnification Agreement (incorporated by reference to Exhibit 10.49 to the Company's Form 10-K for the year ended December 31, 2008, filed on March 13, 2009).

- 10.28**+ Amended and Restated CVR Energy, Inc. 2007 Long Term Incentive Plan, dated as of December 26, 2013 (incorporated by reference to Exhibit 10.32 to the Company's Form 10-K filed on February 26, 2014).
- 10.28.1**+ Form of Nonqualified Stock Option Agreement (incorporated by reference to Exhibit 10.33.1 to the Company's Registration Statement on Form S-1/A, File No. 333-137588, filed on June 5, 2007).
- 10.28.2**+ Form of Director Stock Option Agreement (incorporated by reference to Exhibit 10.33.2 to the Company's Registration Statement on Form S-1/A, File No. 333-137588, filed on June 5, 2007).
- 10.28.3**+ Form of Director Restricted Stock Agreement (incorporated by reference to Exhibit 10.28.3 to the Company's Form 10-K for the year ended December 31, 2009, filed on March 12, 2010).
- 10.28.4**+ Form of Restricted Stock Agreement (incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed on December 23, 2011).
- 10.28.5**+ Form of Restricted Stock Unit Agreement (incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed on January 4, 2013).
- 10.28.6**+ Form of Incentive Unit Agreement (incorporated by reference to Exhibit 10.32.6 to the Company's Form 10-K filed on February 26, 2014).
- 10.29**+ Performance Unit Agreement, dated as of December 31, 2015, by and between CVR Energy, Inc. and John J. Lipinski (incorporated by reference to Exhibit 10.20 to CVR Partners, LP's Form 10-K filed on February 18, 2016 (Commission File No. 001-35120)).
- 10.30**+ Other Unit Based Award Agreement, dated as of April 15, 2015, by and between CVR Energy, Inc. and Martin J. Power (incorporated by reference to Exhibit 10.3 to CVR Refining, LP's Form 10-K filed on February 19, 2016 (Commission File No. 001-35781)).
- 10.31**+ CVR Partners, LP Long-Term Incentive Plan (adopted March 16, 2011) (incorporated by reference to Exhibit 10.1 to the Form S-8 filed by CVR Partners, LP on April 12, 2011 (Commission File No. 333-173444)).
- 10.31.1**+ Form of CVR Partners, LP Long-Term Incentive Plan Employee Phantom Unit Agreement (incorporated by reference to Exhibit 10.18.4 to the Form 10-K filed by CVR Partners, LP on March 1, 2013 (Commission File No. 001-35120)).
- 10.31.2**+ Form of CVR Partners, LP Long-Term Incentive Plan Employee Phantom Unit Agreement (incorporated by reference to Exhibit 10.18.5 to the Form 10-K filed by CVR Partners, LP on March 1, 2013 (Commission File No. 001-35120)).
- 10.31.3**+ Form of CVR Partners, LP Long-Term Incentive Plan Employee Phantom Unit Agreement (incorporated by reference to Exhibit 10.38.3 to the Company's Form 10-K filed on February 20, 2015).
- 10.32**+ Amended and Restated CVR Energy, Inc. Performance Incentive Plan (incorporated by reference to Appendix A to the Company's Proxy Statement on Schedule 14A filed on April 29, 2016).
- 10.33**+ CVR Partners, LP Performance Incentive Plan (incorporated by reference to Exhibit 10.24 to the Form 10-K filed by CVR Partners, LP on March 1, 2013 (Commission File No. 001-35120)).
- 10.34** Third Amended and Restated Limited Liability Company Agreement of CVR GP, LLC, dated April 13, 2011 (incorporated by reference to Exhibit 3.4 to the Form 10-K filed by CVR Partners, LP on February 24, 2012 (Commission File No. 001-35120)).
- 10.35** First Amended and Restated Agreement of Limited Partnership of CVR Refining, LP, dated as of January 23, 2013 (incorporated by reference to Exhibit 3.1 to the Form 8-K filed by CVR Refining, LP on January 29, 2013 (Commission File No. 001-35781)).
- 10.36** Contribution Agreement, dated December 31, 2012, by and among CVR Refining, LP, CVR Refining Holdings, LLC and CVR Refining Holdings Sub, LLC (incorporated by reference to Exhibit 10.1 to the Form S-1/A filed by CVR Refining, LP on January 8, 2013 (Commission File No. 333-184200)).
- 10.37**+ CVR Refining, LP Long-Term Incentive Plan (incorporated by reference to Exhibit 10.2 to the Partnership's Form 8-K filed on January 23, 2013 (Commission File No. 001-35781)).

- 10.37.1**+ Form of CVR Refining, LP Long-Term Incentive Plan Employee Phantom Unit Agreement (incorporated by reference to Exhibit 10.41.1 to the Company's Form 10-K filed on February 26, 2014).
- 10.37.2**+ Form of CVR Refining, LP Long-Term Incentive Plan Employee Phantom Unit Agreement (incorporated by reference to Exhibit 10.44.2 to the Company's Form 10-K filed on February 20, 2015).
- 10.38** Services Agreement, dated December 31, 2012, by and among CVR Refining, LP, CVR Refining GP, LLC and CVR Energy, Inc. (incorporated by reference to Exhibit 10.2 to the Form 8-K filed by CVR Refining, LP on January 29, 2013 (Commission File No. 001-35781)).
- 10.38.1** Amendment to Services Agreement, dated as of February 17, 2014, by and among CVR Refining, LP, CVR Refining GP, LLC and CVR Energy, Inc. (incorporated by reference to Exhibit 10.2 to the Company's Form 10-Q filed on May 2, 2014).
- 10.38.2** Second Amendment to Services Agreement, dated as of June 27, 2014, by and among CVR Refining, LP, CVR Refining GP, LLC and CVR Energy, Inc. (incorporated by reference to Exhibit 10.2 to the Company's Form 10-Q filed on August 1, 2014).
- 10.39** Trademark License Agreement, dated as of January 23, 2013, by and among CVR Refining, LP and CVR Energy, Inc. (incorporated by reference to Exhibit 10.3 to the Form 8-K filed by CVR Refining, LP on January 29, 2013 (Commission File No. 001-35781)).
- 10.40** Senior Unsecured Revolving Credit Agreement, dated as of January 23, 2013, by and among CVR Refining, LP and Coffeyville Resources, LLC (incorporated by reference to Exhibit 10.4 to the Form 8-K filed by CVR Refining, LP on January 29, 2013 (Commission File No. 001-35781)).
- 10.40.1** First Amendment to Credit Agreement, dated as of October 29, 2014, by and among CVR Refining, LP and Coffeyville Resources, LLC (incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed October 30, 2014).
- 10.41** Reorganization Agreement, dated as of January 16, 2013, by and among CVR Refining, LP, CVR Refining GP, LLC, CVR Refining Holdings, LLC and CVR Refining Holdings Sub, LLC (incorporated by reference to Exhibit 10.1 to the Form 8-K filed by CVR Refining, LP on January 23, 2013 (Commission File No. 001-35781)).
- 10.42** Amended and Restated Registration Rights Agreement, dated as of April 13, 2011, among CVR Partners, LP and Coffeyville Resources, LLC (incorporated by reference to Exhibit 10.6 to the Company's Form 8-K/A filed by on May 23, 2011).
- 10.43** Registration Rights Agreement, dated as of January 23, 2013, by and among CVR Refining, LP, Icahn Enterprises Holdings L.P., CVR Refining Holdings, LLC and CVR Refining Holdings Sub, LLC (incorporated by reference to Exhibit 10.1 to the Form 8-K filed by CVR Refining, LP on January 29, 2013 (Commission File No. 001-35781)).
- 10.44** Registration Rights Agreement, dated as of August 9, 2015, by and among CVR Partners, Coffeyville Resources, LLC, Rentech Nitrogen Holdings, Inc., and DSHC, LLC (incorporated by reference to Exhibit 4.1 to the Form 8-K filed by CVR Partners, LP on August 13, 2015 (Commission File No. 001-35120)).
- 10.45** Voting and Support Agreement, dated as of August 9, 2015, by and among CVR Partners, LP, Rentech, Inc., Rentech Nitrogen Holdings, Inc., and DSHC, LLC (incorporated by reference to Exhibit 10.1 to the Form 8-K filed by CVR Partners, LP on August 13, 2015 (Commission File No. 001-35120)).
- 10.46** Transaction Agreement, dated as of August 9, 2015, by and among CVR Partners, LP, Coffeyville Resources, LLC, Rentech, Inc., Rentech Nitrogen Holdings, Inc., and DSHC, LLC (incorporated by reference to Exhibit 10.2 to the Form 8-K filed by CVR Partners, LP on August 13, 2015 (Commission File No. 001-35120)).
- 10.46.1** Amendment No. 1 to Transaction Agreement, dated as of January 20, 2017, by and among CVR Partners, LP, Coffeyville Resources, LLC, Rentech, Inc., Rentech Nitrogen Holdings, Inc., and DSHC, LLC (incorporated by reference to Exhibit 10.1 of the Form 8-K filed on January 23, 2017 by Rentech, Inc. (Commission File No. 001-15795)).

- 10.47** Transaction Agreement, dated as of August 9, 2015, by and among CVR Partners, LP, GSO Special Situations Overseas Master Fund Ltd., GSO Special Situations Fund LP, GSO Palmetto Opportunistic Investment Partners LP, GSO Credit-A Partners LP, Steamboat Credit Opportunities Master Fund LP, GSO Coastline Credit Partners LP, GSO Cactus Credit Opportunities Fund LP and GSO Aiguille des Grands Montets Fund II LP and GSO Capital Partners LP (incorporated by reference to Exhibit 10.3 to the Form 8-K filed by CVR Partners, LP on August 13, 2015 (Commission File No. 001-35120)).
- 10.47.1** Amendment No. 1 to Transaction Agreement, dated as of January 20, 2017, by and among CVR Partners, LP, Coffeyville Resources, LLC, GSO Special Situations Overseas Master Fund Ltd., GSO Special Situations Fund LP, GSO Palmetto Opportunistic Investment Partners LP, GSO Credit-A Partners LP, Steamboat Credit Opportunities Master Fund LP, GSO Coastline Credit Partners LP, GSO Cactus Credit Opportunities Fund LP and GSO Aiguille des Grands Montets Fund II LP, GSO SSOMF Nitro Blocker LLC, Steamboat Nitro Blocker LLC, GSO ADGM II Nitro Blocker LLC and GSO Capital Partners LP (incorporated by reference to Exhibit 10.24.1 to the Form 10-K filed by CVR Partners, LP on February 16, 2017 (Commission File No. 001-35120)).
- 10.48** Collateral Trust Agreement, dated as of June 10, 2016, among CVR Partners, LP, CVR Nitrogen Finance Corporation, the Guarantors (as defined therein) and Wilmington Trust, National Association, as Trustee and Collateral Trustee (incorporated by reference to Exhibit 10.1 of the Form 8-K filed by CVR Partners on June 16, 2016 (Commission File No. 001-35120)).
- 10.49** Parity Lien Security Agreement, dated as of June 10, 2016, among CVR Partners, LP, CVR Nitrogen Finance Corporation, the Guarantors (as defined therein) and Wilmington Trust, National Association, as Trustee and Collateral Trustee (incorporated by reference to Exhibit 10.2 of the Form 8-K filed by CVR Partners on June 16, 2016 (Commission File No. 001-35120)).
- 10.50** ABL Credit Agreement, dated as of September 30, 2016, among CVR Partners, LP, CVR Nitrogen, LP, East Dubuque Nitrogen Fertilizers, LLC, Coffeyville Resources Nitrogen Fertilizers, LLC, CVR Nitrogen Holdings, LLC, CVR Nitrogen Finance Corporation, CVR Nitrogen GP, LLC, certain of their affiliates from time to time party thereto, the lenders from time to time party thereto, UBS AG, Stamford Branch, as administrative agent and collateral agent (incorporated by reference to Exhibit 10.1 of the Form 8-K filed by CVR Partners, LP on October 6, 2016 (Commission File No. 001-35120)).
- 10.51** Security Agreement, dated as of September 30, 2016, among CVR Partners, LP, CVR Nitrogen, LP, East Dubuque Nitrogen Fertilizers, LLC, Coffeyville Resources Nitrogen Fertilizers, LLC, CVR Nitrogen Holdings, LLC, CVR Nitrogen Finance Corporation, CVR Nitrogen GP, LLC, certain of their affiliates from time to time party thereto, and UBS AG, Stamford Branch, as administrative agent and collateral agent (incorporated by reference to Exhibit 10.2 of the Form 8-K filed by CVR Partners, LP on October 6, 2016 (Commission File No. 001-35120)).
- 10.52** Intercreditor Agreement, dated as of September 30, 2016, among CVR Partners, LP, CVR Nitrogen, LP, East Dubuque Nitrogen Fertilizers, LLC, Coffeyville Resources Nitrogen Fertilizers, LLC, CVR Nitrogen Holdings, LLC, CVR Nitrogen Finance Corporation, CVR Nitrogen GP, LLC, certain of their affiliates from time to time party thereto, UBS AG, Stamford Branch, as administrative agent and collateral agent for the secured parties, Wilmington Trust, National Association, as trustee and collateral trustee for the secured parties in respect of the outstanding senior secured notes and other parity lien obligations and other parity lien representative from time to time party thereto (incorporated by reference to Exhibit 10.3 of the Form 8-K filed by CVR Partners, LP on October 6, 2016 (Commission File No. 001-35120)).
- 21.1* List of Subsidiaries of CVR Energy, Inc.
- 23.1* Consent of Grant Thornton LLP.
- 31.1* Rule 13a-14(a)/15d-14(a) Certification of Chief Executive Officer and President.
- 31.2* Rule 13a-14(a)/15d-14(a) Certification of Chief Financial Officer and Treasurer.
- 32.1† Section 1350 Certification of Chief Executive Officer and President and Chief Financial Officer and Treasurer.

101* The following financial information for CVR Energy, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2016, formatted in XBRL ("Extensible Business Reporting Language") includes: (1) Consolidated Balance Sheets, (2) Consolidated Statements of Operations, (3) Consolidated Statements of Comprehensive Income, (4) Consolidated Statements of Changes in Equity, (5) Consolidated Statements of Cash Flows and (6) the Notes to Consolidated Financial Statements, tagged in detail.

* Filed herewith.

** Previously filed.

† Furnished herewith.

+ Denotes management contract or compensatory plan or arrangement.

PLEASE NOTE: Pursuant to the rules and regulations of the SEC, we may file or incorporate by reference agreements as exhibits to the reports that we file with or furnish to the SEC. The agreements are filed to provide investors with information regarding their respective terms. The agreements are not intended to provide any other factual information about the Company or its business or operations. In particular, the assertions embodied in any representations, warranties and covenants contained in the agreements may be subject to qualifications with respect to knowledge and materiality different from those applicable to investors and may be qualified by information in confidential disclosure schedules not included with the exhibits. These disclosure schedules may contain information that modifies, qualifies and creates exceptions to the representations, warranties and covenants set forth in the agreements. Moreover, certain representations, warranties and covenants in the agreements may have been used for the purpose of allocating risk between the parties, rather than establishing matters as facts. In addition, information concerning the subject matter of the representations, warranties and covenants may have changed after the date of the respective agreement, which subsequent information may or may not be fully reflected in the Company's public disclosures. Accordingly, investors should not rely on the representations, warranties and covenants in the agreements as characterizations of the actual state of facts about the Company or its business or operations on the date hereof.



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