

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

Form 10-Q

(Mark One)

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

For the quarterly period ended March 31, 2018

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)

(281) 207-3200

(Registrant's telephone number, including area code)

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

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

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

(Do not check if a smaller reporting company)

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

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

There were 86,831,050 shares of the registrant's common stock outstanding at April 24, 2018.

CVR ENERGY, INC. AND SUBSIDIARIES
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For The Quarter Ended March 31, 2018

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GLOSSARY OF SELECTED TERMS

The following are definitions of certain terms used in this Quarterly Report on Form 10-Q for the quarter ended March 31, 2018 (this "Report").

2017 Form 10-K — Our Annual Report on Form 10-K for the year ended December 31, 2017 filed with the Securities and Exchange Commission ("SEC") on February 26, 2018.

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 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 and 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 and its subsidiaries.

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

CVR Refining GP or general partner — CVR Refining GP, LLC, an indirect wholly-owned subsidiary of CVR Energy.

distillates — Primarily diesel fuel, kerosene and jet fuel.

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

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.

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

FCCU — Fluid Catalytic Cracking Unit.

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.

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.

LIBOR — London Interbank Offered Rate.

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.

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.

Midway — Midway Pipeline LLC.

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.

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 or railcars.

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 Environmental Protection Agency ("EPA").

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

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.

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.

Velocity — Velocity Central Oklahoma Pipeline LLC.

Vitol — Vitol Inc.

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

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.

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. FINANCIAL INFORMATION
Item 1. Financial Statements

CVR ENERGY, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS

	<u>March 31, 2018</u>	<u>December 31, 2017</u>
	(unaudited)	
	(in millions, except share data)	
ASSETS		
Current assets:		
Cash and cash equivalents (including \$168.0 and \$223.0, respectively, of consolidated variable interest entities ("VIEs"))	\$ 420.0	\$ 481.8
Accounts receivable of VIEs, net of allowance for doubtful accounts of \$0.9 and \$1.1, respectively	179.3	178.7
Inventories of VIEs	424.4	385.2
Prepaid expenses and other current assets (including \$111.4 and \$30.0, respectively, of VIEs)	114.3	33.7
Income tax receivable (including \$0.0 and \$0.0, respectively, of VIEs)	9.1	9.7
Due from parent	—	5.1
Total current assets	1,147.1	1,094.2
Property, plant and equipment, net of accumulated depreciation (including \$2,514.3 and \$2,548.3, respectively, of VIEs)	2,537.6	2,571.8
Intangible assets of VIEs, net	0.1	0.2
Goodwill of VIEs	41.0	41.0
Equity method investments in affiliates of VIEs	83.5	82.8
Other long-term assets (including \$11.0 and \$13.3, respectively, of VIEs)	14.0	16.7
Total assets	\$ 3,823.3	\$ 3,806.7
LIABILITIES AND EQUITY		
Current liabilities:		
Note payable and capital lease obligations of VIEs	\$ 2.2	\$ 2.1
Accounts payable (including \$340.6 and \$329.0, respectively, of VIEs)	343.7	333.9
Personnel accruals (including \$17.4 and \$29.9, respectively, of VIEs)	27.7	55.9
Accrued taxes other than income taxes (\$23.8 and \$26.5, respectively)	23.9	26.5
Deferred revenue of VIEs	24.2	12.9
Due to parent	14.3	—
Other current liabilities (including \$85.7 and \$111.8, respectively, of VIEs)	86.3	112.4
Total current liabilities	522.3	543.7
Long-term liabilities:		
Long-term debt and capital lease obligations of VIEs, net of current portion	1,164.8	1,164.4
Deferred income taxes (including \$0.9 and \$1.0, respectively, of VIEs)	386.7	385.9
Other long-term liabilities (including \$2.9 and \$3.7, respectively, of VIEs)	7.9	8.7
Total long-term liabilities	1,559.4	1,559.0
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	1,197.6
Retained deficit	(254.6)	(277.4)
Treasury stock, 98,610 shares at cost	(2.3)	(2.3)
Accumulated other comprehensive income, net of tax	—	—
Total CVR stockholders' equity	941.6	918.8
Noncontrolling interest	800.0	785.2
Total equity	1,741.6	1,704.0
Total liabilities and equity	\$ 3,823.3	\$ 3,806.7

See accompanying notes to the condensed consolidated financial statements.

CVR ENERGY, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

	Three Months Ended March 31,	
	2018	2017
	(unaudited)	
	(in millions, except per share data)	
Net sales	\$ 1,536.5	\$ 1,507.1
Operating costs and expenses:		
Cost of materials and other	1,238.3	1,221.2
Direct operating expenses (exclusive of depreciation and amortization as reflected below)	131.9	138.1
Depreciation and amortization	49.1	48.6
Cost of sales	1,419.3	1,407.9
Selling, general and administrative expenses (exclusive of depreciation and amortization as reflected below)	23.9	29.1
Depreciation and amortization	2.8	2.5
Total operating costs and expenses	1,446.0	1,439.5
Operating income	90.5	67.6
Other income (expense):		
Interest expense and other financing costs	(27.1)	(27.0)
Interest income	0.2	0.2
Gain on derivatives, net	59.3	12.2
Other income, net	1.5	—
Total other income (expense)	33.9	(14.6)
Income before income tax expense	124.4	53.0
Income tax expense	20.8	14.8
Net income	103.6	38.2
Less: Net income attributable to noncontrolling interest	37.4	16.0
Net income attributable to CVR Energy stockholders	\$ 66.2	\$ 22.2
Basic and diluted earnings per share	\$ 0.76	\$ 0.26
Dividends declared per share	\$ 0.50	\$ 0.50
Weighted-average common shares outstanding:		
Basic and diluted	86.8	86.8

See accompanying notes to the condensed consolidated financial statements.

CVR ENERGY, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	Three Months Ended March 31,	
	2018	2017
	(unaudited)	
	(in millions)	
Net income	\$ 103.6	\$ 38.2
Other comprehensive income	—	—
Comprehensive income	103.6	38.2
Less: Comprehensive income attributable to noncontrolling interest	37.4	16.0
Comprehensive income attributable to CVR Energy stockholders	\$ 66.2	\$ 22.2

See accompanying notes to the condensed consolidated financial statements.

CVR ENERGY, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

	Common Stockholders							Noncontrolling Interest	Total Equity
	Shares Issued	\$0.01 Par Value Common Stock	Additional Paid-In Capital	Retained Deficit	Treasury Stock	Total CVR Stockholders' Equity			
(unaudited)									
(in millions, except share data)									
Balance at December 31, 2017	86,929,660	\$ 0.9	\$ 1,197.6	\$ (277.4)	\$ (2.3)	\$ 918.8	\$ 785.2	\$ 1,704.0	
Dividends paid to CVR Energy stockholders	—	—	—	(43.4)	—	(43.4)	—	(43.4)	
Distributions from CVR Refining to public unitholders	—	—	—	—	—	—	(22.6)	(22.6)	
Net income	—	—	—	66.2	—	66.2	37.4	103.6	
Balance at March 31, 2018	86,929,660	\$ 0.9	\$ 1,197.6	\$ (254.6)	\$ (2.3)	\$ 941.6	\$ 800.0	\$ 1,741.6	

See accompanying notes to the condensed consolidated financial statements.

CVR ENERGY, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

	Three Months Ended March 31,	
	2018	2017
	(unaudited)	
	(in millions)	
Cash flows from operating activities:		
Net income	\$ 103.6	\$ 38.2
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	51.9	51.1
Allowance for doubtful accounts	(0.2)	0.7
Amortization of deferred financing costs and original issue discount	1.1	1.2
Deferred income taxes expense	0.9	12.5
Loss on disposition of assets	0.1	0.5
Share-based compensation	1.5	3.3
Gain on derivatives, net	(59.3)	(12.2)
Current period settlements on derivative contracts	13.7	1.2
Income from equity method investments, net of distributions	(0.7)	—
Changes in assets and liabilities:		
Accounts receivable	0.3	8.0
Inventories	(37.1)	(1.9)
Income tax receivable	0.5	0.6
Prepaid expenses and other current assets	(77.4)	30.1
Due to/from parent	19.4	1.9
Other long-term assets	1.2	0.3
Accounts payable	10.7	(10.8)
Deferred revenue	10.6	19.3
Other current liabilities	(15.4)	(6.5)
Other long-term liabilities	(0.9)	(0.3)
Net cash provided by operating activities	<u>24.5</u>	<u>137.2</u>
Cash flows from investing activities:		
Capital expenditures	(20.0)	(24.2)
Proceeds from sale of assets	0.2	—
Investment in affiliates, net of return of investment	—	(1.4)
Net cash used in investing activities	<u>(19.8)</u>	<u>(25.6)</u>
Cash flows from financing activities:		
Payment of capital lease obligations	(0.5)	(0.4)
Dividends to CVR Energy's stockholders	(43.4)	(43.4)
Distributions to CVR Partners' noncontrolling interest holders	(22.6)	—
Net cash used in financing activities	<u>(66.5)</u>	<u>(43.8)</u>
Net increase (decrease) in cash and cash equivalents	(61.8)	67.8
Cash and cash equivalents, beginning of period	481.8	735.8
Cash and cash equivalents, end of period	<u>\$ 420.0</u>	<u>\$ 803.6</u>
Supplemental disclosures:		
Cash paid (refunded) for income taxes, net of refunds	\$ —	\$ (0.2)
Cash paid for interest, net of capitalized interest of \$0.5 and \$0.3 in 2018 and 2017, respectively	\$ 3.0	\$ 2.8
Non-cash investing and financing activities:		
Construction in progress additions included in accounts payable	\$ 7.0	\$ 11.5
Change in accounts payable related to construction in progress additions	\$ (1.0)	\$ (4.8)
Landlord incentives for leasehold improvements	\$ —	\$ 1.2

See accompanying notes to the condensed consolidated financial statements.

CVR ENERGY, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

March 31, 2018

(unaudited)

(1) Organization and Basis of Presentation

Organization

The "Company," "CVR Energy" or "CVR" may be used to refer to CVR Energy, Inc. and, unless the context otherwise requires, 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. CVR's common stock is listed on the New York Stock Exchange ("NYSE") under the symbol "CVI."

As of March 31, 2018, Icahn Enterprises L.P. ("IEP") and its affiliates owned approximately 82% of the Company's outstanding shares.

CVR Partners, LP

On April 13, 2011, the Nitrogen Fertilizer Partnership completed the initial public offering (the "Nitrogen Fertilizer Partnership IPO") of its common units representing limited partnership interests. The common units, which are listed on the NYSE, began trading on April 8, 2011 under the symbol "UAN."

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").

As a result of the Nitrogen Fertilizer Partnership's acquisition of CVR Nitrogen 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 March 31, 2018 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 Condensed Consolidated Balance Sheets of CVR is impacted by the net income of, and distributions from, the Nitrogen Fertilizer Partnership.

CVR Refining, LP

On January 23, 2013, the Refining Partnership completed the initial public offering (the "Refining Partnership IPO") of its common units representing limited partner interests. The common units, which are listed on the NYSE, began trading on January 17, 2013 under the symbol "CVRR."

As of March 31, 2018, public security holders held approximately 34% of the Refining Partnership's outstanding common units (including units owned by affiliates of IEP, representing approximately 3.9% of the Refining Partnership's outstanding common units), and CVR Refining Holdings, LLC ("CVR Refining Holdings") held approximately 66% of the Refining Partnership's outstanding 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 Condensed Consolidated Balance Sheets of CVR is impacted by the net income of, and distributions from, the Refining Partnership.

CVR ENERGY, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Continued)
March 31, 2018
(unaudited)

Basis of Presentation

The accompanying condensed consolidated financial statements were prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP") and in accordance with the rules and regulations of the Securities and Exchange Commission ("SEC"). The condensed consolidated financial statements include the accounts of CVR and its direct and indirect subsidiaries including the Nitrogen Fertilizer Partnership, the Refining Partnership and their respective subsidiaries, as discussed further below. The ownership interests of noncontrolling investors in CVR's subsidiaries are recorded as a noncontrolling interest included as a separate component of equity for all periods presented. All intercompany account balances and transactions have been eliminated in consolidation. Certain information and footnotes required for complete financial statements under GAAP have been condensed or omitted pursuant to SEC rules and regulations. These condensed consolidated financial statements should be read in conjunction with the December 31, 2017 audited consolidated financial statements and notes thereto included in CVR's Annual Report on Form 10-K for the year ended December 31, 2017, which was filed with the SEC on February 26, 2018 (the "2017 Form 10-K").

According to the Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") Topic 810, *Consolidations*, the primary beneficiary of a variable interest entity's ("VIE") activities is required 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; limited partnerships and other similar entities are considered a VIE unless the limited partners hold substantive kick-out rights or participating rights; and an ongoing analysis is required to determine whether the variable interest gives rise to a controlling financial interest in the VIE, among other things. 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. 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 determination, CVR consolidates both the Refining and Nitrogen Fertilizer Partnerships in its consolidated financial statements.

In the opinion of the Company's management, the accompanying condensed consolidated financial statements reflect all adjustments (consisting only of normal recurring adjustments) that are necessary to fairly present the financial position of the Company as of March 31, 2018 and December 31, 2017, the results of operations and comprehensive income for the three month periods ended March 31, 2018 and 2017, changes in equity for the three month period ended March 31, 2018 and cash flows of the Company for the three month periods ended March 31, 2018 and 2017.

The preparation of the condensed consolidated financial statements in conformity with GAAP requires management to make certain estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses, and the disclosure of contingent assets and liabilities. Actual results could differ materially from those estimates. Results of operations and cash flows for the interim periods presented are not necessarily indicative of the results that will be realized for the year ending December 31, 2018 or any other interim or annual period.

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(2) Recent Accounting Pronouncements***Adoption of New Accounting Standard***

On January 1, 2018, the Company adopted FASB ASC Topic 606, "Revenue from Contracts with Customers" ("ASC 606") using the modified retrospective method applied to contracts which were not completed as of January 1, 2018. The standard was applied prospectively and the comparative information for 2017 has not been restated and continues to be reported under the accounting standards in effect for the period. The Company did not identify any material differences in its existing revenue recognition methods that require modification under the new standard and, as such, a cumulative effect adjustment of applying the standard using the modified retrospective method was not recorded.

Impact on Financial Statements

The Company identified presentation changes associated with contracts requiring customer prepayment prior to delivery and the need to gross up certain fees collected from customers. Prior to adoption of ASC 606, deferred revenue was recorded by the Nitrogen Fertilizer Partnership upon customer prepayment. Under the new revenue standard, a receivable and associated deferred revenue is recorded at the point in time in which a prepaid contract is legally enforceable and the associated right to consideration is unconditional. The adoption of ASC 606 resulted in a \$21.4 million increase to deferred revenue and accounts receivable as of January 1, 2018. After the effect of adoption of the new revenue standard, deferred revenue and accounts receivable of the Nitrogen Fertilizer Partnership were \$34.3 million and \$31.2 million, respectively, as of January 1, 2018. Additionally, fees collected from certain customers were previously recorded as a reduction to cost of materials and other. The particular fee, the Oil Spill Liability Tax, relates to taxes imposed on refineries as part of the crude oil procurement process, is charged to certain of the Refining Partnership's customers on product sales and is required under the new standard to be included in the transaction price.

The following tables display the effect of the change to the Condensed Consolidated Balance Sheet and the Condensed Consolidated Statement of Operations as of and for the three months ended March 31, 2018 for the adoption of ASC 606. The Company's Condensed Consolidated Statement of Cash Flows was not impacted due to the adoption of ASC 606 for the three months ended March 31, 2018.

Balance Sheet	March 31, 2018		
	As Reported	Balances Without Adoption of ASC 606	Effect of Change
	(in millions)		
<u>Assets</u>			
Accounts Receivable	\$ 179.3	\$ 178.6	\$ 0.7
<u>Liabilities</u>			
Deferred Revenue	24.2	23.5	0.7

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<u>Statement of Operations</u>	Three Months Ended March 31, 2018		
	As Reported	Balances Without Adoption of ASC 606	Effect of Change
	(in millions)		
<u>Revenues</u>			
Net Sales	\$ 1,536.5	\$ 1,536.3	\$ 0.2
<u>Operating Costs and Expenses</u>			
Cost of materials and other	1,238.3	1,238.1	0.2

New Accounting Standards Issued But Not Yet Implemented

In February 2016, the FASB issued ASU No. 2016-02, "Leases" ("ASU 2016-02"), creating a new topic, FASB ASC Topic 842, "Leases," which supersedes lease requirements in FASB ASC Topic 840, "Leases." The new standard revises accounting for operating leases by a lessee, among other changes, and requires a lessee to recognize a liability related to future lease payments and an asset representing its right to use the underlying asset for the lease term in the balance sheet. Quantitative and qualitative disclosures, including disclosures regarding significant judgments made by management, will be required. 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 the modified retrospective application method and allows for certain practical expedients. The Company expects its assessment and implementation plan to be ongoing during 2018 and is currently unable to reasonably estimate the impact of adopting the new lease standard on its consolidated financial statements and related disclosures. The Company currently believes the most significant change will relate to the recognition of right-of-use assets and leases liability on the balance sheet for existing long-term operating leases, the majority of which are railcar leases, and the potential recognition for agreements that do not currently meet the definition of a lease under ASC Topic 840, which will require an evaluation of the Company's unconditional purchase obligations primarily related to petroleum transportation and storage service agreements. The impact of the new standard on right-of-use assets, leases liability and related disclosures resulting from adoption of the new standard could be material.

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(3) Revenue

The following table presents the Company's revenue disaggregated by major product. The table includes a reconciliation of the disaggregated revenue with the reportable segments.

Major Product	Three Months Ended March 31, 2018			
	Petroleum	Nitrogen Fertilizer	Other / Eliminations	Consolidated
	(in millions)			
Gasoline	\$ 711.7	\$ —	\$ —	\$ 711.7
Distillates	652.2	—	—	652.2
Ammonia	—	11.6	—	11.6
UAN	—	52.8	—	52.8
Urea products	—	4.9	—	4.9
Freight revenue	5.5	8.7	—	14.2
Other (a)	87.3	1.9	(1.6)	87.6
Revenue from product sales	1,456.7	79.9	(1.6)	1,535.0
Other revenue (b)	1.5	—	—	1.5
Total revenue	\$ 1,458.2	\$ 79.9	\$ (1.6)	\$ 1,536.5

(a) Other product sales primarily include crude oil, feedstocks and asphalt sales attributable to the petroleum segment and nitric acid and carbon dioxide sales attributable to the nitrogen fertilizer segment.

(b) Other revenue consists primarily of Cushing, OK storage tank lease revenue.

Petroleum

The petroleum segment's revenue from product sales is recorded upon delivery of the products to customers, which is the point at which title is transferred and the customer has assumed the risk of loss. This generally takes place as product passes into the pipeline, as a product transfer order occurs within a pipeline system, or as product enters equipment or locations supplied or designated by the customer. The petroleum segment has elected to apply the sales tax practical expedient, whereby qualifying excise and other taxes collected from customers and remitted to governmental authorities are not included in reported revenues.

Many of the petroleum segment's contracts have index-based pricing which is considered variable consideration that should be estimated in determining the transaction price. The petroleum segment determined that it does not need to estimate the variable consideration because the uncertainty related to the consideration is resolved on the pricing date or the date when the product is delivered.

The petroleum segment may incur broker commissions or transportation costs prior to product transfer on some of its sales. The petroleum segment has elected to apply the practical expedient allowing it to expense the broker costs since the contract durations are less than a year in length. Transportation costs are accounted for as fulfillment costs and are expensed as incurred since they do not meet the requirement for capitalization.

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The petroleum segment's contracts with its customers state the terms of the sale, including the description, quantity, and price of each product sold. Depending on the product sold, payment from customers is generally due in full within 2 to 32 days of product delivery or invoice date. The petroleum segment's contracts with customers commonly include a provision which states that the Company will accept customer returns of off-spec product, refund the customer (or provide on-spec product), and pay for damages to any customer equipment which resulted from the off-spec product. Typically, if the customer is not satisfied with the product, the price is adjusted downward instead of the product being returned or exchanged. The petroleum segment has determined that product returns or refunds are very rare and will account for them as they occur. The petroleum segment generally provides no warranty other than the implicit promise that goods delivered are free of liens and encumbrances and meet the agreed upon specification.

Freight revenue recognized by the petroleum segment is primarily tariff and line loss charges rebilled to customers to reimburse the petroleum segment for expenses incurred from a pipeline operator. An offsetting expense is included in cost of materials and other.

Nitrogen Fertilizer

The nitrogen fertilizer segment sells its products on a wholesale basis under a contract or by purchase order. The nitrogen fertilizer segment's contracts with customers, including purchase orders, generally contain fixed pricing and most have terms of less than one year. The nitrogen fertilizer segment recognizes revenue at the point in time at which the customer obtains control of the product, which is generally upon delivery and acceptance by the customer. The customer acceptance point is stated in the contract and may be at one of the nitrogen fertilizer segment's manufacturing facilities, at one of the nitrogen fertilizer segment's off-site loading facilities, or at the customer's designated facility. Freight revenue recognized by the nitrogen fertilizer segment represents the pass-through finished goods delivery costs incurred prior to customer acceptance and is reimbursed by customers. An offsetting expense is included in cost of materials and other. Qualifying taxes collected from customers and remitted to governmental authorities are not included in reported revenues.

Depending on the product sold and the type of contract, payments from customers are generally either due prior to delivery or within 15 to 30 days of product delivery.

The nitrogen fertilizer segment generally provides no warranty other than the implicit promise that goods delivered are free of liens and encumbrances and meet the agreed upon specifications. Product returns are rare, and as such, the nitrogen fertilizer segment does not record a specific warranty reserve or consider activities related to such warranty, if any, to be a separate performance obligation.

The nitrogen fertilizer segment has an immaterial amount of variable consideration for contracts with an original duration of less than a year. A small portion of the nitrogen fertilizer partnership's revenue includes contracts extending beyond one year, some of which contain variable pricing in which the majority of the variability is attributed to the market-based pricing. The nitrogen fertilizer segment's contracts do not contain a significant financing component.

The nitrogen fertilizer segment has certain fee-based revenue, included in other revenue in the table above, that is recognized based on the net amount of the proceeds received, consistent with prior accounting practice.

Transaction price allocated to remaining performance obligations

As of March 31, 2018, the Nitrogen Fertilizer Partnership had approximately \$13.3 million of remaining performance obligations for contracts with an original expected duration of more than one year. The Nitrogen Fertilizer Partnership expects to recognize approximately 64% of these performance obligations as revenue by the end of 2019, an additional 22% by 2020 and the remaining balance thereafter. The Nitrogen Fertilizer Partnership has elected to not disclose the amount of transaction price allocated to remaining performance obligations for contracts with an original expected duration of less than one year. The Nitrogen Fertilizer Partnership has elected to not disclose variable consideration allocated to wholly unsatisfied performance obligations that are based on market prices that have not yet been determined.

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Contract balances

The Nitrogen Fertilizer Partnership's deferred revenue is a contract liability that primarily relates to fertilizer sales contracts requiring customer prepayment prior to product delivery to guarantee a price and supply of nitrogen fertilizer. Deferred revenue is recorded at the point in time in which a prepaid contract is legally enforceable and the associated right to consideration is unconditional prior to transferring product to the customer. An associated receivable is recorded for uncollected prepaid contract amounts. Contracts requiring prepayment are generally short-term in nature and, as discussed above, revenue is recognized at the point in time in which the customer obtains control of the product.

A summary of the deferred revenue activity during the three months ended March 31, 2018 is presented below:

	Three Months Ended March 31, 2018
	(in millions)
Balance at January 1, 2018	\$ 34.2
Add:	
New prepay contracts entered into during the period	3.4
Less:	
Revenue recognized that was included in the contract liability balance at the beginning of the period	11.6
Revenue recognized related to contracts entered into during the period	1.7
Other changes	0.1
Balance at March 31, 2018	\$ 24.2

(4) Share-Based Compensation

Long-Term Incentive Plan – CVR Energy

CVR has a Long-Term Incentive Plan ("LTIP") that permits the grant of options, stock appreciation rights ("SARs"), 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 March 31, 2018, 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. 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.

Performance Unit Awards

In December 2016, the Company entered into a performance unit award agreement (the "2016 Performance Unit Award Agreement") with Jack Lipinski, the Company's then Chief Executive Officer and President. Compensation cost for the 2016 Performance Unit Award Agreement of \$1.8 million was recognized over the performance cycle from January 1, 2017 to December 31, 2017. As of December 31, 2017, the Company had an outstanding liability of \$1.8 million related to the 2016 Performance Unit Award Agreement. During the three months ended March 31, 2018, \$1.8 million was paid by the Company related to the 2016 Performance Unit Award Agreement.

In November 2017, the Company entered into a performance unit agreement (the "2017 Performance Unit Agreement") with David Lamp, the Company's current Chief Executive Officer and President. Compensation cost for the 2017 Performance Unit Agreement will be recognized over the performance cycle from January 1, 2018 to December 31, 2018. The performance unit award of 1,500 performance units under the 2017 Performance Unit 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, and both the performance factor and performance objective(s) will be determined by CVR Energy's compensation committee. 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, 2019. Total compensation expense for the three months

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ended March 31, 2018 was approximately \$0.4 million. As of March 31, 2018, the Company had a liability of \$0.4 million for the performance unit award, which is recorded in personnel accruals on the Condensed Consolidated Balance Sheets.

In November 2017, the Company entered into a performance unit award agreement (the "2017 Performance Unit Award Agreement") with Mr. Lamp. The performance unit award represents the right to receive upon vesting, a cash payment equal to \$10.0 million if the average closing price of CVR Energy's common stock over the 30-trading day period from January 4, 2022 to February 15, 2022 is equal to or greater than \$60 per share. At March 31, 2018, there was approximately \$9.4 million of total unrecognized compensation cost related to the 2017 Performance Unit Award Agreement to be recognized over a period of 3.8 years. Total compensation expense for the three months ended March 31, 2018 was approximately \$0.6 million. As of March 31, 2018, the Company had a liability of \$0.6 million for the performance unit award, which is recorded in personnel accruals on the Condensed Consolidated Balance Sheets.

Long-Term Incentive Plan – CVR Partners

CVR Partners has a long-term incentive plan ("CVR Partners LTIP") that 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. Individuals eligible to receive awards pursuant to the CVR Partners LTIP include (i) employees of the Nitrogen Fertilizer Partnership and its subsidiaries, (ii) employees of its general partner, (iii) members of its board of directors of the general partner, and (iv) certain employees, consultants and directors of CVR Energy who perform services for the benefit of the Nitrogen Fertilizer Partnership.

Through the CVR Partners LTIP, phantom and common units have been awarded to employees of both CVR Partners and its general partner. Phantom unit awards made to employees of its general partner are considered non-employee equity based-awards. Awards to employees of CVR Partners and employees of the general partner vest over a three-year period. The maximum number of common units issuable under the CVR Partners LTIP is 5,000,000. As of March 31, 2018, there were 4,820,215 common units available for issuance under the CVR Partners LTIP. As all phantom unit awards discussed below are cash settled awards, they do not reduce the number of common units available for issuance.

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. The phantom unit awards are generally graded-vesting awards, which are expected to vest over three years with one-third of each award vesting each year. Compensation expense is recognized on a straight-line basis over the vesting period of the respective tranche of the award.

A summary of the phantom unit activity and changes under the CVR Partners LTIP during the three months ended March 31, 2018 is presented below:

	Phantom Units	Weighted-Average Grant-Date Fair Value
Non-vested at December 31, 2017	1,188,206	\$ 4.35
Granted	18,262	3.29
Vested	—	—
Forfeited	(23,320)	4.26
Non-vested at March 31, 2018	1,183,148	\$ 4.34

As of March 31, 2018, unrecognized compensation expense associated with the unvested phantom units was approximately \$2.4 million and is expected to be recognized over a weighted-average period of 1.5 years. Compensation expense recorded for the three months ended March 31, 2018 and 2017 related to the awards under the CVR Partners LTIP was approximately \$0.4 million and \$0.3 million, respectively.

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As of March 31, 2018 and December 31, 2017, CVR Partners had liabilities of \$1.1 million and \$0.7 million, respectively, for cash settled non-vested phantom unit awards and associated distribution equivalent rights, which are recorded in personnel accruals on the Condensed Consolidated Balance Sheets.

Long-Term Incentive Plan – CVR Refining

CVR Refining has a long-term incentive plan ("CVR Refining LTIP") that 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. Individuals who are eligible to receive awards under the CVR Refining, LP Long-Term Incentive Plan (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 Coffeyville Resources, LLC ("CRLLC") and CVR Energy who perform services for the benefit of the Refining Partnership.

Awards of phantom units and distribution equivalent rights have been 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 each 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 three months ended March 31, 2018 is presented below:

	Phantom Units	Weighted-Average Grant-Date Fair Value
Non-vested at December 31, 2017	986,480	\$ 12.03
Granted	6,658	15.02
Vested	—	—
Forfeited	(7,835)	12.37
Non-vested at March 31, 2018	985,303	\$ 12.05

As of March 31, 2018, there was approximately \$8.7 million of total unrecognized compensation cost related to the awards under the CVR Refining LTIP to be recognized over a weighted-average period of 1.4 years. Total compensation expense recorded for the three months ended March 31, 2018 and 2017 related to the awards under the CVR Refining LTIP was approximately \$0.8 million and \$1.0 million, respectively.

As of March 31, 2018 and December 31, 2017, the Refining Partnership had liabilities of approximately \$4.6 million and \$3.7 million, respectively, for non-vested phantom unit awards and associated distribution equivalent rights, which are recorded in personnel accruals on the Condensed Consolidated Balance Sheets.

Incentive Unit Awards

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 each 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

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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 incentive unit activity and changes during the three months ended March 31, 2018 is presented below:

	Incentive Units	Weighted-Average Grant- Date Fair Value
Non-vested at December 31, 2017	779,261	\$ 12.14
Granted	—	—
Vested	(1,445)	13.65
Forfeited	(38,569)	11.63
Non-vested at March 31, 2018	739,247	\$ 12.18

As of March 31, 2018, there was approximately \$4.0 million of total unrecognized compensation cost related to incentive unit awards to be recognized over a weighted-average period of approximately 1.4 years. Total compensation expense (benefit) for the three months ended March 31, 2018 and 2017 related to the awards was approximately \$(0.7) million and \$1.2 million, respectively.

As of March 31, 2018 and December 31, 2017, the Company had liabilities of approximately \$2.5 million and \$3.3 million, respectively, for non-vested incentive units and associated distribution equivalent rights, which are recorded in personnel accruals on the Condensed Consolidated Balance Sheets.

(5) Inventories

Inventories consisted of the following:

	March 31, 2018	December 31, 2017
	(in millions)	
Finished goods	\$ 177.5	\$ 172.0
Raw materials and precious metals	133.6	113.8
In-process inventories	36.3	22.4
Parts and supplies	77.0	77.0
Total Inventories	\$ 424.4	\$ 385.2

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(6) Property, Plant and Equipment

Property, plant and equipment consisted of the following:

	March 31, 2018	December 31, 2017
	(in millions)	
Land and improvements	\$ 47.4	\$ 47.4
Buildings	83.9	83.3
Machinery and equipment	3,741.4	3,733.8
Automotive equipment	24.8	24.7
Furniture and fixtures	33.0	32.4
Leasehold improvements	4.6	4.6
Aircraft	3.6	3.6
Railcars	16.8	16.8
Construction in progress	64.7	56.2
	<u>4,020.2</u>	<u>4,002.8</u>
Less: Accumulated depreciation	1,482.6	1,431.0
Total property, plant and equipment, net	<u>\$ 2,537.6</u>	<u>\$ 2,571.8</u>

Capitalized interest recognized as a reduction in interest expense for the three months ended March 31, 2018 and 2017 totaled approximately \$0.5 million and \$0.3 million, respectively. Land, buildings and equipment that are under a capital lease obligation had an original carrying value of approximately \$24.8 million at both March 31, 2018 and December 31, 2017. Amortization of assets held under capital leases is included in depreciation expense.

(7) Equity Method Investments**VPP Joint Venture**

On September 19, 2016, Coffeyville Resources Pipeline, LLC ("CRPLLC"), an indirect wholly-owned subsidiary of the Refining Partnership, entered into an agreement with Velocity Central Oklahoma Pipeline LLC ("Velocity") related to their joint ownership of Velocity Pipeline Partners, LLC ("VPP"), which is a pipeline company that operates a 12-inch crude oil pipeline with a capacity of 65,000 barrels per day and 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. Velocity holds a 60% interest in VPP and serves as the day-to-day operator of VPP. As of both March 31, 2018 and December 31, 2017, the carrying value of CRPLLC's investment in VPP was \$6.1 million, which is recorded in equity method investments in affiliates on the Condensed Consolidated Balance Sheets. Contribution by CRPLLC to VPP during the pipeline construction totaled \$7.0 million, of which \$1.4 million was contributed during 2017.

The pipeline commenced operations in April 2017 following completion of construction. Equity income from VPP for the three months ended March 31, 2018 was \$0.4 million, which is recorded in other income, net on the Condensed Consolidated Statements of Operations. For the three months ended March 31, 2018, the Refining Partnership received cash distributions of \$0.4 million from VPP.

Coffeyville Resources Refining & Marketing, LLC ("CRRM") is party to a transportation agreement with VPP for an initial term of 20 years under which VPP provides CRRM with crude oil transportation services for crude oil shipped within a defined geographic area, and CRRM entered into a terminalling services agreement with Velocity under which it receives access to Velocity's terminal in Lowrance, Oklahoma to unload and pump crude oil into VPP's pipeline for an initial term of 20 years. For the three months ended March 31, 2018, CRRM incurred costs of \$1.5 million under the transportation agreement with VPP. CRRM's crude shipments on the pipeline for the three months ended March 31, 2018 averaged approximately 41,000 bpd. As of March 31, 2018 and December 31, 2017, the Condensed Consolidated Balance Sheets included a liability of \$0.5 million and \$0.3 million, respectively, to VPP.

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Midway Joint Venture

On October 31, 2017, subsidiaries of CVR Refining and Plains All American Pipeline, L.P. ("Plains") formed a 50/50 joint venture, Midway Pipeline LLC ("Midway"), which acquired the approximately 100-mile, 16-inch Cushing to Broome pipeline system from Plains. The Cushing to Broome pipeline system connects CVR Refining's Coffeyville, Kansas refinery to the Cushing, Oklahoma oil hub. Midway has a contract with Plains pursuant to which Plains will continue its role as operator of the pipeline. In November 2017, CVR Refining contributed \$76.0 million to Midway. During the three months ended March 31, 2018, CVR Refining recognized equity income from Midway of \$1.1 million, which is recorded in other income, net on the Condensed Consolidated Statements of Operations. For the three months ended March 31, 2018, the Refining Partnership received a cash distribution of \$0.5 million from Midway. As of March 31, 2018 and December 31, 2017, the carrying value of CVR Refining's investment in Midway was \$77.3 million and \$76.7 million, respectively, which is recorded in equity method investments in affiliates on the Condensed Consolidated Balance Sheets.

For the three months ended March 31, 2018, CVR Refining incurred costs of \$3.1 million with Midway for crude oil transportation services. Crude shipments on the pipeline for the three months ended March 31, 2018 averaged approximately 73,000 barrels per day.

(8) Income Taxes

CVR is a member of the consolidated federal tax group of American Entertainment Properties Corporation ("AEPC"), an affiliate of IEP, and is party to 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 March 31, 2018, the Company's Condensed Consolidated Balance Sheet reflected a payable of \$14.3 million for federal income taxes due to AEPC. During the three months ended March 31, 2018 and 2017, no payments were made to AEPC under the Tax Allocation Agreement.

The Company recognizes liabilities, interest and penalties for potential tax issues based on its estimate of whether, and the extent to which, additional taxes may be due as determined under FASB ASC Topic 740 — *Income Taxes*. As of March 31, 2018, the Company had unrecognized tax benefits of approximately \$28.7 million, of which \$22.7 million, if recognized, would impact the Company's effective tax rate. Approximately \$25.8 million of unrecognized tax benefits were netted with deferred tax asset carryforwards. The remaining unrecognized tax benefits are included in other long-term liabilities in the Condensed Consolidated Balance Sheets. The Company has accrued interest of \$1.1 million related to uncertain tax positions. The Company's accounting policy with respect to interest and penalties related to tax uncertainties is to classify these amounts as income taxes.

The Company's effective tax rate for the three months ended March 31, 2018 and 2017 was 16.7% and 27.9%, respectively, as compared to the Company's combined federal and state expected statutory tax rate of 26.1% and 39.3% for each of the three months ended March 31, 2018 and 2017, respectively. The Company's effective tax rate for the three months ended March 31, 2018 and 2017 varies from the statutory rate primarily due to the reduction of income subject to tax associated with the noncontrolling ownership interests of CVR Refining's and CVR Partners' earnings (loss) and state income tax credits. The effective tax rate for the three months ended March 31, 2018 varies from the three months ended March 31, 2017 due to the reduction of the federal income tax rate from 35% to 21% as a result of the Tax Cuts and Jobs Act legislation that was signed into law in December 2017.

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(9) Long-Term Debt

Long-term debt consisted of the following:

	March 31, 2018	December 31, 2017
	(in millions)	
6.5% Senior Notes due 2022	\$ 500.0	\$ 500.0
9.25% Senior Secured Notes due 2023	645.0	645.0
6.5% Senior Notes due 2021	2.2	2.2
Capital lease obligations	44.5	45.0
Total debt	1,191.7	1,192.2
Unamortized debt issuance cost	(11.7)	(12.2)
Unamortized debt discount	(13.0)	(13.5)
Current portion of capital lease obligations	(2.2)	(2.1)
Long-term debt, net of current portion	\$ 1,164.8	\$ 1,164.4

2022 Senior Notes

On October 23, 2012, CVR Refining, LLC ("Refining LLC") and Coffeyville Finance Inc. ("Coffeyville Finance") issued \$500.0 million aggregate principal amount of the 6.5% Second Lien Senior Notes due 2022 (the "2022 Notes"). 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 March 31, 2018, the 2022 Notes had an aggregate principal balance and a net carrying value of \$500.0 million.

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 its 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 its 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 Financial Services LLC and Moody's Investors Service, 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 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 March 31, 2018, and the ratio was satisfied (not less than 2.5 to 1.0).

At March 31, 2018, the estimated fair value of the 2022 Notes was approximately \$510.0 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.

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Amended and Restated Asset Based (ABL) Credit Facility

On November 14, 2017, CRLLC, CVR Refining, Refining LLC and each of the operating subsidiaries of Refining LLC (collectively, the "Credit Parties") entered into Amendment No. 1 to the Amended and Restated ABL Credit Agreement (the "Amendment") with a group of lenders and Wells Fargo Bank, National Association ("Wells Fargo"), as administrative agent and collateral agent. The Amendment amends certain provisions of the Amended and Restated ABL Credit Agreement, dated December 20, 2012, by and among Wells Fargo, the group of lenders party thereto and the Credit Parties (the "Existing Credit Agreement" and as amended by the Amendment, the "Amended and Restated ABL Credit Facility"), which was otherwise scheduled to mature on December 20, 2017. The Amended and Restated ABL Credit Facility is scheduled to mature on November 14, 2022.

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 \$60.0 million and \$40.0 million, respectively. 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 exceeds 15% of the lesser of the borrowing base and the total commitments and (iii) the fixed charge coverage ratio for the immediately preceding twelve-month period shall be equal to or greater than 1.00 to 1.00. The Amended and Restated ABL Credit Facility has a five-year maturity and may 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 London Interbank Offered Rate ("LIBOR") plus an applicable margin. The applicable margin is (i) (a) 1.50% for LIBOR borrowings and (b) 0.50% 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) 1.75% for LIBOR borrowings and (b) 0.75% 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) 0.375% 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) 0.25% 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 Credit Parties are 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 lenders under the Amended and Restated ABL Credit Facility were granted a perfected, first priority security interest (subject to certain customary exceptions) in the ABL Priority Collateral (as defined in the ABL Intercreditor Agreement) and a second priority lien (subject to certain customary exceptions) and security interest in the Note Priority Collateral (as defined in the ABL Intercreditor Agreement).

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, 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 under the facility. The Credit Parties were in compliance with the covenants of the Amended and Restated ABL Credit Facility as of March 31, 2018.

As of March 31, 2018, the Refining Partnership had availability under the Amended and Restated ABL Credit Facility of \$297.9 million and had letters of credit outstanding of approximately \$6.4 million. There were no borrowings outstanding under the Amended and Restated ABL Credit Facility as of March 31, 2018. Availability under the Amended and Restated ABL Credit Facility was limited by borrowing base conditions as of March 31, 2018.

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2023 Senior Notes

On June 10, 2016, CVR Partners and CVR Nitrogen Finance Corporation ("CVR Nitrogen Finance"), an indirect wholly-owned subsidiary of CVR Partners, 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 9.250% 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. 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. 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 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.

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 its 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 its unitholders, up to an aggregate \$75.0 million basket plus certain other amounts referred to as "incremental funds" under the indenture. As of March 31, 2018, the ratio was less than 1.75 to 1.0. Restricted payments have been made, and \$72.7 million of the basket was available as of March 31, 2018. As of March 31, 2018, the Nitrogen Fertilizer Partnership was in compliance with the covenants contained in the 2023 Notes.

Included in other current liabilities on the Condensed Consolidated Balance Sheets is accrued interest payable totaling approximately \$17.6 million and \$2.7 million, respectively, as of March 31, 2018 and December 31, 2017 related to the 2023 Notes. At March 31, 2018 and December 31, 2017, respectively, the estimated fair value of the 2023 Notes was approximately \$686.7 million and \$694.2 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.

Asset Based (ABL) Credit Facility

On September 30, 2016, the Nitrogen Fertilizer Partnership entered into a senior secured asset based revolving credit facility (the "ABL Credit Facility") with a group of lenders and UBS AG, Stamford Branch, as administrative agent and collateral agent. 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 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 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) 2.00% 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 borrowers must also pay a commitment fee on the unutilized commitments and also pay customary letter of credit fees.

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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 March 31, 2018.

As of March 31, 2018, the Nitrogen Fertilizer Partnership and its subsidiaries had availability under the ABL Credit Facility of \$49.2 million. There were no borrowings outstanding under the ABL Credit Facility as of March 31, 2018.

Capital Lease Obligations

CVR Refining maintains two leases, accounted for as a capital lease and a financial obligation, related to Magellan Pipeline Terminals, L.P. ("Magellan Pipeline") and Excel Pipeline LLC ("Excel Pipeline"). The underlying assets and related depreciation are included in property, plant and equipment, net of accumulated depreciation on the Condensed Consolidated Balance Sheets. 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 139 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 a lease term with 138 months remaining and will expire in September 2029.

(10) Earnings Per Share

Basic and diluted earnings per share are computed by dividing net income attributable to CVR stockholders by the weighted-average number of shares of common stock outstanding. The components of the basic and diluted earnings per share calculation are as follows:

	Three Months Ended March 31,	
	2018	2017
	(in millions, except per share data)	
Net income attributable to CVR Energy stockholders	\$ 66.2	\$ 22.2
Weighted-average shares of common stock outstanding - Basic and diluted	86.8	86.8
Basic and diluted earnings per share	\$ 0.76	\$ 0.26

There were no dilutive awards outstanding during the three months ended March 31, 2018 and 2017, as all unvested awards under the LTIP were liability-classified awards. See Note 4 ("Share-Based Compensation").

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(11) Commitments and Contingencies***Leases and Unconditional Purchase Obligations***

The minimum required payments for CVR's operating lease agreements and unconditional purchase obligations are as follows:

	Operating Leases	Unconditional Purchase Obligations ⁽¹⁾
	(in millions)	
Nine Months Ending December 31, 2018	\$ 5.9	\$ 117.2
Year Ending December 31,		
2019	7.0	125.1
2020	6.4	99.7
2021	5.8	88.7
2022	5.4	84.2
Thereafter	3.7	538.8
	\$ 34.2	\$ 1,053.7

(1) This amount includes approximately \$678.9 million payable ratably over 13 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 March 31, 2018, 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 20 years on TransCanada's Keystone pipeline system.

CVR leases equipment, including railcars and real properties, under long-term operating leases expiring at various dates through 2035. For the three months ended March 31, 2018 and 2017, lease expense totaled approximately \$1.9 million and \$2.1 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 three months ended March 31, 2018 and 2017, total expense of approximately \$48.5 million and \$55.3 million, respectively, was incurred related to long-term commitments.

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 the expiration of any Renewal Term. The Vitol Agreement currently extends through December 31, 2018.

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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. There were no new proceedings or material developments in proceedings that CVR previously reported in its 2017 Form 10-K. 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 condensed 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.

The U.S. Attorney's office for the Southern District of New York contacted CVR Energy in September 2017 seeking production of information pertaining to CVR Refining's, CVR Energy's and Mr. Carl C. Icahn's activities relating to the Renewable Fuel Standard ("RFS") and Mr. Icahn's role as an advisor to the President. CVR Energy is cooperating with the request and is providing information in response to the subpoena. The U.S. Attorney's office has not made any claims or allegations against CVR Energy or Mr. Icahn. CVR Energy maintains a strong compliance program and, while no assurances can be made, CVR Energy does not believe this inquiry will have a material impact on its business, financial condition, results of operations or cash flows.

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.

Except as otherwise described below, there have been no new developments or material changes to the environmental accruals or expected capital expenditures related to compliance with the environmental matters from those provided in the 2017 Form 10-K. The Company believes the petroleum and nitrogen fertilizer businesses are in material compliance with existing EHS rules and regulations. There can be no assurance that the EHS matters described or referenced herein or other EHS matters which may develop in the future will not have a material adverse effect on the Company's business, financial condition or results of operations.

At March 31, 2018, the Company's Condensed Consolidated Balance Sheets included total environmental accruals of \$3.6 million, as compared to \$3.9 million at December 31, 2017. 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.

Environmental expenditures are capitalized when such expenditures are expected to result in future economic benefits. For both the three months ended March 31, 2018 and 2017, capital expenditures were approximately \$4.7 million. These expenditures were incurred for environmental compliance and efficiency of the operations.

Renewable Fuel Standards

The petroleum business is subject to the 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. 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.

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The price of RINs has been extremely volatile over the last year. 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.

The net cost of RINs for the three months ended March 31, 2018 and 2017 was a negative \$22.7 million and a negative \$6.4 million, respectively. The net costs of RINs was a reduction to cost of materials and other in the Condensed Consolidated Statements of Operations. RINs expense includes the purchased cost of RINs, the impact of recognizing the petroleum business' uncommitted biofuel blending obligation at fair value based on market prices at each reporting date and is reduced by the valuation change of RINs purchases in excess of the petroleum business' RFS obligation as of the reporting date. During the three months ended March 31, 2018, the net cost of RINs was favorably impacted by a reduction in the petroleum business' RFS obligation and reduced market pricing. As of March 31, 2018 and December 31, 2017, the petroleum business' biofuel blending obligation was approximately \$21.4 million and \$28.3 million, respectively, which was recorded in other current liabilities on the Condensed Consolidated Balance Sheets. As of March 31, 2018, the petroleum business recorded a RINs asset within prepaid and other current assets in the Condensed Consolidated Balance Sheet of \$59.9 million, representing excess RINs primarily due to a reduction in its RFS obligation.

Affiliate Pension Obligations

Mr. Carl C. 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 March 31, 2018 and December 31, 2017. If the ACF and Federal-Mogul plans were voluntarily terminated, they would be collectively underfunded by approximately \$417.1 million and \$423.7 million as of March 31, 2018 and December 31, 2017, 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 condensed consolidated financial statements.

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(12) Fair Value Measurements

In accordance with FASB ASC Topic 820 — *Fair Value Measurements and Disclosures* ("ASC 820"), the Company utilizes the market approach to measure fair value for its financial assets and liabilities. The market approach uses prices and other relevant information generated by market transactions involving identical or comparable assets, liabilities or a group of assets or liabilities, such as a business.

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 or 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 tables set forth the assets and liabilities measured at fair value on a recurring basis, by input level, as of March 31, 2018 and December 31, 2017:

<u>Location and Description</u>	March 31, 2018			
	Level 1	Level 2	Level 3	Total
	(in millions)			
Cash equivalents	\$ 15.3	\$ —	\$ —	\$ 15.3
Other current assets (investments)	0.1	—	—	0.1
Other current assets (commodity derivatives)	—	3.1	—	3.1
Total Assets	<u>\$ 15.4</u>	<u>\$ 3.1</u>	<u>\$ —</u>	<u>\$ 18.5</u>
Other current liabilities (commodity derivatives)	\$ —	\$ (21.8)	\$ —	\$ (21.8)
Other current liabilities (biofuel blending obligation)	—	(19.5)	—	(19.5)
Total Liabilities	<u>\$ —</u>	<u>\$ (41.3)</u>	<u>\$ —</u>	<u>\$ (41.3)</u>

<u>Location and Description</u>	December 31, 2017			
	Level 1	Level 2	Level 3	Total
	(in millions)			
Cash equivalents	\$ 15.2	\$ —	\$ —	\$ 15.2
Other current assets (investments)	0.1	—	—	0.1
Total Assets	<u>\$ 15.3</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 15.3</u>
Other current liabilities (commodity derivatives)	\$ —	\$ (64.3)	\$ —	\$ (64.3)
Other long-term liabilities (biofuel blending obligation)	—	(1.0)	—	(1.0)
Total Liabilities	<u>\$ —</u>	<u>\$ (65.3)</u>	<u>\$ —</u>	<u>\$ (65.3)</u>

As of March 31, 2018 and December 31, 2017, 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 and the uncommitted biofuel blending obligation. Additionally, the fair value of the Company's debt issuances is disclosed in Note 9 ("Long-Term Debt").

The Refining Partnership's commodity derivative contracts and the uncommitted biofuel blending obligation, which use fair value measurements and are valued using broker quoted market prices of similar instruments, are considered Level 2 inputs. The Company had no transfers of assets and liabilities between any of the above levels during the three months ended March 31, 2018.

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(13) Derivative Financial Instruments

Current period settlements on derivative contracts and Gain on derivatives, net were as follows:

	Three Months Ended March 31,	
	2018	2017
	(in millions)	
Current period settlements on derivative contracts	\$ 13.7	\$ 1.2
Gain on derivatives, net	59.3	12.2

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.

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 under GAAP. 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 Condensed 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 Condensed Consolidated Balance Sheets. The maintenance margin balance is included within other current assets within the Condensed 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 Condensed Consolidated Balance Sheets. From time to time, the Refining Partnership may be required to deposit additional funds into this margin account. The fair value of the open commodity positions as of March 31, 2018 was a net loss of \$0.2 million included in other current liabilities. For the three months ended March 31, 2018 and 2017, the Refining Partnership recognized net losses of \$0.2 million and \$0.1 million, respectively, which are recorded in gain on derivatives, net in the Condensed Consolidated Statements of Operations.

Commodity Derivatives

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 Condensed Consolidated Balance Sheets with changes in fair value currently recognized in the Condensed 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 March 31, 2018, the Refining Partnership had open commodity swap instruments consisting of 1.7 million barrels of 2-1-1 crack spreads, 0.6 million barrels of distillate crack spreads and 0.6 million barrels of gasoline crack spreads. At December 31, 2017, the Refining Partnership had open commodity swap instruments consisting of 7.1 million barrels of 2-1-1 crack spreads, 3.6 million barrels of distillate crack spreads, and 3.6 million barrels of gasoline crack spreads. Additionally, as of March 31, 2018 and December 31, 2017, CVR Refining had open forward purchase and sale commitments for 4.2 million barrels and 5.8 million barrels, respectively, of Canadian crude oil priced at fixed differentials that are not considered probable of physical settlement and are accounted for as derivatives. The fair value of the outstanding commodity derivative contracts at March 31, 2018 was a net unrealized loss of \$18.5 million, of which \$3.1 million is included in other current assets and \$21.6 million is included in other current liabilities. The fair value of the outstanding contracts at December 31, 2017 was a net unrealized loss of \$64.3 million, of which the entire balance is recorded in other current liabilities. For the three months ended March 31, 2018 and 2017, the Refining Partnership recognized net gains of \$59.7 million and \$12.3 million, respectively, which are recorded in gain on derivatives, net in the Condensed Consolidated Statements of Operations.

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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 Condensed Consolidated Balance Sheets. As of March 31, 2018, the counterparty credit risk adjustment was not material to the condensed 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 swap 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 commodity swap derivative positions have been presented net in the Condensed Consolidated Balance Sheets. The tables below outline the gross amounts of the recognized assets and liabilities and the gross amounts offset in the Condensed Consolidated Balance Sheets for the various types of open derivative positions at the Refining Partnership.

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The offsetting assets and liabilities for the Refining Partnership's derivatives as of March 31, 2018 and December 31, 2017 are recorded as current assets and current liabilities in prepaid expenses and other current assets and accrued expenses and other current liabilities, respectively, in the Condensed Consolidated Balance Sheets as follows:

<u>Description</u>	As of March 31, 2018				
	Gross Current Assets	Gross Amounts Offset	Net Current Assets Presented	Cash Collateral Not Offset	Net Amount
	(in millions)				
Commodity Derivatives	\$ 8.0	\$ (4.9)	\$ 3.1	\$ —	\$ 3.1
Total	\$ 8.0	\$ (4.9)	\$ 3.1	\$ —	\$ 3.1

<u>Description</u>	As of March 31, 2018				
	Gross Current Liabilities	Gross Amounts Offset	Net Current Liabilities Presented	Cash Collateral Not Offset	Net Amount
	(in millions)				
Commodity Derivatives	\$ (26.7)	\$ 4.9	\$ (21.8)	\$ —	\$ (21.8)
Total	\$ (26.7)	\$ 4.9	\$ (21.8)	\$ —	\$ (21.8)

<u>Description</u>	As of December 31, 2017				
	Gross Current Assets	Gross Amounts Offset	Net Current Assets Presented	Cash Collateral Not Offset	Net Amount
	(in millions)				
Commodity Derivatives	\$ 7.0	\$ (7.0)	\$ —	\$ —	\$ —
Total	\$ 7.0	\$ (7.0)	\$ —	\$ —	\$ —

<u>Description</u>	As of December 31, 2017				
	Gross Current Liabilities	Gross Amounts Offset	Net Current Liabilities Presented	Cash Collateral Not Offset	Net Amount
	(in millions)				
Commodity Derivatives	\$ 71.3	\$ (7.0)	\$ 64.3	\$ —	\$ 64.3
Total	\$ 71.3	\$ (7.0)	\$ 64.3	\$ —	\$ 64.3

(14) Related Party Transactions

Icahn Enterprises

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 March 31, 2018, IEP and its affiliates owned approximately 82% of the Company's outstanding common shares.

On March 12, 2018, CVR Energy paid a cash dividend to the Company's stockholders of record at the close of business on March 5, 2018 for the fourth quarter of 2017 in the amount of \$0.50 per share, or \$43.4 million in the aggregate. IEP received \$35.6 million in respect of its common shares.

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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 8 ("Income Taxes") for a discussion of related party transactions under the Tax Allocation Agreement.

Insight Portfolio Group

Insight Portfolio Group LLC ("Insight Portfolio Group") 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 became a member of the buying group in 2012. In January 2013, CVR Energy acquired a minority equity interest in Insight Portfolio 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 and \$0.1 million for the three months ended March 31, 2018 and 2017, respectively. The Company may purchase a variety of goods and services as a member 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.

Railcar Lease Agreements and Maintenance

The Nitrogen Fertilizer Partnership has agreements that expire in 2023 to lease a total of 115 UAN railcars from ARI Leasing, LLC ("ARI"), a company controlled by IEP. In the second quarter of 2017, the Nitrogen Fertilizer Partnership entered into an agreement to lease an additional 70 UAN railcars from ARI which will expire in 2022. The Nitrogen Fertilizer Partnership received the additional 70 leased railcars during the second half of 2017. For the three months ended March 31, 2018 and 2017, rent expense of approximately \$0.4 million and \$0.2 million, respectively, was recorded in cost of materials and other in the Condensed Consolidated Statement of Operations related to these agreements.

American Railcar Industries, Inc., a company controlled by IEP, performed railcar maintenance for the Nitrogen Fertilizer Partnership and the expense associated with this maintenance was approximately \$0.2 million for the three months ended March 31, 2017 and was included in cost of materials and other in the Condensed Consolidated Statement of Operations. Expense associated with this maintenance was nominal for the three months ended March 31, 2018.

Joint Venture Agreements

The Refining Partnership holds a 40% and 50% interest in the VPP and Midway joint ventures, respectively. The joint ventures provide the Refining Partnership with crude oil transportation services. Refer to Note 7 ("Equity Method Investments") for additional discussion of the joint ventures.

(15) Business Segments

Operating segments are defined in FASB ASC Topic 280 - *Segment Reporting*, as components of an enterprise about which separate financial information is available and evaluated regularly by the chief operating decision maker, or decision-making group, in deciding how to allocate resources and in assessing performance. The Company measures segment profit as operating income for petroleum and nitrogen fertilizer, CVR's two reporting segments. All intercompany transactions are eliminated in the other segment as described below. All operations of the segments are located within the United States.

Petroleum

Principal products of the petroleum segment include gasoline, diesel fuel, jet fuel, natural gas liquids, asphalt and petroleum refining by-products, including petroleum coke, which are sold to retailers, petroleum jobbers, railroads and other refiners/marketers. The petroleum segment also sells hydrogen and petroleum coke to the nitrogen fertilizer segment pursuant to separate intercompany agreements. Intercompany sales included in petroleum net sales are eliminated in consolidation.

The petroleum segment may also purchase hydrogen from the nitrogen fertilizer segment under an intercompany feedstock and shared services agreement. Receipts of hydrogen from the nitrogen fertilizer segment are reported in petroleum cost of materials and other and are eliminated in consolidation.

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Nitrogen Fertilizer

The principal product of the nitrogen fertilizer segment is nitrogen fertilizer. Nitrogen fertilizer is used by farmers to improve the yield and quality of their crops, primarily corn and wheat. The nitrogen fertilizer segment principally produces UAN. The nitrogen fertilizer segment's product sales are sold on a wholesale basis in North America. Intercompany sales to the petroleum segment are primarily hydrogen sales pursuant to the feedstock and shared services agreement. The nitrogen fertilizer segment also receives income from subleasing railcars to the petroleum segment's refineries. All intercompany sales included in nitrogen fertilizer net sales are eliminated in consolidation.

As described above, the nitrogen fertilizer segment purchases hydrogen and petroleum coke from the petroleum segment. Receipts of hydrogen and petroleum coke from the petroleum segment are reported in nitrogen fertilizer cost of materials and other and are eliminated in consolidation.

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.

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The following table summarizes certain operating results and capital expenditures information by segment:

	Three Months Ended March 31,	
	2018	2017
(in millions)		
Net sales		
Petroleum	\$ 1,458.2	\$ 1,423.5
Nitrogen Fertilizer	79.9	85.3
Intersegment elimination	(1.6)	(1.7)
Total	<u>\$ 1,536.5</u>	<u>\$ 1,507.1</u>
Cost of materials and other		
Petroleum	\$ 1,217.7	\$ 1,201.3
Nitrogen Fertilizer	22.3	21.8
Intersegment elimination	(1.7)	(1.9)
Total	<u>\$ 1,238.3</u>	<u>\$ 1,221.2</u>
Direct operating expenses (exclusive of depreciation and amortization)		
Petroleum	\$ 93.0	\$ 102.1
Nitrogen Fertilizer	38.9	35.9
Other	—	0.1
Total	<u>\$ 131.9</u>	<u>\$ 138.1</u>
Depreciation and amortization		
Petroleum	\$ 33.7	\$ 34.1
Nitrogen Fertilizer	16.4	15.4
Other	1.8	1.6
Total	<u>\$ 51.9</u>	<u>\$ 51.1</u>
Operating income (loss)		
Petroleum	\$ 97.2	\$ 66.0
Nitrogen Fertilizer	(3.4)	5.3
Other	(3.3)	(3.7)
Total	<u>\$ 90.5</u>	<u>\$ 67.6</u>
Capital expenditures		
Petroleum	\$ 16.0	\$ 19.6
Nitrogen Fertilizer	2.7	4.1
Other	1.3	0.5
Total	<u>\$ 20.0</u>	<u>\$ 24.2</u>

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	<u>As of March 31, 2018</u>	<u>As of December 31, 2017</u>
	(in millions)	
Total assets		
Petroleum	\$ 2,295.3	\$ 2,269.9
Nitrogen Fertilizer	1,239.5	1,234.3
Other	288.5	302.5
Total	<u>\$ 3,823.3</u>	<u>\$ 3,806.7</u>
Goodwill		
Petroleum	\$ —	\$ —
Nitrogen Fertilizer	41.0	41.0
Other	—	—
Total	<u>\$ 41.0</u>	<u>\$ 41.0</u>

(16) Subsequent Events***Dividend***

On April 25, 2018, the board of directors of the Company declared a cash dividend for the first quarter of 2018 to the Company's stockholders of \$0.50 per share, or \$43.4 million in the aggregate. The dividend will be paid on May 14, 2018 to stockholders of record at the close of business on May 7, 2018. IEP will receive \$35.6 million in respect of its 82% ownership interest in the Company's shares.

Refining Partnership Distribution

On April 25, 2018, the board of directors of the Refining Partnership's general partner declared a cash distribution for the first quarter of 2018 to the Refining Partnership's unitholders of \$0.51 per common unit, or \$75.3 million in aggregate. The cash distribution will be paid on May 14, 2018 to unitholders of record at the close of business on May 7, 2018. The Company will receive \$49.6 million in respect of its Refining Partnership common units.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the unaudited condensed consolidated financial statements and related notes and with the statistical information and financial data appearing in this Report, as well as our 2017 Form 10-K. Results of operations and cash flows for the three months ended March 31, 2018 are not necessarily indicative of results to be attained for any other period.

Forward-Looking Statements

This Report, including, without limitation, the section captioned "Management's Discussion and Analysis of Financial Condition and Results of Operations", contains "forward-looking statements" as defined by the Securities and Exchange Commission ("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 Part I — Item 1A. "Risk Factors" in the 2017 Form 10-K, filed with the SEC on February 26, 2018. 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.

Company Overview

CVR Energy, Inc. ("CVR Energy," "CVR," "we," "us," "our" or the "Company") is 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. At March 31, 2018, we owned 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. As of March 31, 2018, Icahn Enterprises L.P. and its affiliates owned approximately 82% of our outstanding common stock.

We operate under two business segments: petroleum and nitrogen fertilizer, which are referred to in this document as our "petroleum business" and our "nitrogen fertilizer business," respectively.

Petroleum business. The petroleum business consists of our interest in the Refining Partnership. At March 31, 2018, we owned 100% of the general partner and approximately 66% of the common units of the Refining Partnership. The petroleum business consists of a 132,000 bpcd capacity complex full coking medium-sour crude oil refinery in Coffeyville, Kansas and a 74,500 bpcd capacity complex crude oil refinery in Wynnewood, Oklahoma capable of processing 20,000 bpcd of light sour crude oil (within its capacity of 74,500 bpcd). In addition, its supporting businesses include a (i) crude oil gathering system with a gathering capacity of over 110,000 bpd serving Kansas, Nebraska, Oklahoma, Missouri, Colorado and Texas, (ii) a 170,000 bpd pipeline system, which transports crude oil to the Coffeyville refinery from our Broome Station facility located near Caney, Kansas, which is supported by approximately 570 miles of active owned, leased and joint venture pipelines, (iii) approximately 6.4 million barrels of owned and leased crude oil storage, (iv) a rack marketing business supplying refined petroleum product through tanker trucks directly to customers located in close geographic proximity to Coffeyville, Kansas and Wynnewood, Oklahoma and at throughput terminals on Magellan and NuStar refined petroleum products distribution systems, and (v) over 4.6 million barrels of combined refined products and feedstocks storage capacity.

The Coffeyville refinery is situated approximately 100 miles northeast of Cushing, Oklahoma ("Cushing"), a major crude oil trading and storage hub. The Wynnewood refinery is located approximately 130 miles southwest of Cushing. Cushing is supplied by numerous pipelines from U.S. domestic locations and Canada. In addition to rack sales (sales which are made at terminals into third-party tanker trucks or railcars), Coffeyville makes bulk sales (sales through third-party pipelines) into the mid-continent markets and other destinations utilizing the product pipeline networks owned by Magellan, Enterprise, and NuStar.

Crude oil is supplied to the Coffeyville refinery through the wholly-owned gathering system and by owned, leased and joint venture pipelines. The petroleum business maintains capacity on the Keystone and Spearhead pipelines from Canada to Cushing. It also has contracted capacity on the Pony Express and White Cliffs pipelines, which originate in Colorado and extend to Cushing. It also maintains leased and owned storage in Cushing to facilitate optimal crude oil purchasing and blending. Crude oil is supplied to the Wynnewood refinery through third-party pipelines operated by Sunoco Pipeline, Excel Pipeline and Blueknight Pipeline and, beginning in April 2017, through the VPP joint venture pipeline. Historically, the crude has been sourced from Texas and Oklahoma. The access to a variety of crude oils coupled with the complexity of the refineries typically allows the petroleum business to purchase crude oil at a discount to WTI. The consumed crude oil cost discount to WTI for the first quarter of 2018 was a premium of \$1.15 per barrel compared to a discount of \$0.77 per barrel in the first quarter of 2017.

Nitrogen fertilizer business. The nitrogen fertilizer business consists of our interest in the Nitrogen Fertilizer Partnership. As of March 31, 2018, we owned 100% of the general partner and approximately 34% of the common units of the Nitrogen Fertilizer Partnership. The nitrogen fertilizer business consists of two nitrogen fertilizer manufacturing facilities which are located in Coffeyville, Kansas and East Dubuque, Illinois. The Coffeyville Fertilizer Facility utilizes a petroleum coke, or pet coke, gasification process to produce nitrogen fertilizer, and the East Dubuque Facility uses natural gas to produce nitrogen fertilizer. 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 gasifier is a dual-train facility, with each gasifier able to function independently of the other, thereby providing redundancy and improving reliability. Strategically located adjacent to CVR Refining's refinery in Coffeyville, Kansas, the Coffeyville Fertilizer Facility is the only operation in North America that utilizes a pet coke gasification process to produce nitrogen fertilizer. During the past five years, over 70% of the pet coke consumed by the Coffeyville Fertilizer Facility was produced and supplied by CVR Refining's Coffeyville, Kansas crude oil refinery.

The Coffeyville Fertilizer Facility upgrades substantially all of the ammonia it produces to higher margin UAN fertilizer, which has historically commanded a premium price over ammonia. For the three months ended March 31, 2018 and 2017, approximately 96% and 87%, respectively, of the Coffeyville Fertilizer Facility produced ammonia tons were upgraded into UAN.

The East Dubuque Facility includes a 1,075 ton-per-day capacity ammonia unit and a 1,100 ton-per-day capacity UAN unit. The facility is located on a bluff above the Mississippi River, with access to the river for loading certain products. The East Dubuque Facility uses natural gas as its primary feedstock. The East Dubuque Facility has the flexibility to vary its product mix, which enables 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. Product sales are heavily weighted toward sales of ammonia and UAN. For both the three months ended March 31, 2018 and 2017, approximately 45% of East Dubuque Facility produced ammonia tons were upgraded to other products.

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 first-in, first-out ("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 the petroleum business 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 products 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 volatile seasonal exports of diesel from the United States Gulf Coast markets. 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 the RFS, which requires it to either blend "renewable fuels" in with its transportation fuels or purchase RINs, in lieu of blending, by March 31, 2019 or otherwise be subject to penalties.

Refer to *If sufficient RINs are unavailable for purchase at times when the petroleum business seeks to purchase RINs, 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*, in Part I, Item 1A, "Risk Factors" of our 2017 Form 10-K and Part I, Item 1, Note 11 ("Commitments and Contingencies"), "Environmental, Health and Safety ("EHS") Matters" of this Report for further discussion of the RFS.

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. Based upon recent market prices of RINs and current estimates related to the other variable factors, the petroleum business currently estimates that the net cost of RINs will be approximately \$80.0 million for the year ending December 31, 2018.

In order to assess its operating performance, the petroleum business compares 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 New York Mercantile Exchange ("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 isobutane, 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 price differential to WTI and the WCS price differential to WTI as both of these differentials indicate the relative price of heavier, more sour, crude oil 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 percentage 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 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 has seen a downward movement in refining margins as a result. The stabilization of oil prices led by the decision of the Organization of the Petroleum Exporting Countries ("OPEC") to lower production volumes and the resurgent shale drilling in the Permian and other tight oil plays are expected to cause price spread volatility as the industry attempts to match infrastructure to supply.

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 three months ended March 31, 2018, a \$1.00 change in natural gas price would have increased or decreased the petroleum business' natural gas costs by approximately \$3.6 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 from period to period.

Safe and reliable operations at the refineries are key to the petroleum business' financial performance and results of operations. Unscheduled 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 scheduled 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. The next turnaround scheduled for the Wynnewood refinery is being performed as a two phase turnaround. The first phase of its current turnaround was completed in November 2017 at a total cost of approximately \$67.4 million. The second phase of the Wynnewood turnaround is expected to occur in the first half of 2019. Turnaround expenses associated with the second phase of the Wynnewood turnaround are estimated to be approximately \$25.0 million. In addition to the two phase turnaround, the petroleum business accelerated certain planned turnaround activities in the first quarter of 2017 on the hydrocracker unit for a catalyst change-out. The petroleum business incurred approximately \$13.0 million of major scheduled

turnaround expenses for the hydrocracker. The next turnaround scheduled for the Coffeyville refinery is expected to be performed in the second half of 2020.

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 costs and 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.

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

In order to assess its operating performance, 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 gates 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 from period to period. The product pricing at gate provides a measure that is consistently comparable from 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 its out-of-region competitors in serving the U.S. farm belt agricultural 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, including expenses related to 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 the railcars under the relevant regulations.

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 high fixed cost of the Coffeyville Fertilizer Facility's direct operating expense structure also directly affects the Nitrogen Fertilizer Partnership's profitability. The Coffeyville Fertilizer Facility's pet coke gasification process results in a significantly higher percentage of fixed costs than a natural gas-based fertilizer plant, such as the East Dubuque Facility. In addition, while less than the Coffeyville Fertilizer Facility, the East Dubuque Facility has a significant amount of fixed costs. Major fixed operating expenses include a large portion of electrical energy, employee labor, and maintenance, including contract labor and outside services.

The Coffeyville Fertilizer Facility's largest raw material expense used in the production of ammonia is pet coke, which it purchases from the petroleum business and third parties. For the three months ended March 31, 2018 and 2017, the nitrogen fertilizer business incurred approximately \$2.2 million and \$1.9 million, respectively, for the cost of pet coke, which equaled an average cost per ton of \$18 and \$14, respectively. The nitrogen fertilizer business also purchased some of its hydrogen from CVR Refining's adjacent crude oil refinery pursuant to a long-term agreement.

The East Dubuque Facility's largest raw material expense used in the production of ammonia is natural gas, which is purchased from third parties. The East Dubuque Facility's natural gas process results in a higher percentage of variable costs as compared to the Coffeyville Fertilizer Facility. For the three months ended March 31, 2018 and 2017, the East Dubuque Facility incurred approximately \$4.4 million and \$5.3 million, respectively, for feedstock natural gas, which equaled an average cost per MMBtu of \$3.48 and \$3.59, respectively.

Consistent, safe and reliable operations at the nitrogen fertilizer plants are critical to its financial performance and results of operations. In addition, consistent, safe and reliable operations at the Linde air separation unit, which supplies oxygen, nitrogen and compressed dry air to the Coffeyville Facility, is critical to the nitrogen fertilizer business financial performance and results of operations. Unplanned downtime at either of the facilities or at the Linde air separation unit 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 nitrogen fertilizer business facilities have each undergone a full facility turnaround approximately every two to three years. The East Dubuque Facility underwent a full facility turnaround in the third quarter of 2017 and the ammonia and UAN units were down for approximately 14 days at a cost of approximately \$2.6 million, exclusive of the impacts of the lost production during the downtime. The Coffeyville Fertilizer Facility began a scheduled turnaround in April 2018 that is expected to last approximately 15 days at an estimated cost of \$7 million, exclusive of the impacts of 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 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 hydrogen purchase and sale agreement, which governs the purchase of hydrogen for the Coffeyville Fertilizer Facility; (v) a raw water and facilities sharing agreement, which allocates raw water resources between the two businesses; (vi) an easement agreement; (vii) an environmental agreement; and (viii) 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 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 \$150.0 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. The intercompany credit facility matures in January 2019.

Crude Oil Supply Agreement

Refer to Part I, Item 1, Note 11 ("Commitments and Contingencies") of this Report for information on the crude oil supply agreement.

Joint Ventures

Refer to Part I, Item 1, Note 7 ("Equity Method Investments") of this Report for information on the joint ventures.

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.

	Three Months Ended March 31,	
	2018	2017
	(in millions)	
Gain on derivatives, net	\$ 59.3	\$ 12.2
Major scheduled turnaround expenses(1)	—	12.9

(1) Represents expense associated with major scheduled turnaround activities performed at the Wynnewood refinery.

Noncontrolling Interest

The noncontrolling interest reflected in our condensed consolidated financial statements represents the interest in the Nitrogen Fertilizer Partnership and Refining Partnership held by public common unitholders. The non-controlling interest reflected on our Condensed Consolidated Balance Sheets is impacted by the net income of, and distributions from, the Nitrogen Fertilizer Partnership and Refining Partnership. During 2017 and as of March 31, 2018, the noncontrolling interest related to the Refining Partnership and Nitrogen Fertilizer Partnership reflected in our condensed consolidated financial statements was approximately 34% and 66%, respectively.

Distributions to CVR Partners Unitholders

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 generated on a quarterly basis. 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 will be determined by the board of directors of the Nitrogen Fertilizer Partnership's general partner following the end of such quarter. Available cash for each quarter is calculated as 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, and (iii) to the extent applicable, major scheduled turnaround expenses, reserves for future operating or capital needs that the board of directors of the Nitrogen Fertilizer Partnership's general partner deems necessary or appropriate, 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. Actual distributions are set by the board of directors of 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, where applicable, major scheduled turnaround expenses, gain or loss on extinguishment of debt, loss on disposition of assets, expenses and business interruption insurance recovery.

Distributions to CVR Refining Unitholders

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 distribution 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 board of directors of the Refining Partnership does not currently intend to maintain excess distribution coverage for the purpose of maintaining stability or growth in the Refining Partnership's quarterly distribution or to otherwise reserve cash for distributions, nor do they currently intend to incur debt to pay quarterly distributions. Further, it is the current intent of the board of directors of the Refining Partnership, 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.

On March 12, 2018, the Refining Partnership paid a cash distribution to its common unitholders of record as of March 5, 2018 for the fourth quarter of 2017 in the amount of \$0.45 per common unit, or \$66.4 million in aggregate.

On April 25, 2018, the board of directors of the Refining Partnership's general partner declared a cash distribution for the first quarter of 2018 to the Refining Partnership's unitholders of \$0.51 per common unit, or \$75.3 million in aggregate. The cash distribution will be paid on May 14, 2018 to unitholders of record at the close of business on May 7, 2018. We will receive \$49.6 million in respect of our common units.

CVR Energy Dividends

On March 12, 2018, the Company paid a cash dividend to stockholders of record at the close of business on March 5, 2018 for the fourth quarter of 2017 in the amount of \$0.50 per share, or \$43.4 million in aggregate. IEP received \$35.6 million in respect of its common shares.

On April 25, 2018, our board of directors declared a dividend for the first quarter of 2018 of \$0.50 per share, or \$43.4 million in the aggregate. The dividend will be paid on May 14, 2018 to stockholders of record at the close of business on May 7, 2018.

Results of Operations

The following tables summarize the financial data and key operating statistics for CVR and our two operating segments for the three months ended March 31, 2018 and 2017. The following data should be read in conjunction with our condensed consolidated financial statements and the notes thereto included elsewhere in this Report. All information in "Management's Discussion and Analysis of Financial Condition and Results of Operations," except for the balance sheet data as of December 31, 2017, is unaudited.

	Three Months Ended March 31,	
	2018	2017
(in millions, except per share data)		
Consolidated Statements of Operations Data		
Net sales	\$ 1,536.5	\$ 1,507.1
Cost of materials and other	1,238.3	1,221.2
Direct operating expenses(1)	131.9	138.1
Depreciation and amortization	49.1	48.6
Cost of sales	1,419.3	1,407.9
Selling, general and administrative expenses(1)	23.9	29.1
Depreciation and amortization	2.8	2.5
Operating income	90.5	67.6
Interest expense and other financing costs	(27.1)	(27.0)
Interest income	0.2	0.2
Gain on derivatives, net	59.3	12.2
Other income, net	1.5	—
Income before income tax expense	124.4	53.0
Income tax expense	20.8	14.8
Net income	103.6	38.2
Less: Net income attributable to noncontrolling interest	37.4	16.0
Net income attributable to CVR Energy stockholders	\$ 66.2	\$ 22.2
Basic and diluted earnings per share	\$ 0.76	\$ 0.26
Dividends declared per share	\$ 0.50	\$ 0.50
Adjusted EBITDA(2)	\$ 85.9	\$ 80.4
Weighted-average common shares outstanding:		
Basic and diluted	86.8	86.8

	As of March 31, 2018	As of December 31, 2017
	(in millions)	
Balance Sheet Data		
Cash and cash equivalents	\$ 420.0	\$ 481.8
Working capital	624.8	550.5
Total assets	3,823.3	3,806.7
Total debt, including current portion	1,167.0	1,166.5
Total CVR Energy stockholders' equity	941.6	918.8

	Three Months Ended March 31,	
	2018	2017
(in millions)		
Cash Flow Data		
Net cash flow provided by (used in):		
Operating activities	\$ 24.5	\$ 137.2
Investing activities	(19.8)	(25.6)
Financing activities	(66.5)	(43.8)
Net increase (decrease) in cash and cash equivalents	<u>\$ (61.8)</u>	<u>\$ 67.8</u>
Capital expenditures for property, plant and equipment	\$ 20.0	\$ 24.2

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

(2) **EBITDA and Adjusted EBITDA.** EBITDA represents net income (loss) 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 noncontrolling interest. Adjusted EBITDA represents EBITDA adjusted for consolidated (i) FIFO impact (favorable) unfavorable; (ii) major scheduled turnaround expenses (that many of our competitors capitalize and thereby exclude from their measures of EBITDA and adjusted EBITDA); (iii) (gain) loss on derivatives, net; and (iv) current period settlements on derivative contracts. EBITDA and Adjusted EBITDA are not recognized terms under GAAP and should not be substituted for net income (loss) or cash flow from operations. We believe that EBITDA and Adjusted EBITDA enable investors to better understand and evaluate our ongoing operating results and allow 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.

Below is a reconciliation of net income (loss) attributable to CVR Energy stockholders to EBITDA and EBITDA to Adjusted EBITDA for the three months ended March 31, 2018 and 2017:

	Three Months Ended March 31,	
	2018	2017
	(in millions)	
Net income attributable to CVR Energy stockholders	\$ 66.2	\$ 22.2
Add:		
Interest expense and other financing costs, net of interest income	26.9	26.8
Income tax expense	20.8	14.8
Depreciation and amortization	51.9	51.1
Adjustments attributable to noncontrolling interest	(36.4)	(35.9)
EBITDA	129.4	79.0
Add:		
FIFO impact, (favorable) unfavorable	(20.4)	0.3
Major scheduled turnaround expenses	—	12.9
Gain on derivatives, net	(59.3)	(12.2)
Current period settlement on derivative contracts(a)	13.7	1.2
Adjustments attributable to noncontrolling interest	22.5	(0.8)
Adjusted EBITDA	\$ 85.9	\$ 80.4

- (a) 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.

Three Months Ended March 31, 2018 Compared to the Three Months Ended March 31, 2017 (Consolidated)

Net Sales. Consolidated net sales were \$1,536.5 million for the three months ended March 31, 2018 compared to \$1,507.1 million for the three months ended March 31, 2017. The increase of \$29.4 million was largely the result of an increase in the petroleum segment's net sales of \$34.7 million due to higher sales prices for the transportation fuels and by-products, partially offset by decreased sales volumes. The petroleum segment's average sales price per gallon for the three months ended March 31, 2018 of \$1.82 for gasoline and \$1.99 for distillates increased by 18.2% and 25.9%, respectively, as compared to the three months ended March 31, 2017. The nitrogen fertilizer segment net sales decreased \$5.4 million primarily attributable to the lower ammonia sales volumes (\$8.3 million), lower UAN sales prices (\$1.3 million), partially offset by higher UAN sales volume (\$4.3 million).

Cost of Materials and Other. Consolidated cost of materials and other was \$1,238.3 million for the three months ended March 31, 2018, as compared to \$1,221.2 million for the three months ended March 31, 2017. The increase of \$17.1 million, or 1.4%, primarily resulted from an increase of \$16.4 million in the petroleum segment. The increase at the petroleum segment was due to increases in the cost of consumed crude and increase in costs of products purchased for resale partially offset by decreases in the cost of other feedstocks and RINS. The increase in consumed crude oil costs was due to an increase in crude prices which was partially offset by a decrease in crude oil throughput volume. The nitrogen fertilizer segment's cost of materials and other increased \$0.5 million primarily due to an increase in costs from transactions with third parties partially offset by a decrease in transactions with affiliates.

Direct Operating Expenses (Exclusive of Depreciation and Amortization). Consolidated direct operating expenses (exclusive of depreciation and amortization) were \$131.9 million for the three months ended March 31, 2018, as compared to \$138.1 million for the three months ended March 31, 2017. The decrease of \$6.2 million was due to a decrease at the petroleum segment of \$9.1 million primarily related to lower turnaround expenses, energy and utility costs in the first quarter of 2018 compared to the first quarter of 2017, offset by an increase at the nitrogen fertilizer segment. The nitrogen fertilizer segment's direct operating expenses (exclusive of depreciation and amortization) increased \$3.0 million due to having to expense fixed operating costs while idle as well as higher UAN sales tons.

Selling, General and Administrative Expenses (Exclusive of Depreciation and Amortization). Consolidated selling, general and administrative expenses (exclusive of depreciation and amortization) were \$23.9 million for the three months ended March 31, 2018, as compared to \$29.1 million for the three months ended March 31, 2017. The decrease of \$5.2 million was primarily attributable to lower personnel costs and a decrease in share-based compensation.

Operating Income. Consolidated operating income was \$90.5 million for the three months ended March 31, 2018, as compared to operating income of \$67.6 million for the three months ended March 31, 2017, an increase of \$22.9 million. The increase in operating income was primarily due to an increase of \$31.2 million in the petroleum segment, which was the result of higher refining margins and a decrease in direct operating expenses, selling, general and administrative expenses and depreciation and amortization expense. The nitrogen fertilizer segment's operating income decreased \$8.7 million primarily as a result of a decrease in net sales and increased direct operating expenses and increased depreciation and amortization.

Gain on Derivatives, net. For the three months ended March 31, 2018, the petroleum segment recorded a \$59.3 million net gain on derivatives. This compares to a \$12.2 million net gain on derivatives for the three months ended March 31, 2017. This change was primarily due to increase in the volume of derivatives positions during 2018 coupled with the Canadian crude derivative positions included in only 2018. The gross swap positions in 2018 were 11.5 million barrels compared to 4.0 million barrels in 2017. We enter into commodity hedging instruments in order to fix the price on a portion of our future crude oil purchases and to fix the margin on a portion of future production.

Income Tax Expense (Benefit). Income tax expense for the three months ended March 31, 2018 was \$20.8 million or 16.7% of income before income taxes, as compared to income tax expense for the three months ended March 31, 2017 of \$14.8 million or 27.9% of income before income taxes. Our 2018 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) and the benefits related to state income tax credits.

Petroleum Business Results of Operations

The petroleum business includes the operations of both the Coffeyville and Wynnewood refineries. The following tables provide an overview of the petroleum business' results of operations, relevant market indicators and its key operating statistics for the three months ended March 31, 2018 and 2017:

	Three Months Ended March 31,	
	2018	2017
(in millions)		
Petroleum Segment Summary Financial Results		
Net sales	\$ 1,458.2	\$ 1,423.5
Operating costs and expenses:		
Cost of materials and other	1,217.7	1,201.3
Direct operating expenses(1)(2)	93.0	89.2
Major scheduled turnaround expenses	—	12.9
Depreciation and amortization	32.7	33.3
Cost of sales	1,343.4	1,336.7
Selling, general and administrative expenses(1)	16.6	20.0
Depreciation and amortization	1.0	0.8
Operating income	97.2	66.0
Interest expense and other financing costs	(11.4)	(11.2)
Interest income	0.1	—
Gain on derivatives, net	59.3	12.2
Other income, net	1.5	—
Income before income tax expense	146.7	67.0
Income tax expense	—	—
Net income	\$ 146.7	\$ 67.0
Gross profit(3)	\$ 114.8	\$ 86.8
Refining margin(4)	\$ 240.5	\$ 222.2
Adjusted Petroleum EBITDA(5)	\$ 125.7	\$ 114.5

	Three Months Ended March 31,	
	2018	2017
(dollars per barrel)		
Key Operating Statistics		
Per crude oil throughput barrel:		
Gross profit(3)	\$ 7.18	\$ 4.50
Refining margin(4)	15.04	11.52
FIFO impact, (favorable) unfavorable	(1.27)	0.02
Refining margin adjusted for FIFO impact(4)	13.77	11.54
Direct operating expenses and major scheduled turnaround expenses(1)(2)	5.82	5.29
Direct operating expenses excluding major scheduled turnaround expenses(1)(2)	5.82	4.63
Per total throughput barrel:		
Direct operating expenses and major scheduled turnaround expenses(1)(6)	5.49	4.96
Direct operating expenses excluding major scheduled turnaround expenses(1)(6)	5.49	4.34

	Three Months Ended March 31,			
	2018		2017	
		%		%
Refining Throughput and Production Data (bpd)				
Throughput:				
Condensate	17,714	9.4	7,503	3.3
Sweet	159,495	84.7	190,350	83.3
Sour	—	—	—	—
Heavy sour	490	0.3	16,516	7.2
Total crude oil throughput	177,699	94.4	214,369	93.8
All other feedstocks and blendstocks	10,669	5.6	14,243	6.2
Total throughput	188,368	100.0	228,612	100.0
Production:				
Gasoline	92,048	48.9	118,955	51.9
Distillate	78,866	41.9	89,907	39.2
Other (excluding internally produced fuel)	17,396	9.2	20,298	8.9
Total refining production (excluding internally produced fuel)	188,310	100.0	229,160	100.0

	Three Months Ended March 31,	
	2018	2017
Market Indicators (dollars per barrel)		
West Texas Intermediate (WTI) NYMEX	\$ 62.89	\$ 51.78
Crude Oil Differentials:		
WTI less WTS (light/medium sour)	1.43	1.42
WTI less WCS (heavy sour)	25.74	13.77
WTI less Condensate	0.38	0.10
Midland Cushing Differential	0.38	(0.02)
NYMEX Crack Spreads:		
Gasoline	15.35	14.68
Heating Oil	20.46	15.54
NYMEX 2-1-1 Crack Spread	17.91	15.11
PADD II Group 3 Basis:		
Gasoline	(1.87)	(1.96)
Ultra Low Sulfur Diesel	(0.61)	(1.58)
PADD II Group 3 Product Crack Spread:		
Gasoline	13.48	12.71
Ultra Low Sulfur Diesel	19.85	13.96
PADD II Group 3 2-1-1	16.67	13.34

(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 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 (loss), an accounting principle generally accepted in the United States of America ("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, 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 (loss) per crude oil throughput barrel, we utilize the total dollar figures for gross profit (loss) 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 their cost of materials and other at which they are 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 are 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.

Refining margin per crude oil throughput barrel adjusted for FIFO impact is a measurement calculated as the difference between net sales and cost of materials and other adjusted for FIFO impact. Refining margin adjusted for FIFO impact is a non-GAAP measure that we believe is important to investors in evaluating our refineries' performance as a general indication of the amount above their cost of materials and other (taking into account the impact of our utilization of FIFO) at which they are able to sell refined products. Our calculation of refining margin adjusted for FIFO impact may differ from calculations of other companies in the industry, thereby limiting its usefulness as a comparative measure. Under our FIFO accounting method, changes in crude oil prices can cause fluctuations in the inventory valuation of our 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. In order to derive the refining margin per crude oil throughput barrel adjusted for FIFO impact, we utilize the total dollar figures for refining margin adjusted for FIFO impact as derived above and divide by the applicable number of crude oil throughput barrels for the period. We believe that refining margin adjusted for FIFO impact and refining margin per crude oil throughput barrel adjusted for FIFO impact are 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, refining margin adjusted for FIFO impact, refining margin per crude oil throughput barrel and refining margin adjusted for FIFO impact per crude oil throughput barrel (each a non-GAAP financial measure), including a reconciliation to the most directly comparable GAAP financial measure, for the three months ended March 31, 2018 and 2017 is as follows:

	Three Months Ended March 31,	
	2018	2017
	(in millions)	
Net sales	\$ 1,458.2	\$ 1,423.5
Cost of materials and other	1,217.7	1,201.3
Direct operating expenses (exclusive of depreciation and amortization and major scheduled turnaround expenses as reflected below)	93.0	89.2
Major scheduled turnaround expenses	—	12.9
Depreciation and amortization	32.7	33.3
Gross profit	114.8	86.8
Add:		
Direct operating expenses (exclusive of depreciation and amortization and major scheduled turnaround expenses as reflected below)	93.0	89.2
Major scheduled turnaround expenses	—	12.9
Depreciation and amortization	32.7	33.3
Refining margin	240.5	222.2
FIFO impact, (favorable) unfavorable	(20.4)	0.3
Refining margin adjusted for FIFO impact	\$ 220.1	\$ 222.5

	Three Months Ended March 31,	
	2018	2017
Total crude oil throughput barrels per day	177,699	214,369
Days in the period	90	90
Total crude oil throughput barrels	15,992,910	19,293,210

	Three Months Ended March 31,	
	2018	2017
Refining margin	\$ 240.5	\$ 222.2
Divided by: crude oil throughput barrels	16.0	19.3
Refining margin per crude oil throughput barrel	\$ 15.04	\$ 11.52

	Three Months Ended March 31,	
	2018	2017
Refining margin adjusted for FIFO impact	\$ 220.1	\$ 222.5
Divided by: crude oil throughput barrels	16.0	19.3
Refining margin adjusted for FIFO impact per crude oil throughput barrel	\$ 13.77	\$ 11.54

- (5) Petroleum EBITDA represents net income (loss) 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) major scheduled turnaround expenses (that many of our competitors capitalize and thereby exclude from their measures of EBITDA and Adjusted EBITDA); (iii) (gain) loss on derivatives, net; and (iv) 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 (loss) or cash flow from operations. We believe 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 its 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 (loss) for the petroleum segment to Petroleum EBITDA and Petroleum EBITDA to Adjusted Petroleum EBITDA for the three months ended March 31, 2018 and 2017:

	Three Months Ended March 31,	
	2018	2017
(in millions)		
Petroleum:		
Petroleum net income	\$ 146.7	\$ 67.0
Add:		
Interest expense and other financing costs, net of interest income	11.3	11.2
Income tax expense	—	—
Depreciation and amortization	33.7	34.1
Petroleum EBITDA	191.7	112.3
Add:		
FIFO impact, (favorable) unfavorable(a)	(20.4)	0.3
Major scheduled turnaround expenses(b)	—	12.9
Gain on derivatives, net	(59.3)	(12.2)
Current period settlements on derivative contracts(c)	13.7	1.2
Adjusted Petroleum EBITDA	\$ 125.7	\$ 114.5

(a) FIFO is the petroleum business' basis for determining inventory value under GAAP. 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. In order to derive the FIFO impact per crude oil throughput barrel, we utilize the total dollar figures for the FIFO impact and divide by the number of crude oil throughput barrels for the period.

(b) Represents expense associated with major scheduled turnaround activities at the Wynnewood refinery during 2017.

(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.

(6) Direct operating expense is presented on a per total throughput barrel basis. In order to derive the direct operating expenses per total throughput barrel, we utilize the total direct operating expenses, which do not include depreciation or amortization expense, and divide by the applicable number of total throughput barrels for the period.

	Three Months Ended March 31,			
	2018		2017	
		%		%
Coffeyville Refinery Throughput and Production Data (bpd)				
Throughput:				
Condensate	17,714	17.0	7,503	5.3
Sweet	80,527	77.4	106,740	75.3
Sour	—	—	—	—
Heavy sour	490	0.5	16,516	11.7
Total crude oil throughput	98,731	94.9	130,759	92.3
All other feedstocks and blendstocks	5,365	5.1	10,915	7.7
Total throughput	104,096	100.0	141,674	100.0
Production:				
Gasoline	48,453	45.9	74,538	51.6
Distillate	44,245	41.9	59,444	41.2
Other (excluding internally produced fuel)	12,831	12.2	10,335	7.2
Total refining production (excluding internally produced fuel)	105,529	100.0	144,317	100.0

	Three Months Ended March 31,			
	2018		2017	
		%		%
Wynnewood Refinery Throughput and Production Data (bpd)				
Throughput:				
Condensate	—	—	—	—
Sweet	78,968	93.7	83,610	96.2
Sour	—	—	—	—
Heavy sour	—	—	—	—
Total crude oil throughput	78,968	93.7	83,610	96.2
All other feedstocks and blendstocks	5,304	6.3	3,328	3.8
Total throughput	84,272	100.0	86,938	100.0
Production:				
Gasoline	43,595	52.7	44,417	52.4
Distillate	34,621	41.8	30,463	35.9
Other (excluding internally produced fuel)	4,565	5.5	9,963	11.7
Total refining production (excluding internally produced fuel)	82,781	100.0	84,843	100.0

Three Months Ended March 31, 2018 Compared to the Three Months Ended March 31, 2017 (Petroleum Business)

Net Sales. Petroleum net sales were \$1,458.2 million for the three months ended March 31, 2018 compared to \$1,423.5 million for the three months ended March 31, 2017. The increase of \$34.7 million, or 2.4% was largely the result of higher sales prices for our transportation fuels and by-products, partially offset by decreased sales volumes. For the three months ended March 31, 2018, the average sales price per gallon for gasoline of \$1.82, increased by approximately 18.2%, as compared to \$1.54 for the three months ended March 31, 2017, and the average sales price per gallon for distillates of \$1.99 for the three months ended March 31, 2018 increased by approximately 25.9%, as compared to \$1.58 for the three months ended March 31, 2017. Overall sales volumes decreased approximately 17.1% for the three months ended March 31, 2018, as compared to the three months ended March 31, 2017. Sales volumes for the three months ended March 31, 2018 were impacted by decreased production as a result of the FCCU outage at the Coffeyville refinery for approximately 48 days.

The following table demonstrates the impact of changes in sales volumes and sales prices for gasoline and distillates for the three months ended March 31, 2018 compared to the three months ended March 31, 2017.

	Three Months Ended March 31, 2018			Three Months Ended March 31, 2017			Total Variance		Price Variance	Volume Variance
	Volume(1)	\$ per barrel	Sales \$(2)	Volume(1)	\$ per barrel	Sales \$(2)	Volume(1)	Sales \$(2)		
	(in millions)									
Gasoline	9.3	\$ 76.35	\$ 711.7	12.2	\$ 64.60	791.2	(2.9)	\$ (79.5)	\$ 109.6	\$ (189.1)
Distillate	7.8	\$ 83.39	\$ 652.2	8.2	\$ 66.31	544.2	(0.4)	\$ 108.0	\$ 133.5	\$ (25.5)

(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 and blendstocks, purchased products for resale, RINs, transportation and distribution costs. Petroleum cost of materials and other was \$1,217.7 million for three months ended March 31, 2018 compared to \$1,201.3 million for the three months ended March 31, 2017. The increase of \$16.4 million, or 1.4%, was primarily the result of increases in the cost of consumed crude oil and increase in costs of products purchased for resale partially offset by decreases in the cost of other feedstocks and RINs. The increase in consumed crude oil costs was due to an increase in crude prices which was partially offset by a decrease in crude oil throughput volume. The WTI benchmark crude price increased approximately 21.5% from the three months ended March 31, 2017. The average cost per barrel of crude oil consumed for the three months ended March 31, 2018 was \$64.06 compared to \$51.09 for the comparable period of 2017, an increase of approximately 25.4%. Crude oil throughput volume decreased by approximately 17.1% for the three months ended March 31, 2018 as compared to the three months ended March 31, 2017 in order to manage FCCU feedstock inventory during the FCCU outage at the Coffeyville refinery. The increase in the costs of products purchased for resale is primarily due to higher purchase prices for the three months ended March 31, 2018 as compared to the three months ended March 31, 2017. The decrease in the cost of other feedstocks was primarily due to a decrease in throughput volumes for the three months ended March 31, 2018 as compared to the three months ended March 31, 2017. The net cost of RINs was favorably impacted by a reduction in the Refining Partnership's RFS obligation and reduced market pricing. Under the FIFO method of accounting, changes in crude oil prices can also cause fluctuations in the inventory valuation of the petroleum business's crude oil, work in process and finished goods, thereby resulting in a favorable or unfavorable FIFO inventory impact when crude oil prices increase or decrease. For the three months ended March 31, 2018, the petroleum segment had a favorable FIFO inventory impact of \$20.4 million compared to an unfavorable FIFO inventory impact of \$0.3 million for the comparable period of 2017.

Refining margin per barrel of crude oil throughput increased to \$15.04 for the three months ended March 31, 2018 from \$11.52 for the three months ended March 31, 2017. Refining margin adjusted for FIFO impact was \$13.77 per crude oil throughput barrel for the three months ended March 31, 2018, as compared to \$11.54 per crude oil throughput barrel for the three months ended March 31, 2017. Gross profit per barrel increased to \$7.18 per barrel for the three months ended March 31, 2018, as compared to a profit per barrel of \$4.50 in the comparative period in 2017. The increase in refining margin and gross profit per barrel was primarily due to a higher spread between crude oil and transportation fuels pricing and a favorable change in gasoline basis. NYMEX 2-1-1 crack spread for the three months ended March 31, 2018 was \$17.91 per barrel, an increase of approximately 18.50% over the NYMEX 2-1-1 crack spread of \$15.11 per barrel for the three months ended March 31, 2017. The Group 3 gasoline basis was \$(1.87) per barrel for the three months ended March 31, 2018 as compared to \$(1.96) per barrel three months ended March 31, 2017. Partially offsetting these favorable impacts were increases in consumed crude oil costs and the cost of products purchased for resale.

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 actual 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 \$93.0 million for the three months ended March 31, 2018 compared to \$102.1 million for the three months ended March 31, 2017. The decrease of \$9.1 million was primarily the result of decreases in turnaround expenses (\$12.9 million), energy and utility costs (\$2.1 million), production chemicals (\$0.8 million) and allocated expenses (\$0.6 million). These decreases were partially offset by an increase in repair and maintenance expenses (\$7.7 million). Direct operating expenses per barrel of crude oil throughput for the three months ended March 31, 2018 increased to \$5.82 per barrel, as compared to \$5.29 per barrel for the three months ended March 31, 2017. The increase in the direct operating expenses per barrel of crude oil throughput is primarily a function of lower throughput rates.

Operating Income (loss). Petroleum operating income was an income of \$97.2 million for the three months ended March 31, 2018, as compared to operating income of \$66.0 million for the three months ended March 31, 2017. The increase of \$31.2 million was primarily the result of an increase in refining margin of \$18.3 million due to higher sales prices for transportation fuels and by-products, and a decrease in direct operating expenses of (\$9.1 million), selling, general and administrative expenses (\$3.4 million) and depreciation and amortization expenses (\$0.4 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 key operating statistics for the three months ended March 31, 2018 and 2017.

	Three Months Ended March 31,	
	2018	2017
	(in millions)	
<u>Nitrogen Fertilizer Business Financial Results</u>		
Net sales	\$ 79.9	\$ 85.3
Operating costs and expenses:		
Cost of materials and other	22.3	21.8
Direct operating expenses(1)	38.9	35.9
Major scheduled turnaround expenses	—	—
Depreciation and amortization	16.4	15.4
Cost of sales	77.6	73.1
Selling, general and administrative(1)	5.7	6.9
Operating income (loss)	(3.4)	5.3
Interest expense and other financing costs	(15.7)	(15.7)
Other income, net	—	0.1
Loss before income tax expense	(19.1)	(10.3)
Income tax expense	—	—
Net loss	\$ (19.1)	\$ (10.3)
Adjusted Nitrogen Fertilizer EBITDA(2)	\$ 13.0	\$ 20.8

	Three Months Ended March 31,	
	2018	2017
Nitrogen Fertilizer Segment Key Operating Statistics:		
Sales (thousand tons):		
Ammonia	36.1	61.9
UAN	345.3	321.6
Product pricing at gate (dollars per ton)(3):		
Ammonia	\$ 322	\$ 308
UAN	\$ 153	\$ 160
Production volume (thousand tons):		
Ammonia (gross produced)(4)	199.2	219.2
Ammonia (net available for sale)(4)	58.9	80.0
UAN	339.3	341.9
Feedstock:		
Petroleum coke used in production (thousand tons)	118.2	132.6
Petroleum coke used in production (dollars per ton)	\$ 18	\$ 14
Natural gas used in production (thousands of MMBtu)(5)	1,850.3	2,091.2
Natural gas used in production (dollars per MMBtu)(5)(6)	\$ 3.24	\$ 3.41
Natural gas in cost of materials and other (thousands of MMBtu)(5)	1,257.7	1,476.0
Natural gas in cost of materials and other (dollars per MMBtu)(5)(6)	\$ 3.48	\$ 3.59
Coffeyville Fertilizer Facility on-stream factors(7):		
Gasification	100.0%	98.9%
Ammonia	99.8%	98.5%
UAN	99.2%	96.8%
East Dubuque Facility on-stream factors(7):		
Ammonia	86.7%	99.6%
UAN	87.0%	98.2%
Market Indicators:		
Ammonia — Southern Plains (dollars per ton)	\$ 382	\$ 387
Ammonia — Corn belt (dollars per ton)	\$ 427	\$ 424
UAN — Corn belt (dollars per ton)	\$ 210	\$ 215
Natural gas NYMEX (dollars per MMBtu)	\$ 2.85	\$ 3.06

(1) Amounts are shown exclusive of depreciation and amortization and major scheduled turnaround expenses.

- (2) Nitrogen Fertilizer EBITDA represents nitrogen fertilizer net income (loss) adjusted for (i) interest (income) expense; (ii) income tax expense; and (iii) depreciation and amortization expense. Adjusted Nitrogen Fertilizer EBITDA represents Nitrogen Fertilizer EBITDA adjusted for (i) major scheduled turnaround expenses, when applicable; (ii) gain or loss on extinguishment of debt; (iii) loss on disposition of assets, when applicable; and (iv) business interruption insurance recovery, when 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, gain or loss on extinguishment of debt, loss on disposition of assets, and business interruption insurance recovery, relating to transactions not reflective of the Nitrogen Fertilizer Partnership's core operations.

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 (loss) as a measure of performance. We believe 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 three months ended March 31, 2018 and 2017:

	Three Months Ended March 31,	
	2018	2017
(in millions)		
Nitrogen Fertilizer:		
Nitrogen fertilizer net loss	\$ (19.1)	\$ (10.3)
Add:		
Interest expense and other financing costs, net	15.7	15.7
Income tax expense	—	—
Depreciation and amortization	16.4	15.4
Nitrogen Fertilizer EBITDA and Adjusted EBITDA	<u>\$ 13.0</u>	<u>\$ 20.8</u>

- (3) 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.
- (4) 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.
- (5) The feedstock natural gas shown above does not include natural gas used for fuel. The cost of fuel natural gas is included in direct operating expenses (exclusive of depreciation and amortization).
- (6) The cost per MMBtu excludes derivative activity, when applicable. The impact of natural gas derivative activity during the periods presented 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 included as a measure of operating efficiency.

Three Months Ended March 31, 2018 Compared to the Three Months Ended March 31, 2017 (Nitrogen Fertilizer Business)

Net Sales. Nitrogen fertilizer net sales were \$79.9 million for the three months ended March 31, 2018 compared to \$85.3 million for the three months ended March 31, 2017. The decrease of \$5.4 million for the three months ended March 31, 2018 compared to the three months ended March 31, 2017 was primarily attributable to the lower ammonia sales volumes (\$8.3 million) and lower UAN sales prices (\$1.3 million), partially offset by higher UAN sales volume (\$4.3 million). For the three months ended March 31, 2018, UAN and ammonia made up \$60.6 million and \$12.5 million of the Nitrogen Fertilizer Partnership's consolidated net sales, respectively, including freight. For the three months ended March 31, 2017, UAN and ammonia made up \$57.6 million and \$19.9 million of the Nitrogen Fertilizer Partnership's consolidated net sales, respectively, including freight.

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 and East Dubuque Facility for the three months ended March 31, 2018 as compared to the three months ended March 31, 2017:

	Price Variance		Volume Variance	
	(in millions)			
UAN	\$	(1.3)	\$	4.3
Ammonia	\$	0.9	\$	(8.3)

The decrease in ammonia sales volumes for the three months ended March 31, 2018 compared to the three months ended March 31, 2017 was primarily attributable to less product available from lower inventory as of December 31, 2017 due to a strong Fall 2017 application as compared to December 31, 2016 and unplanned downtime at the East Dubuque Facility for the three months ended March 31, 2018. The increase in UAN sales volumes for the three months ended March 31, 2018 compared to the three months ended March 31, 2017 was primarily attributable to more product available from higher inventory as of December 31, 2017 as compared to December 31, 2016.

Cost of Materials and Other. Nitrogen fertilizer cost of materials and other consists primarily of freight and distribution expenses, feedstock expenses, purchased ammonia and purchased hydrogen. Cost of materials and other for the three months ended March 31, 2018 was \$22.3 million, compared to \$21.8 million for the three months ended March 31, 2017. The \$0.5 million increase was primarily due to an increase in costs from transactions with third parties of \$0.7 million, partially offset by a decrease in transactions with affiliates of \$0.2 million. The higher third-party costs incurred were primarily the result of a \$1.6 million increase in freight costs due to the increased UAN sales volumes, partially offset by lower natural gas expenses at the East Dubuque Facility as a result of no feedstock natural gas used during the 12-day East Dubuque January 2018 outage.

Direct Operating Expenses (Exclusive of Depreciation and Amortization). Nitrogen fertilizer direct operating expenses (exclusive of depreciation and amortization) 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. Direct operating expenses (exclusive of depreciation and amortization) for the three months ended March 31, 2018 were \$38.9 million as compared to \$35.9 million for the three months ended March 31, 2017. The \$3.0 million increase was primarily due to having to expense fixed operating costs while idle as well as higher sales tons in the three months ended March 31, 2018 as compared to 2017, resulting in higher cost of inventory expensed during 2018.

Operating Income (loss). Nitrogen fertilizer operating loss was \$3.4 million for the three months ended March 31, 2018, as compared to operating income of \$5.3 million for the three months ended March 31, 2017. The decrease of \$(8.7) million was the result of a decrease in net sales (\$5.4 million), an increase in direct operating expenses (\$3.0 million), an increase in depreciation and amortization (\$1.0 million) and an increase in cost of materials and other (\$0.5 million), partially offset by a decrease in selling general and administrative expenses (\$1.2 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 IPO in April 2011 and the Refining Partnership 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 12 months, and that we have sufficient cash resources to fund our operations for at least the next 12 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 beyond our control.

Depending on the needs of our businesses, contractual limitations and market conditions, we may from time to time seek to issue equity securities, incur additional debt, issue debt securities, or otherwise refinance our existing debts. There can be no assurance that we will seek to do any of the foregoing or that we will be able to do any of the foregoing on terms acceptable to us or at all.

Cash Balances and Other Liquidity

As of March 31, 2018, we had consolidated cash and cash equivalents of \$420.0 million. Of that amount, \$252.0 million was cash and cash equivalents of CVR Energy, \$106.9 million was cash and cash equivalents of the Refining Partnership and \$61.1 million was cash and cash equivalents of the Nitrogen Fertilizer Partnership. As of April 24, 2018, we had consolidated cash and cash equivalents of approximately \$540.7 million.

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 distributions are made to all common unitholders. At March 31, 2018, 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. The Nitrogen Fertilizer Partnership and CVR Nitrogen Finance Corporation ("CVR Nitrogen Finance") issued the 2023 Notes, which are guaranteed on a senior secured basis by all of the Nitrogen Fertilizer 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 of 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.

See Part I, Item 1, Note 9 ("Long-Term Debt") of this Report for additional information on the 2023 Notes, including a description of the covenants contained therein. The Nitrogen Fertilizer Partnership was in compliance with the covenants as of March 31, 2018.

2022 Notes. The 2022 Notes are unsecured and 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.

The 2022 Notes mature on November 1, 2022, unless earlier redeemed or repurchased. 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 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 2022 Notes, if redeemed during the 12-month period beginning on November 1 of the years indicated below. None of the 2022 Notes have been redeemed as of March 31, 2018.

Year	Percentage
2017	103.250%
2018	102.167%
2019	101.083%
2020 and thereafter	100.000%

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 member interest of Refining LLC.

See Part I, Item 1, Note 9 ("Long-Term Debt") of this Report for additional information on the 2022 Notes, including a description of the covenants contained therein. The Refining Partnership was in compliance with the covenants as of March 31, 2018.

Amended and Restated Asset Based (ABL) Credit Facility. On November 14, 2017, CRLLC, CVR Refining, Refining LLC and each of the operating subsidiaries of Refining LLC (collectively, the "Credit Parties") entered into Amendment No. 1 to the Amended and Restated ABL Credit Agreement (the "Amendment") with a group of lenders and Wells Fargo Bank, National Association ("Wells Fargo"), as administrative agent and collateral agent. The Amendment amends certain provisions of the Amended and Restated ABL Credit Agreement, dated December 20, 2012, by and among Wells Fargo, the group of lenders party thereto and the Credit Parties (the "Existing Credit Agreement" and as amended by the Amendment, the "Amended and Restated ABL Credit Facility"), which was otherwise scheduled to mature in December 2017. 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 \$60.0 million and \$40.0 million, respectively. The Amended and Restated ABL Credit Facility also includes a \$200.0 million

uncommitted incremental facility. The proceeds of the loans may be used for capital expenditures, working capital and general corporate purposes. The Amended and Restated ABL Credit Facility matures in November 2022.

See Part I, Item 1, Note 9 ("Long-Term Debt") of this Report for additional information on the Amended and Restated ABL Credit Facility, including a description of the covenants contained therein. The Refining Partnership was in compliance with the covenants as of March 31, 2018.

Asset Based (ABL) Credit Facility. The Nitrogen Fertilizer Partnership has an ABL Credit Facility, the proceeds of which may be used to fund capital expenditures and working capital and general corporate purposes of the Nitrogen Fertilizer Partnership and its subsidiaries. The ABL Credit Facility is a senior secured asset-based revolving credit facility with 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 ABL Credit Facility matures September 30, 2021.

See Part I, Item 1, Note 9 ("Long-Term Debt") of this Report for additional information on the ABL Credit Facility, including a description of the covenants contained therein. The Nitrogen Fertilizer Partnership was in compliance with the covenants as of March 31, 2018.

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 the three months ended March 31, 2018 and current estimated capital expenditures for the full year 2018 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:

	Three Months Ended March 31, 2018	2018 Estimate
	(in millions)	
Petroleum Business (the Refining Partnership):		
<i>Coffeyville refinery:</i>		
Maintenance	\$ 7.2	\$ 52.0
Growth	0.4	4.5
Coffeyville refinery total capital spending	7.6	56.5
<i>Wynnewood refinery:</i>		
Maintenance	3.6	45.0
Growth	2.4	9.0
Wynnewood refinery total capital spending	6.0	54.0
<i>Other Petroleum:</i>		
Maintenance	1.5	13.0
Growth	0.9	6.5
Other petroleum total capital spending	2.4	19.5
Petroleum business total capital spending	16.0	130.0
Nitrogen Fertilizer Business (the Nitrogen Fertilizer Partnership):		
Maintenance	2.3	18.0
Growth	0.4	3.0
Nitrogen fertilizer business total capital spending	2.7	21.0
Corporate		
	1.3	9.0
Total capital spending	\$ 20.0	\$ 160.0

The petroleum business' and the nitrogen fertilizer business' estimated capital expenditures are subject to change due to unanticipated changes in the cost, scope and completion time for capital projects. For example, they 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 the refineries or nitrogen fertilizer plants. The petroleum business and nitrogen fertilizer business may also accelerate or defer some capital expenditures from time to time. 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.

Cash Flows

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

	Three Months Ended March 31,	
	2018	2017
(unaudited)		
(in millions)		
Net cash provided by (used in):		
Operating activities	\$ 24.5	\$ 137.2
Investing activities	(19.8)	(25.6)
Financing activities	(66.5)	(43.8)
Net increase (decrease) in cash and cash equivalents	<u>\$ (61.8)</u>	<u>\$ 67.8</u>

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 three months ended March 31, 2018 were \$24.5 million. The positive cash flow from operating activities generated over this period was primarily driven by net income before noncontrolling interest of \$103.6 million, non-cash depreciation and amortization of \$51.9 million and the current period settlements on derivative contracts of \$13.7 million, offset by the gain on derivatives of \$59.3 million, net cash outflows for trade working capital of \$26.1 million and net cash outflows from other working capital of \$62.8 million. The net cash outflow from trade working capital was primarily due to an increase in inventories of \$37.1 million, partially offset by a decrease in accounts receivable of \$0.3 million and an increase in accounts payable of \$10.7 million. The increase in inventories was primarily due to a build up of gasoline and crude volumes due to FCC unit outage at the Coffeyville refinery for approximately 48 days during the first quarter of 2018. The increase in accounts payable was primarily attributable to increased payables for gathered crude oil purchases due to an increase in the volume of gathered crude. The net cash outflow for other working capital was primarily attributable to an increase in prepaid expenses and other current assets of \$77.4 million and a decrease in other current liabilities of \$15.4 million, partially offset by increases in deferred revenue of \$10.6 million and due to parent of \$19.4 million. The increase in prepaid expenses and other current assets was primarily attributable to the RINs asset recorded for excess RINs due to a reduction in the Refining Partnership's RFS obligation coupled with an increase in crude oil barrels in-transit. The decrease in other current liabilities was primarily related to decreases in commodity derivatives unrealized loss positions as of March 31, 2018 coupled with a decrease in the Refining Partnership's uncommitted biofuel blending obligation. The increase in deferred revenue was primarily due to collection of customer prepayments. The increase in due to parent was the result of income tax expense for the first quarter as well as timing of payments under the tax allocation agreement with IEP.

Net cash flows provided by operating activities for the three months ended March 31, 2017 were \$137.2 million. The positive cash flow from operating activities generated over this period was primarily driven by net income before noncontrolling interest of \$38.2 million, non-cash depreciation and amortization of \$51.1 million and net cash inflows from other working capital of \$45.4 million, offset by the net cash outflows for trade working capital of \$4.7 million. The net cash inflow for other working capital was primarily attributable to prepaid expenses and other current assets of \$30.1 million and deferred revenue of \$19.3 million, offset by other current liabilities of \$6.5 million. The cash inflow related to prepaid expenses and other current assets was primarily due to a \$27.4 million decrease in the derivative swaps current asset and a \$2.9 million decrease in the Transcanada/Keystone prepaid. The cash inflow related to deferred revenue was primarily due to customer prepayments made for deliveries during the second quarter of 2017. The cash outflow associated with other current liabilities was primarily attributable to payment of annual incentive awards offset by an increase in accrued interest. The cash outflow related to trade working capital consisted of a decrease in accounts payable of \$10.9 million and an increase in inventory of \$1.9 million, offset by a decrease in accounts receivable of \$8.0 million. The decrease in accounts payable related directly to a decrease in open derivative swap instruments coupled with a reduction in lease crude purchasing. The increase in inventory was primarily attributable to an increase in in-process inventory at the fertilizer business.

Cash Flows Used in Investing Activities

Net cash used in investing activities for the three months ended March 31, 2018 was \$19.8 million compared to \$25.6 million for the three months ended March 31, 2017, representing a decrease of \$5.8 million. Net cash used in investing activities for the three months ended March 31, 2018 was primarily attributable to capital spending of \$20.0 million. Net cash used in investing activities for the three months ended March 31, 2017 was attributable to capital spending of \$24.2 million and \$1.4 million related to the Refining Partnership's investment in the VPP joint venture in the first quarter of 2017.

Cash Flows Used In Financing Activities

Net cash used in financing activities for the three months ended March 31, 2018 was \$66.5 million, as compared to \$43.8 million for the three months ended March 31, 2017. The net cash used in financing activities for the three months ended March 31, 2018 was primarily attributable to dividend payments to common stockholders of \$43.4 million, distributions to the Refining Partnership common unitholders of \$22.6 million and payments of capital lease obligations of \$0.5 million. The net cash used in financing activities for the three months ended March 31, 2017 was primarily attributable to dividend payments to common stockholders of \$43.4 million and payments of capital lease obligations.

As of and for the three months ended March 31, 2018, there were no borrowings or repayments under the Amended and Restated ABL credit facility or the ABL Credit Facility.

Contractual Obligations

As of March 31, 2018, our contractual obligations included long-term debt, operating leases, capital lease obligations, unconditional purchase obligations, environmental liabilities and interest payments. There were no material changes outside the ordinary course of our business with respect to our contractual obligations during the three months ended March 31, 2018 from those disclosed in our 2017 Form 10-K.

Off-Balance Sheet Arrangements

We had no off-balance sheet arrangements as of March 31, 2018, as defined within the rules and regulations of the SEC.

Recent Accounting Pronouncements

Refer to Part I, Item 1, Note 2 ("Recent Accounting Pronouncements") of this Report for a discussion of recent accounting pronouncements applicable to the Company.

Critical Accounting Policies

Our critical accounting policies are disclosed in the "Critical Accounting Policies" section of our 2017 Form 10-K. No modifications have been made to our critical accounting policies, other than with respect to revenue recognition. Refer to Note 2 ("Recent Accounting Pronouncements") and Note 3 ("Revenue") to Part I, Item 1 of this Report for a discussion of revenue recognition for contracts with customers.

Item 3. 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, RINs prices and interest rates. Except as discussed below, information about market risks for the three months ended March 31, 2018 does not differ materially from that discussed under Part II — Item 7A of our 2017 Form 10-K.

Our earnings and cash flows and estimates of future cash flows are sensitive to changes in energy prices. The prices of crude oil and refined products have fluctuated substantially in recent years. These prices depend on many factors, including the overall demand for crude oil and refined products, which in turn depends, among other factors, on general economic conditions, the level of foreign and domestic production of crude oil and refined products, the availability of imports of crude oil and refined products, the marketing of alternative and competing fuels, the extent of government regulations and global market dynamics. The prices we receive for refined products are also affected by factors such as local market conditions and the level of operations of other refineries in our markets. The prices at which we can sell gasoline and other refined products are strongly influenced by the price of crude oil. Generally, an increase or decrease in the price of crude oil results in a corresponding increase or decrease in the price of gasoline and other refined products. The timing of the relative movement of the prices, however, can impact profit margins, which could significantly affect our earnings and cash flows.

Commodity Price Risk

At March 31, 2018, the Refining Partnership had net open commodity swap instruments consisting of 1.7 million barrels of 2-1-1 crack spreads, 0.6 million barrels of distillate crack spreads and 0.6 million barrels of gasoline crack spreads. Additionally, as of March 31, 2018, the Refining Partnership had open forward purchase and sale commitments for 4.2 million barrels of Canadian crude oil priced at fixed differentials that are not considered probable of physical settlement and are accounted for as derivatives at March 31, 2018. A change of \$1.00 per barrel in the fair value of the benchmark crude or product basis would result in an increase or decrease in the related fair value of commodity instruments of \$5.9 million.

Compliance Program Price Risk

As a producer of transportation fuels from petroleum, the Refining Partnership is required to blend biofuels into the products 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 the volatility in the price of RINs needed to comply with the RFS. To mitigate the impact of this risk on the results of operations and cash flows, the Refining Partnership purchases RINs when prices are deemed favorable or otherwise appropriate for business purposes. See Note 11 ("Commitments and Contingencies") to Part I, Item 1 of this Report and "Major Influences on Results of Operations" in Part I, Item 2 of this Report for further discussion about compliance with the RFS.

Foreign Currency Exchange

Given that our business is currently 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.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

As of March 31, 2018, 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 Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). 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 Security and Exchange Commission's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and our Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. It should be noted that any system of disclosure controls and procedures, however well designed and operated, can provide only reasonable, and not absolute, assurance that the objectives of the system are met. In addition, the design of any system of disclosure controls and procedures is based in part upon assumptions about the likelihood of future events. Due to these and other inherent limitations of any such system, there can be no assurance that any design will always succeed in achieving its stated goals under all potential future conditions.

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 March 31, 2018 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION**Item 1. Legal Proceedings**

See Note 11 ("Commitments and Contingencies") to Part I, Item 1 of this Report, which is incorporated by reference into this Part II, Item 1, for a description of certain litigation, legal and administrative proceedings and environmental matters.

Item 1A. Risk Factors

There have been no material changes from the risk factors previously disclosed in the "Risk Factors" section in our 2017 Form 10-K.

Item 6. Exhibits

Exhibit Number	Exhibit Description
31.1*	Rule 13a-14(a)/15(d)-14(a) Certification of President and Chief Executive Officer.
31.2*	Rule 13a-14(a)/15(d)-14(a) Certification of Executive Vice President, Chief Financial Officer and Treasurer.
32.1†	Section 1350 Certification of President and Chief Executive Officer.
32.2†	Section 1350 Certification of Executive Vice President, Chief Financial Officer and Treasurer.
101*	The following financial information for CVR Energy, Inc.'s Quarterly Report on Form 10-Q for the quarter ended March 31, 2018 formatted in XBRL ("Extensible Business Reporting Language") includes: (i) Condensed Consolidated Balance Sheets (unaudited), (ii) Condensed Consolidated Statements of Operations (unaudited), (iii) Condensed Consolidated Statements of Comprehensive Income (unaudited), (iv) Condensed Consolidated Statement of Changes in Equity (unaudited), (v) Condensed Consolidated Statements of Cash Flows (unaudited) and (vi) the Notes to Condensed Consolidated Financial Statements (unaudited), tagged in detail.

* Filed herewith.

† Furnished herewith.

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, 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, its business or operations on the date hereof.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

CVR Energy, Inc.

April 27, 2018

By:

/s/ DAVID L. LAMP

President and Chief Executive Officer

(Principal Executive Officer)

April 27, 2018

By:

/s/ SUSAN M. BALL

Executive Vice President, Chief Financial Officer and Treasurer

(Principal Financial and Accounting Officer)

**Certification of President and Chief Executive Officer Pursuant to
Rule 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934,
As Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002**

I, David L. Lamp, certify that:

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

/s/ DAVID L.
By: LAMP
David L. Lamp
*President and
Chief Executive
Officer
(Principal
Executive Officer)*

Date: April 27, 2018

**Certification of Executive Vice President, Chief Financial Officer and Treasurer Pursuant to
Rule 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934,
As Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002**

I, Susan M. Ball, certify that:

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

By: /s/ SUSAN M. BALL

Susan M. Ball
*Executive Vice
President, Chief
Financial Officer and
Treasurer
(Principal Financial
and Accounting
Officer)*

Date: April 27, 2018

**Certification of President and Chief Executive Officer
Pursuant to 18 U.S.C. Section 1350, As Adopted Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002**

In connection with the filing of the Quarterly Report of CVR Energy, Inc., a Delaware corporation (the "Company"), on Form 10-Q for the fiscal quarter ended March 31, 2018, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, David L. Lamp, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge and belief:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of the dates and for the periods expressed in the Report.

By: /s/ DAVID L. LAMP

David L. Lamp

President and Chief Executive Officer

(Principal Executive Officer)

Dated: April 27, 2018

**Certification of Executive Vice President, Chief Financial Officer and Treasurer
Pursuant to 18 U.S.C. Section 1350, As Adopted Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002**

In connection with the filing of the Quarterly Report of CVR Energy, Inc., a Delaware corporation (the "Company"), on Form 10-Q for the fiscal quarter ended March 31, 2018, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Susan M. Ball, Executive Vice President, Chief Financial Officer and Treasurer of the Company, certify, pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge and belief:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of the dates and for the periods expressed in the Report.

By: /s/ SUSAN M. BALL

Susan M. Ball

*Executive Vice President, Chief Financial
Officer and Treasurer*

(Principal Financial and Accounting Officer)

Dated: April 27, 2018