Section 1: 10-Q (10-Q)

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 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 June 30, 2019

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 001-32597

CF INDUSTRIES HOLDINGS, INC.

(Exact name of registrant as specified in its charter)

Delaware	**20-2697511**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
4 Parkway North, Suite 400 **Deerfield, Illinois**	**60015**
(Address of principal executive offices)	(Zip Code)

(847) 405-2400
(Registrant's telephone number, including area code)

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

Title of each class	Trading symbol(s)	Name of each exchange on which registered
common stock, par value $0.01 per share	CF	New York Stock Exchange

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 every Interactive Data File required to be submitted 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 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 ☐ 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 in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

218,325,839 shares of the registrant’s common stock, par value $0.01 per share, were outstanding at July 29, 2019.

CF INDUSTRIES HOLDINGS, INC.

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CF INDUSTRIES HOLDINGS, INC.

PART I—FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS.

CONSOLIDATED STATEMENTS OF OPERATIONS

(Unaudited)

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
	(in millions, except per share amounts)			
Net sales	$ 1,502	$ 1,300	$ 2,503	$ 2,257
Cost of sales	1,003	988	1,784	1,755
Gross margin	499	312	719	502
Selling, general and administrative expenses	62	53	120	110
Other operating—net	(37)	3	(33)	(18)
Total other operating costs and expenses	25	56	87	92
Equity in earnings of operating affiliate	1	18	8	25
Operating earnings	475	274	640	435
Interest expense	59	61	119	121
Interest income	(4)	(2)	(8)	(5)
Other non-operating—net	(2)	(3)	(3)	(4)
Earnings before income taxes	422	218	532	323
Income tax provision	102	44	94	61
Net earnings	320	174	438	262
Less: Net earnings attributable to noncontrolling interests	37	26	65	51
Net earnings attributable to common stockholders	$ 283	$ 148	$ 373	$ 211
Net earnings per share attributable to common stockholders:				
Basic	$ 1.28	$ 0.63	$ 1.68	$ 0.90
Diluted	$ 1.28	$ 0.63	$ 1.67	$ 0.90
Weighted-average common shares outstanding:				
Basic	221.1	234.0	222.2	233.9
Diluted	222.3	234.9	223.4	234.8
Dividends declared per common share	$ 0.30	$ 0.30	$ 0.60	$ 0.60

See accompanying Notes to Unaudited Consolidated Financial Statements.

CF INDUSTRIES HOLDINGS, INC.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(Unaudited)

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
	(in millions)			
Net earnings	$ 320	$ 174	$ 438	$ 262
Other comprehensive (loss) income:				
Foreign currency translation adjustment—net of taxes	(8)	(67)	24	(50)
Unrealized loss on securities—net of taxes	—	(1)	—	(1)
Defined benefit plans—net of taxes	5	7	3	6
	(3)	(61)	27	(45)
Comprehensive income	317	113	465	217
Less: Comprehensive income attributable to noncontrolling interests	37	26	65	51
Comprehensive income attributable to common stockholders	$ 280	$ 87	$ 400	$ 166

See accompanying Notes to Unaudited Consolidated Financial Statements.

CF INDUSTRIES HOLDINGS, INC.

CONSOLIDATED BALANCE SHEETS

	(Unaudited) June 30, 2019	December 31, 2018
	(in millions, except share and per share amounts)	
Assets		
Current assets:		
Cash and cash equivalents	$ 858	$ 682
Accounts receivable—net	313	235
Inventories	290	309
Prepaid income taxes	1	28
Other current assets	26	20
Total current assets	1,488	1,274
Property, plant and equipment—net	8,336	8,623
Investment in affiliate	101	93
Goodwill	2,353	2,353
Operating lease right-of-use assets	281	—
Other assets	304	318
Total assets	$ 12,863	$ 12,661
Liabilities and Equity		
Current liabilities:		
Accounts payable and accrued expenses	$ 416	$ 545
Income taxes payable	13	5
Customer advances	21	149
Current operating lease liabilities	89	—
Current maturities of long-term debt	498	—
Other current liabilities	5	6
Total current liabilities	1,042	705
Long-term debt, net of current maturities	4,203	4,698
Deferred income taxes	1,207	1,117
Operating lease liabilities	197	—
Other liabilities	396	410
Equity:		
Stockholders' equity:		
Preferred stock—$0.01 par value, 50,000,000 shares authorized	—	—
Common stock—$0.01 par value, 500,000,000 shares authorized, 2019—218,961,651 shares issued and 2018—233,800,903 shares issued	2	2
Paid-in capital	1,299	1,368
Retained earnings	2,111	2,463
Treasury stock—at cost, 2019—42,608 shares and 2018—10,982,408 shares	(2)	(504)
Accumulated other comprehensive loss	(344)	(371)
Total stockholders' equity	3,066	2,958
Noncontrolling interest	2,752	2,773
Total equity	5,818	5,731
Total liabilities and equity	$ 12,863	$ 12,661

See accompanying Notes to Unaudited Consolidated Financial Statements.

CF INDUSTRIES HOLDINGS, INC.

CONSOLIDATED STATEMENTS OF EQUITY

(Unaudited)

	Common Stockholders							
	$0.01 Par Value Common Stock	Treasury Stock	Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity	Noncontrolling Interest	Total Equity
	(in millions, except per share amounts)							
Balance as of March 31, 2019	$ 2	$ (64)	$ 1,311	$ 2,047	$ (341)	$ 2,955	$ 2,715	$ 5,670
Net earnings	—	—	—	283	—	283	37	320
Other comprehensive loss	—	—	—	—	(3)	(3)	—	(3)
Purchases of treasury stock	—	(118)	—	—	—	(118)	—	(118)
Retirement of treasury stock	—	178	(25)	(153)	—	—	—	—
Issuance of $0.01 par value common stock under employee stock plans	—	2	2	—	—	4	—	4
Stock-based compensation expense	—	—	11	—	—	11	—	11
Cash dividends ($0.30 per share)	—	—	—	(66)	—	(66)	—	(66)
Balance as of June 30, 2019	$ 2	$ (2)	$ 1,299	$ 2,111	$ (344)	$ 3,066	$ 2,752	$ 5,818
Balance as of December 31, 2018	$ 2	$ (504)	$ 1,368	$ 2,463	$ (371)	$ 2,958	$ 2,773	$ 5,731
Net earnings	—	—	—	373	—	373	65	438
Other comprehensive income	—	—	—	—	27	27	—	27
Purchases of treasury stock	—	(178)	—	—	—	(178)	—	(178)
Retirement of treasury stock	—	682	(90)	(592)	—	—	—	—
Acquisition of treasury stock under employee stock plans	—	(4)	—	—	—	(4)	—	(4)
Issuance of $0.01 par value common stock under employee stock plans	—	2	4	—	—	6	—	6
Stock-based compensation expense	—	—	17	—	—	17	—	17
Cash dividends ($0.60 per share)	—	—	—	(133)	—	(133)	—	(133)
Distribution declared to noncontrolling interest	—	—	—	—	—	—	(86)	(86)
Balance as of June 30, 2019	$ 2	$ (2)	$ 1,299	$ 2,111	$ (344)	$ 3,066	$ 2,752	$ 5,818

(Continued)

CONSOLIDATED STATEMENTS OF EQUITY

(Continued) (Unaudited)

	Common Stockholders							
	$0.01 Par Value Common Stock	Treasury Stock	Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Total Stockholders' Equity	Noncontrolling Interests	Total Equity
	(in millions, except per share amounts)							

Balance as of March 31, 2018	$ 2	$ (1)	$ 1,405	$ 2,436	$ (248)	$ 3,594	$ 3,071	$ 6,665
Net earnings	—	—	—	148	—	148	26	174
Other comprehensive loss	—	—	—	—	(61)	(61)	—	(61)
Acquisition of treasury stock under employee stock plans	—	1	(1)	—	—	—	—	—
Issuance of $0.01 par value common stock under employee stock plans	—	—	2	—	—	2	—	2
Stock-based compensation expense	—	—	5	—	—	5	—	5
Cash dividends ($0.30 per share)	—	—	—	(70)	—	(70)	—	(70)
Acquisition of noncontrolling interests in TNCLP	—	—	(62)	—	—	(62)	(331)	(393)
Balance as of June 30, 2018	$ 2	$ —	$ 1,349	$ 2,514	$ (309)	$ 3,556	$ 2,766	$ 6,322

Balance as of December 31, 2017	$ 2	$ —	$ 1,397	$ 2,443	$ (263)	$ 3,579	$ 3,105	$ 6,684
Adoption of ASU No. 2014-09	—	—	—	(1)	—	(1)	—	(1)
Adoption of ASU No. 2016-01	—	—	—	1	(1)	—	—	—
Net earnings	—	—	—	211	—	211	51	262
Other comprehensive loss	—	—	—	—	(45)	(45)	—	(45)
Acquisition of treasury stock under employee stock plans	—	—	(1)	—	—	(1)	—	(1)
Issuance of $0.01 par value common stock under employee stock plans	—	—	4	—	—	4	—	4
Stock-based compensation expense	—	—	11	—	—	11	—	11
Cash dividends ($0.60 per share)	—	—	—	(140)	—	(140)	—	(140)
Acquisition of noncontrolling interests in TNCLP	—	—	(62)	—	—	(62)	(331)	(393)
Distribution declared to noncontrolling interest	—	—	—	—	—	—	(59)	(59)
Balance as of June 30, 2018	$ 2	$ —	$ 1,349	$ 2,514	$ (309)	$ 3,556	$ 2,766	$ 6,322

See accompanying Notes to Unaudited Consolidated Financial Statements.

CF INDUSTRIES HOLDINGS, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(Unaudited)

	Six months ended June 30,	
	2019	2018
	(in millions)	
Operating Activities:		
Net earnings	$ 438	$ 262
Adjustments to reconcile net earnings to net cash provided by operating activities:		
Depreciation and amortization	440	434
Deferred income taxes	85	2
Stock-based compensation expense	17	11
Unrealized net loss (gain) on natural gas derivatives	1	(8)
Unrealized loss on embedded derivative	2	1
Gain on disposal of property, plant and equipment	(45)	—
Undistributed earnings of affiliate—net of taxes	(10)	(3)
Changes in:		
Accounts receivable—net	(78)	(34)
Inventories	21	21
Accrued and prepaid income taxes	35	52
Accounts payable and accrued expenses	(94)	(46)
Customer advances	(128)	(68)
Other—net	9	(26)
Net cash provided by operating activities	693	598
Investing Activities:		
Additions to property, plant and equipment	(154)	(145)
Proceeds from sale of property, plant and equipment	63	16
Distributions received from unconsolidated affiliate	—	10
Other—net	—	1
Net cash used in investing activities	(91)	(118)
Financing Activities:		
Financing fees	—	1
Dividends paid on common stock	(133)	(140)
Acquisition of noncontrolling interests in TNCLP	—	(388)
Distributions to noncontrolling interests	(86)	(59)
Purchases of treasury stock	(209)	—
Issuances of common stock under employee stock plans	6	4
Shares withheld for taxes	(4)	(1)
Net cash used in financing activities	(426)	(583)
Effect of exchange rate changes on cash and cash equivalents	—	(4)
Increase (decrease) in cash and cash equivalents	176	(107)
Cash and cash equivalents at beginning of period	682	835
Cash and cash equivalents at end of period	$ 858	$ 728

See accompanying Notes to Unaudited Consolidated Financial Statements.

NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS

1. Background and Basis of Presentation

We are a leading global fertilizer and chemical company. Our 3,000 employees operate world-class manufacturing complexes in Canada, the United Kingdom and the United States. Our principal customers are cooperatives, independent fertilizer distributors, traders, wholesalers, farmers and industrial users. Our principal nitrogen fertilizer products are ammonia, granular urea, urea ammonium nitrate solution (UAN) and ammonium nitrate (AN). Our other nitrogen products include diesel exhaust fluid (DEF), urea liquor, nitric acid and aqua ammonia, which are sold primarily to our industrial customers, and compound fertilizer products (NPKs), which are solid granular fertilizer products for which the nutrient content is a combination of nitrogen, phosphorus, and potassium. We serve our customers in North America through our production, storage, transportation and distribution network. We also reach a global customer base with exports from our Donaldsonville, Louisiana, plant, the world’s largest and most flexible nitrogen complex. Additionally, we move product to international destinations from our Verdigris, Oklahoma, facility, our Yazoo City, Mississippi, facility, our Billingham and Ince facilities in the United Kingdom, and from a joint venture ammonia facility in the Republic of Trinidad and Tobago in which we own a 50 percent interest.

All references to “CF Holdings,” “the Company,” “we,” “us” and “our” refer to CF Industries Holdings, Inc. and its subsidiaries, except where the context makes clear that the reference is only to CF Industries Holdings, Inc. itself and not its subsidiaries. All references to “CF Industries” refer to CF Industries, Inc., a 100% owned subsidiary of CF Industries Holdings, Inc.

The accompanying unaudited interim consolidated financial statements have been prepared on the same basis as our audited consolidated financial statements for the year ended December 31, 2018, in accordance with U.S. generally accepted accounting principles (GAAP) for interim financial reporting. In the opinion of management, these statements reflect all adjustments, consisting only of normal and recurring adjustments, that are necessary for the fair representation of the information for the periods presented. The accompanying unaudited interim consolidated financial statements have been prepared pursuant to the rules and regulations of the Securities and Exchange Commission (SEC). Certain information and disclosures normally included in financial statements prepared in accordance with U.S. GAAP have been condensed or omitted pursuant to such rules and regulations. Operating results for any period presented apply to that period only and are not necessarily indicative of results for any future period.

The accompanying unaudited interim consolidated financial statements should be read in conjunction with our audited consolidated financial statements and related disclosures included in our 2018 Annual Report on Form 10-K filed with the SEC on February 22, 2019. The preparation of the unaudited interim consolidated financial statements requires us to make use of estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities at the date of the unaudited consolidated financial statements and the reported revenues and expenses for the periods presented. Significant estimates and assumptions are used for, but are not limited to, net realizable value of inventories, environmental remediation liabilities, environmental and litigation contingencies, the cost of customer incentives, useful lives of property and identifiable intangible assets, the assumptions used in the evaluation of potential impairments of property, investments, identifiable intangible assets and goodwill, income tax and valuation reserves, allowances for doubtful accounts receivable, the measurement of the fair values of investments for which markets are not active, assumptions used in the determination of the funded status and annual expense of defined benefit pension and other postretirement benefit plans and the assumptions used in the valuation of stock-based compensation awards granted to employees.

2. New Accounting Standards

Recently Adopted Pronouncements

On January 1, 2019, we adopted Accounting Standards Update (ASU) No. 2016-02, Leases (Topic 842), which supersedes the lease accounting requirements in ASC Topic 840, Leases. This ASU requires lessees to recognize the rights and obligations resulting from virtually all leases (other than leases that meet the definition of a short-term lease) on their balance sheets as right-of-use assets with corresponding lease liabilities. Extensive quantitative and qualitative disclosures, including significant judgments made by management, are required to provide greater insight into the extent of income and expense recognized and expected to be recognized from existing contracts. We elected the optional transition method provided under ASU No. 2018-11, Leases (Topic 842): Targeted Improvements, which provides the option to adopt ASU No. 2016-02 as of the adoption date with a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. The cumulative effect adjustment we recognized in the opening balance of retained earnings as of January 1, 2019 was not material. In addition, we elected the package of practical expedients permitted under the transition guidance within ASU No. 2016-02, which allows us to carry forward the historical lease determination, lease classification, and assessment of initial direct costs. See Note 13—Leases for additional information.

On January 1, 2019, we adopted ASU No. 2017-12, Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities, which improves the financial reporting of hedging relationships in order to better portray the economic results of an entity's risk management activities in its financial statements. The adoption of this ASU had no effect on our consolidated financial statements.

Recently Issued Pronouncements

In August 2018, the Financial Accounting Standards Board issued ASU No. 2018-15, Intangibles—Goodwill and Other—Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That is a Service Contract. This ASU aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. This ASU does not affect the accounting for the service element of a hosting arrangement that is a service contract. The amendments in this ASU are effective for annual and interim periods beginning after December 15, 2019 and can be applied either retrospectively or prospectively to all implementation costs incurred after the date of adoption. Early adoption is permitted. We plan to adopt this ASU prospectively. We do not expect that our adoption of this ASU on January 1, 2020 will have a material impact on our consolidated financial statements. However, this guidance could have an effect on future financial results if significant new software involving a cloud computing agreement is implemented. In this case, a certain portion of the implementation costs could be deferred and expensed over the term of the cloud computing arrangement.

3. Revenue Recognition

We track our revenue by product and by geography. See Note 17—Segment Disclosures for our revenue by reportable segment, which are ammonia, granular urea, UAN, AN and Other. The following table summarizes our revenue by product and by geography (based on destination of our shipment) for the three and six months ended June 30, 2019 and 2018:

	Ammonia	Granular Urea	UAN	AN	Other	Total
			(in millions)			
Three months ended June 30, 2019						
North America	$ 443	$ 413	$ 346	$ 54	$ 68	$ 1,324
Europe and other	30	20	23	72	33	178
Total revenue	$ 473	$ 433	$ 369	$ 126	$ 101	$ 1,502
Three months ended June 30, 2018						
North America	$ 349	$ 345	$ 290	$ 49	$ 64	$ 1,097
Europe and other	25	15	49	75	39	203
Total revenue	$ 374	$ 360	$ 339	$ 124	$ 103	$ 1,300

	Ammonia	Granular Urea	UAN	AN	Other	Total
			(in millions)			
Six months ended June 30, 2019						
North America	$ 603	$ 748	$ 588	$ 100	$ 127	$ 2,166
Europe and other	57	28	37	153	62	337
Total revenue	$ 660	$ 776	$ 625	$ 253	$ 189	$ 2,503
Six months ended June 30, 2018						
North America	$ 517	$ 609	$ 536	$ 94	$ 123	$ 1,879
Europe and other	69	15	86	130	78	378
Total revenue	$ 586	$ 624	$ 622	$ 224	$ 201	$ 2,257

As of June 30, 2019 and December 31, 2018, we had $21 million and $149 million, respectively, in customer advances on our consolidated balance sheets. During the six months ended June 30, 2019 and 2018, substantially all of our customer advances that were recorded at the beginning of each respective period were recognized as revenue.

We offer cash incentives to certain customers based on the volume of their purchases over a certain period. These incentives do not provide an option to the customer for additional product. The balances of customer incentives accrued at June 30, 2019 and December 31, 2018 were not material.

We have certain customer contracts with performance obligations where if the customer does not take the required amount of product specified in the contract, then the customer is required to make a payment to us, which may vary based upon the terms and conditions of the applicable contract. As of June 30, 2019, excluding contracts with original durations of less than one year, and based on the minimum product tonnage to be sold and current market price estimates, our remaining performance obligations under these contracts are approximately $1.2 billion. We expect to recognize approximately 13% of these performance obligations as revenue in the remainder of 2019, approximately 45% as revenue during 2020 and 2021, approximately 28% as revenue during 2022 and 2023, and the remainder thereafter. If these customers do not fulfill their contractual obligations under such contracts, the legally enforceable minimum amount that they would pay to us under these contracts, in the aggregate, is approximately $264 million as of June 30, 2019. Other than the performance obligations described above, any performance obligations with our customers that were unfulfilled or partially filled at December 31, 2018 will be satisfied in 2019.

4. Net Earnings Per Share

Net earnings per share were computed as follows:

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
	(in millions, except per share amounts)			
Net earnings attributable to common stockholders	$ 283	$ 148	$ 373	$ 211
Basic earnings per common share:				
Weighted-average common shares outstanding	221.1	234.0	222.2	233.9
Net earnings attributable to common stockholders	$ 1.28	$ 0.63	$ 1.68	$ 0.90
Diluted earnings per common share:				
Weighted-average common shares outstanding	221.1	234.0	222.2	233.9
Dilutive common shares—stock options	1.2	0.9	1.2	0.9
Diluted weighted-average shares outstanding	222.3	234.9	223.4	234.8
Net earnings attributable to common stockholders	$ 1.28	$ 0.63	$ 1.67	$ 0.90

In the computation of diluted earnings per common share, potentially dilutive stock options are excluded if the effect of their inclusion is anti-dilutive. Shares for anti-dilutive stock options not included in the computation of diluted earnings per common share were 1.5 million in each of the three and six months ended June 30, 2019 and 2.0 million in each of the three and six months ended June 30, 2018.

5. Inventories

Inventories consist of the following:

	June 30, 2019	December 31, 2018
	(in millions)	
Finished goods	$ 250	$ 272
Raw materials, spare parts and supplies	40	37
Total inventories	$ 290	$ 309

6. Property, Plant and Equipment—Net

Property, plant and equipment—net consists of the following:

	June 30, 2019	December 31, 2018
	(in millions)	
Land	$ 70	$ 69
Machinery and equipment	12,178	12,127
Buildings and improvements	882	886
Construction in progress	275	225
Property, plant and equipment[1]	13,405	13,307
Less: Accumulated depreciation and amortization	5,069	4,684
Property, plant and equipment—net	$ 8,336	$ 8,623

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[1] As of June 30, 2019 and December 31, 2018, we had property, plant and equipment that was accrued but unpaid of approximately $43 million and $48 million, respectively. As of June 30, 2018 and December 31, 2017, we had property, plant and equipment that was accrued but unpaid of $49 million and $46 million, respectively.

During the first quarter of 2019, we entered into an agreement to sell our Pine Bend dry bulk storage and logistics facility in Minnesota. In April 2019, we completed the sale, received proceeds of $55 million and recognized a pre-tax gain of $45 million. The gain is reflected in other operating—net in our consolidated statement of operations for the three and six months ended June 30, 2019.

Depreciation and amortization related to property, plant and equipment was $247 million and $430 million for the three and six months ended June 30, 2019, respectively, and $236 million and $421 million for the three and six months ended June 30, 2018, respectively.

Plant turnarounds—Scheduled inspections, replacements and overhauls of plant machinery and equipment at our continuous process manufacturing facilities during a full plant shutdown are referred to as plant turnarounds. The expenditures related to turnarounds are capitalized in property, plant and equipment when incurred. The following is a summary of capitalized plant turnaround costs:

	Six months ended June 30,	
	2019	2018
	(in millions)	
Net capitalized turnaround costs:		
Beginning balance	$ 252	$ 208
Additions	22	41
Depreciation	(57)	(56)
Effect of exchange rate changes	2	(2)
Ending balance	$ 219	$ 191

Scheduled replacements and overhauls of plant machinery and equipment include the dismantling, repair or replacement and installation of various components including piping, valves, motors, turbines, pumps, compressors, heat exchangers and the replacement of catalysts when a full plant shutdown occurs. Scheduled inspections are also conducted during full plant shutdowns, including required safety inspections which entail the disassembly of various components such as steam boilers, pressure vessels and other equipment requiring safety certifications. Internal employee costs and overhead amounts are not considered turnaround costs and are not capitalized.

7. Goodwill and Other Intangible Assets

The following table shows the carrying amount of goodwill by reportable segment as of June 30, 2019 and December 31, 2018:

	Ammonia	Granular Urea	UAN	AN	Other	Total
			(in millions)			
Balance as of December 31, 2018	$ 586	$ 828	$ 576	$ 292	$ 71	$ 2,353
Effect of exchange rate changes[1]	—	—	—	—	—	—
Balance as of June 30, 2019	$ 586	$ 828	$ 576	$ 292	$ 71	$ 2,353

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(1) The effect of exchange rate changes on the carrying amount of goodwill was immaterial for the six months ended June 30, 2019.

All of our identifiable intangible assets have definite lives and are presented in other assets on our consolidated balance sheets at gross carrying amount, net of accumulated amortization, as follows:

	June 30, 2019			December 31, 2018		
	Gross Carrying Amount	Accumulated Amortization	Net	Gross Carrying Amount	Accumulated Amortization	Net
			(in millions)			
Customer relationships	$ 127	$ (40)	$ 87	$ 127	$ (37)	$ 90
TerraCair brand	—	—	—	10	(10)	—
Trade names	30	(6)	24	30	(5)	25
Total intangible assets	$ 157	$ (46)	$ 111	$ 167	$ (52)	$ 115

Our intangible assets are being amortized over a weighted-average life of approximately 20 years. Amortization expense of our identifiable intangible assets was $2 million and $4 million for the three and six months ended June 30, 2019, respectively, and $3 million and $5 million for the three and six months ended June 30, 2018, respectively. The gross carrying amount and accumulated amortization of our intangible assets are also impacted by the effect of exchange rate changes. Total estimated amortization expense for the remainder of 2019 and each of the five succeeding fiscal years is as follows:

	Estimated Amortization Expense
	(in millions)
Remainder of 2019	$ 4
2020	8
2021	8
2022	8
2023	8
2024	8

8. Equity Method Investment

We have a 50% ownership interest in Point Lisas Nitrogen Limited (PLNL), which operates an ammonia production facility in the Republic of Trinidad and Tobago. We include our share of the net earnings from this equity method investment as an element of earnings from operations because PLNL provides additional production to our operations and is integrated with our other supply chain and sales activities in the ammonia segment.

As of June 30, 2019, the total carrying value of our equity method investment in PLNL was $101 million, $47 million more than our share of PLNL's book value. The excess is attributable to the purchase accounting impact of our acquisition of the investment in PLNL and reflects the revaluation of property, plant and equipment. The increased basis for property, plant and equipment is being amortized over a remaining period of approximately 14 years. Our equity in earnings of PLNL is different from our ownership interest in income reported by PLNL due to amortization of this basis difference.

We have transactions in the normal course of business with PLNL reflecting our obligation to purchase 50% of the ammonia produced by

PLNL at current market prices. Our ammonia purchases from PLNL totaled $12 million and $34 million for the three and six months ended June 30, 2019, respectively, and $9 million and $38 million for the three and six months ended June 30, 2018, respectively.

The Trinidadian tax authority (the Board of Inland Revenue) has issued PLNL a tax assessment with respect to tax years 2011 and 2012 in the aggregate amount of approximately $12 million, in addition to interest and penalties with respect to tax years 2011 and 2012 in the aggregate amount of approximately $22 million, for alleged underpayment of withholding taxes on distributions made by PLNL to its owners. Since we own a 50% interest in PLNL, our effective share of any assessment that is determined to be a liability of PLNL would be 50%, which would be reflected as a reduction in our equity in earnings of PLNL. The Board of Inland Revenue has not provided PLNL with the legal or factual basis for the assessment. As a result, PLNL cannot assess the likelihood of the outcome of this matter and we cannot assess the potential foreign tax credit we may be eligible for, if the withholding tax amount was determined to be a liability of PLNL.

PLNL operates an ammonia plant that relies on natural gas supplied, under a Gas Sales Contract (the NGC Contract), by The National Gas Company of Trinidad and Tobago Limited (NGC). PLNL experienced past curtailments in the supply of natural gas from NGC, which reduced historical ammonia production at PLNL. The NGC Contract had an initial expiration date of September 2018 and was extended on the same terms until September 2023. Any NGC commitment to supply gas beyond 2023 will be based on new agreements. In May 2018, the NGC and PLNL reached a settlement of an arbitration proceeding regarding PLNL's claims for damages due to the natural gas supply curtailments. The net after-tax impact of the settlement reached between NGC and PLNL that is recognized in our consolidated statements of operations for the three and six months ended June 30, 2018 was an increase in our equity in earnings of operating affiliates of approximately $19 million.

9. Fair Value Measurements

Our cash and cash equivalents and other investments consist of the following:

	June 30, 2019			
	Cost Basis	Unrealized Gains	Unrealized Losses	Fair Value
	(in millions)			
Cash	$ 52	$ —	$ —	$ 52
Cash equivalents:				
U.S. and Canadian government obligations	794	—	—	794
Other debt securities	12	—	—	12
Total cash and cash equivalents	$ 858	$ —	$ —	$ 858
Nonqualified employee benefit trusts	17	2	—	19

	December 31, 2018			
	Cost Basis	Unrealized Gains	Unrealized Losses	Fair Value
	(in millions)			
Cash	$ 34	$ —	$ —	$ 34
Cash equivalents:				
U.S. and Canadian government obligations	623	—	—	623
Other debt securities	25	—	—	25
Total cash and cash equivalents	$ 682	$ —	$ —	$ 682
Nonqualified employee benefit trusts	17	2	—	19

Under our short-term investment policy, we may invest our cash balances, either directly or through mutual funds, in several types of investment-grade securities, including notes and bonds issued by governmental entities or corporations. Securities issued by governmental entities include those issued directly by the U.S. and Canadian federal governments; those issued by state, local or other governmental entities; and those guaranteed by entities affiliated with governmental entities.

Assets and Liabilities Measured at Fair Value on a Recurring Basis

The following tables present assets and liabilities included in our consolidated balance sheets as of June 30, 2019 and December 31, 2018 that are recognized at fair value on a recurring basis, and indicate the fair value hierarchy utilized to determine such fair value:

	June 30, 2019			
	Total Fair Value	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
	(in millions)			
Cash equivalents	$ 806	$ 806	$ —	$ —
Nonqualified employee benefit trusts	19	19	—	—
Embedded derivative liability	(23)	—	(23)	—

	December 31, 2018			
	Total Fair Value	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
	(in millions)			
Cash equivalents	$ 648	$ 648	$ —	$ —
Nonqualified employee benefit trusts	19	19	—	—
Embedded derivative liability	(21)	—	(21)	—

Cash Equivalents

As of June 30, 2019 and December 31, 2018, our cash equivalents consisted primarily of U.S. and Canadian government obligations and money market mutual funds that invest in U.S. government obligations and other investment-grade securities.

Nonqualified Employee Benefit Trusts

We maintain trusts associated with certain nonqualified supplemental pension plans. The fair values of the trust assets are based on daily quoted prices in an active market, which represents the net asset values of the shares held in the trusts, and are included on our consolidated balance sheets in other assets. Debt securities are accounted for as available-for-sale securities. Changes in the fair value of equity securities in the trust assets are recognized through earnings.

Embedded Derivative Liability

Under the terms of our strategic venture with CHS Inc. (CHS), if our credit rating as determined by two of three specified credit rating agencies is below certain levels, we are required to make a non-refundable yearly payment of $5 million to CHS. Since our credit ratings were below certain levels in 2016, 2017 and 2018, we made a payment of $5 million to CHS in the fourth quarter of each year. These payments will continue on a yearly basis until the earlier of the date that our credit rating is upgraded to or above certain levels by two of the three specified credit rating agencies or February 1, 2026. This obligation is recognized on our consolidated balance sheets as an embedded derivative. As of June 30, 2019 and December 31, 2018, the embedded derivative liability of $23 million and $21 million, respectively, is included in other current liabilities and other liabilities on our consolidated balance sheets. Included in other operating—net in our consolidated statement of operations for the six months ended June 30, 2019 and 2018 is a net loss of $2 million and $1 million, respectively.

The inputs into the fair value measurement include the probability of future upgrades and downgrades of our credit rating based on historical credit rating movements of other public companies and the discount rates to be applied to potential annual payments based on applicable credit spreads of other public companies at different credit rating levels. Based on these inputs, our fair value measurement is classified as Level 2.

See Note 14—Noncontrolling Interests for additional information regarding our strategic venture with CHS.

Financial Instruments

The carrying amount and estimated fair value of our financial instruments are as follows:

	June 30, 2019		December 31, 2018	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
	(in millions)			
Long-term debt	$ 4,701	$ 4,669	$ 4,698	$ 4,265

The fair value of our long-term debt was based on quoted prices for identical or similar liabilities in markets that are not active or valuation models in which all significant inputs and value drivers are observable and, as a result, they are classified as Level 2 inputs.

The carrying amounts of cash and cash equivalents, as well as instruments included in other current assets and other current liabilities that meet the definition of financial instruments, approximate fair values because of their short-term maturities.

Assets and Liabilities Measured at Fair Value on a Nonrecurring Basis

We also have assets and liabilities that may be measured at fair value on a nonrecurring basis; that is, the assets and liabilities are not measured at fair value on an ongoing basis, but are subject to fair value adjustments in certain circumstances, such as when there is evidence of impairment, when there is allocation of purchase price in an acquisition or when a new liability is being established that requires fair value measurement. These include long-lived assets, goodwill and other intangible assets and investments in unconsolidated subsidiaries, such as equity method investments, which may be written down to fair value as a result of impairment. The fair value measurements related to each of these rely primarily on Company-specific inputs and the Company's assumptions about the use of the assets. Since certain of the Company's assumptions would involve inputs that are not observable, these fair values would reside within Level 3 of the fair value hierarchy.

10. Income Taxes

For the three months ended June 30, 2019, we recorded an income tax provision of $102 million on pre-tax income of $422 million, or an effective tax rate of 24.2%, compared to an income tax provision of $44 million on pre-tax income of $218 million, or an effective tax rate of 20.2%, for the three months ended June 30, 2018.

For the six months ended June 30, 2019, our income tax provision includes an incentive tax credit from the State of Louisiana of $30 million, net of federal income tax, related to certain capital projects at our Donaldsonville, Louisiana complex.

Our effective tax rate is also impacted by earnings attributable to noncontrolling interest in CF Industries Nitrogen, LLC (CFN), as our consolidated income tax provision does not include a tax provision on the earnings attributable to the noncontrolling interest. Our effective tax rate for the three months ended June 30, 2019 of 24.2%, which is based on pre-tax income of $422 million, would be 26.5% exclusive of the earnings attributable to the noncontrolling interests of $37 million. Our effective tax rate for the three months ended June 30, 2018 of 20.2%, which is based on pre-tax income of $218 million, would be 23.0% exclusive of the earnings attributable to the noncontrolling interests of $26 million. See Note 14—Noncontrolling Interests for additional information.

On April 2, 2018, we purchased all of the outstanding publicly traded common units of TNCLP. Our effective tax rate in the second quarter of 2018 is impacted by a $20 million reduction to our deferred tax liability due to the change in our effective state income tax rate as a result of the implementation of legal entity structure changes related to the acquisition. See Note 14—Noncontrolling Interests for additional information.

11. Interest Expense

Details of interest expense are as follows:

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
	(in millions)			
Interest on borrowings[1]	$ 57	$ 57	$ 114	$ 114
Fees on financing agreements[1]	3	4	6	7
Interest on tax liabilities	—	—	—	1
Interest capitalized	(1)	—	(1)	(1)
Total interest expense	$ 59	$ 61	$ 119	$ 121

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(1) See Note 12—Financing Agreements for additional information.

12. Financing Agreements

Revolving Credit Agreement

We have a senior secured revolving credit agreement (the Revolving Credit Agreement) providing for a revolving credit facility of up to $750 million with a maturity of September 18, 2020. The Revolving Credit Agreement includes a letter of credit sub-limit of $125 million. Borrowings under the Revolving Credit Agreement may be used for working capital and general corporate purposes. CF Industries, the borrower under the Revolving Credit Agreement, may also designate as borrowers one or more wholly owned subsidiaries that are organized in the United States or any state thereof or the District of Columbia.

Borrowings under the Revolving Credit Agreement may be denominated in dollars, Canadian dollars, euros and British pounds, and bear interest at a per annum rate equal to an applicable eurocurrency rate or base rate plus, in either case, a specified margin, and the borrowers are required to pay an undrawn commitment fee on the undrawn portion of the commitments under the Revolving Credit Agreement and customary letter of credit fees. The specified margin and the amount of the commitment fee depend on CF Holdings' credit rating at the time.

The guarantors under the Revolving Credit Agreement are currently comprised of CF Holdings and CF Holdings' wholly owned subsidiaries CF Industries Enterprises, LLC (CFE), CF Industries Sales, LLC (CFS), CF USA Holdings, LLC (CF USA) and CF Industries Distribution Facilities, LLC (CFIDF).

As of June 30, 2019, we had excess borrowing capacity under the Revolving Credit Agreement of $750 million and no outstanding letters of credit. There were no borrowings outstanding under the Revolving Credit Agreement as of June 30, 2019 or December 31, 2018, or during the six months ended June 30, 2019.

The Revolving Credit Agreement contains representations and warranties and affirmative and negative covenants, including financial covenants. As of June 30, 2019, we were in compliance with all covenants under the Revolving Credit Agreement.

Letters of Credit

In addition to the letter of credit capacity under the Revolving Credit Agreement, as described above, we have also entered into a bilateral agreement with capacity to issue letters of credit up to $145 million (reflecting an increase of $20 million in January 2019). As of June 30, 2019, approximately $131 million of letters of credit were outstanding under this agreement.

Senior Notes

Long-term debt, including current maturities of long-term debt, presented on our consolidated balance sheets as of June 30, 2019 and December 31, 2018 consisted of the following Public Senior Notes (unsecured) and Senior Secured Notes issued by CF Industries:

	Effective Interest Rate	June 30, 2019		December 31, 2018	
		Principal	Carrying Amount [1]	Principal	Carrying Amount [1]
		(in millions)			
Public Senior Notes:					
7.125% due May 2020	7.529%	$ 500	$ 498	$ 500	$ 497
3.450% due June 2023	3.562%	750	747	750	747
5.150% due March 2034	5.279%	750	740	750	740
4.950% due June 2043	5.031%	750	742	750	741
5.375% due March 2044	5.465%	750	741	750	741
Senior Secured Notes:					
3.400% due December 2021	3.782%	500	495	500	495
4.500% due December 2026	4.759%	750	738	750	737
Total long-term debt		$ 4,750	$ 4,701	$ 4,750	$ 4,698
Less: Current maturities of long-term debt		500	498	—	—
Long-term debt, net of current maturities		$ 4,250	$ 4,203	$ 4,750	$ 4,698

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(1) Carrying amount is net of unamortized debt discount and deferred debt issuance costs. Total unamortized debt discount was $11 million as of both June 30, 2019 and December 31, 2018, and total deferred debt issuance costs were $38 million and $41 million as of June 30, 2019 and December 31, 2018, respectively.

Public Senior Notes

Under the indentures (including the applicable supplemental indentures) governing the senior notes due 2020, 2023, 2034, 2043 and 2044 identified in the table above (the Public Senior Notes), each series of Public Senior Notes is guaranteed by CF Holdings and CF Holdings' wholly owned subsidiaries CFE, CFS, CF USA and CFIDF. CFE, CFS, CF USA and CFIDF became subsidiary guarantors of the Public Senior Notes as a result of their becoming guarantors under the Revolving Credit Agreement. Interest on the Public Senior Notes is payable semiannually, and the Public Senior Notes are redeemable at our option, in whole at any time or in part from time to time, at specified make-whole redemption prices.

Senior Secured Notes

On November 21, 2016, CF Industries issued $500 million aggregate principal amount of 3.400% senior secured notes due 2021 (the 2021 Notes) and $750 million aggregate principal amount of 4.500% senior secured notes due 2026 (the 2026 Notes, and together with the 2021 Notes, the Senior Secured Notes). CF Holdings and the subsidiary guarantors of the Public Senior Notes are also guarantors of the Senior Secured Notes. Interest on the Senior Secured Notes is payable semiannually on December 1 and June 1, and the Senior Secured Notes are redeemable at our option, in whole at any time or in part from time to time, at specified make-whole redemption prices.

13. Leases

Right-of-use (ROU) assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. ROU assets and lease liabilities are recognized at the lease commencement date based on the present value of lease payments over the lease term. The discount rate used to calculate the present value represents our secured incremental borrowing rate and is calculated based on the treasury yield curve commensurate with the term of each lease, and a spread representative of our secured borrowing costs. Our lease terms may include options to extend or terminate the lease when it is reasonably certain that we will exercise that option.

For operating leases, rental payments, including rent holidays, leasehold incentives, and scheduled rent increases are expensed on a straight-line basis. For finance leases, if any, ROU assets are amortized over the lease term on a straight-line basis and interest expense is recognized using the effective interest method and based on the lease liability at period end. Leasehold improvements are amortized over the shorter of the depreciable lives of the corresponding fixed assets or the lease term including any applicable renewals. We have made an accounting policy election to not include leases with an initial term of 12 months or less on the balance sheet.

We have operating leases for certain property and equipment under various noncancelable agreements, the most significant of which are rail car leases and barge tow charters for the distribution of our products. The rail car leases currently have minimum terms ranging from one to eleven years and the barge tow charter commitments range from one to seven years. Our rail car leases and barge tow charters commonly contain provisions for automatic annual renewal that can extend the lease term unless canceled by either party. We also have operating leases for terminal and warehouse storage for our distribution system, some of which contain minimum throughput requirements. The storage agreements contain minimum terms generally ranging from one to five years and commonly contain provisions for automatic annual renewal thereafter unless canceled by either party. The renewal provisions for our rail car leases, barge tow charters and terminal and warehouse storage agreements are not reasonably certain to be exercised. For all rail car leases, barge tow charters, and terminal and warehouse storage agreements, we have made an accounting policy election to not separate lease and non-lease components, such as operating costs and maintenance, due to the unavailability of sufficient data. As a result, the non-lease components are included in the ROU assets and lease liabilities on our balance sheet.

The components of lease costs were as follows:

	Three months ended June 30, 2019	Six months ended June 30, 2019
	(in millions)	
Operating lease cost	$ 24	$ 47
Short-term lease cost	7	14
Total lease cost	$ 31	$ 61

Supplemental cash flow information related to leases was as follows:

	Six months ended June 30, 2019
	(in millions)
Operating cash flows - cash paid for amounts included in the measurement of operating lease liabilities	$ 42
ROU assets obtained in exchange for operating lease obligations	32

Supplemental balance sheet information related to leases was as follows:

	June 30, 2019
	(in millions)
Operating lease ROU assets	$ 281
Current operating lease liabilities	$ 89
Operating lease liabilities	197
Total operating lease liabilities	$ 286

	June 30, 2019
Operating leases	
Weighted average remaining lease term	5 years
Weighted average discount rate[(1)]	4.9%

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(1) Upon adoption of the new lease accounting standard, discount rates used for existing leases were established at January 1, 2019. See Note 2—New Accounting Standards.

The following table reconciles the undiscounted cash flows for our operating leases to the operating lease liabilities recorded on our consolidated balance sheet as of June 30, 2019.

	Operating lease payments
	(in millions)
Remainder of 2019	$ 46
2020	85
2021	64
2022	42
2023	28
Thereafter	57
Total lease payments	322
Less: imputed interest	(36)
Total operating lease liabilities	286
Less: Current operating lease liabilities	(89)
Long-term operating lease liabilities	$ 197

As of June 30, 2019, we have entered into additional leases that had not yet commenced. These leases have been excluded from total operating lease liabilities and will commence in fiscal years 2019 and 2020 with future minimum payments of $18 million and lease terms ranging from five to ten years.

As previously disclosed in our 2018 Annual Report on Form 10-K and under the previous lease accounting standard, the future minimum lease payments for operating leases having initial or remaining noncancelable lease terms in excess of one year as of December 31, 2018 were as follows:

	Operating lease payments
	(in millions)
2019	$ 93
2020	80
2021	59
2022	41
2023	28
Thereafter	62
Total lease payments	$ 363

14. Noncontrolling Interests

A reconciliation of the beginning and ending balances of noncontrolling interests and distributions payable to noncontrolling interests in our consolidated balance sheets is provided below.

	2019	2018		
	CFN	CFN	TNCLP	Total
	(in millions)			
Noncontrolling interests:				
Balance as of January 1	$ 2,773	$ 2,772	$ 333	$ 3,105
Earnings attributable to noncontrolling interests	65	43	8	51
Declaration of distributions payable	(86)	(49)	(10)	(59)
Purchase of the TNCLP Public Units	—	—	(331)	(331)
Balance as of June 30	$ 2,752	$ 2,766	$ —	$ 2,766
Distributions payable to noncontrolling interests:				
Balance as of January 1	$ —	$ —	$ —	$ —
Declaration of distributions payable	86	49	10	59
Distributions to noncontrolling interests	(86)	(49)	(10)	(59)
Balance as of June 30	$ —	$ —	$ —	$ —

CF Industries Nitrogen, LLC (CFN)

We have a strategic venture with CHS under which they own an equity interest in CFN, a subsidiary of CF Holdings, which represents approximately 11% of the membership interests of CFN. We own the remaining membership interests. Under the terms of CFN's limited liability company agreement, each member's interest will reflect, over time, the impact of the profitability of CFN and any member contributions made to, and distributions received from, CFN. For financial reporting purposes, the assets, liabilities and earnings of the strategic venture are consolidated into our financial statements. CHS' interest in the strategic venture is recorded in noncontrolling interests in our consolidated financial statements. CHS also receives deliveries pursuant to a supply agreement under which CHS has the right to purchase annually from CFN up to approximately 1.1 million tons of granular urea and 580,000 tons of UAN at market prices. As a result of its equity interest in CFN, CHS is entitled to semi-annual cash distributions from CFN. We are also entitled to semi-annual cash distributions from CFN. The amounts of distributions from CFN to us and CHS are based generally on the profitability of CFN and determined based on the volume of granular urea and UAN sold by CFN to us and CHS pursuant to supply agreements, less a formula driven amount based primarily on the cost of natural gas used to produce the granular urea and UAN, and adjusted for the allocation of items such as operational efficiencies and overhead amounts. Additionally, under the terms of the strategic venture, we recognized an embedded derivative related to our credit rating. See Note 9—Fair Value Measurements for additional information.

On July 31, 2019, the CFN Board of Managers approved semi-annual distribution payments for the distribution period ended June 30, 2019 in accordance with CFN's limited liability company agreement. On July 31, 2019, CFN distributed $100 million to CHS for the distribution period ended June 30, 2019.

Terra Nitrogen Company, L.P. (TNCLP)

On February 7, 2018, we announced that, in accordance with the terms of TNCLP's First Amended and Restated Agreement of Limited Partnership (as amended by Amendment No. 1 to the First Amended and Restated Agreement of Limited Partnership, the TNCLP Agreement of Limited Partnership), Terra Nitrogen GP Inc. (TNGP), the sole general partner of TNCLP and an indirect wholly owned subsidiary of CF Holdings, elected to exercise its right to purchase all of the 4,612,562 publicly traded common units of TNCLP (the TNCLP Public Units). On April 2, 2018, TNGP completed its purchase of the TNCLP Public Units (the Purchase) for an aggregate cash purchase price of $388 million, at which time we recognized a reduction in paid-in capital of $62 million; a deferred tax liability of $5 million; and the removal of the TNCLP noncontrolling interests, as shown in the table above. Upon completion of the Purchase, CF Holdings owned, through its subsidiaries, 100 percent of the general and limited partnership interests of TNCLP.

Prior to April 2, 2018, TNCLP was a master limited partnership that owned a nitrogen fertilizer manufacturing facility in Verdigris, Oklahoma. We owned approximately 75.3% of TNCLP through general and limited partnership interests and outside investors owned the remaining approximately 24.7% of the limited partnership interests. For financial reporting purposes, the assets, liabilities and earnings of the partnership were consolidated into our financial statements. The outside investors’ limited partnership interests in TNCLP were recorded in noncontrolling interests in our consolidated financial statements. The noncontrolling interest represented the noncontrolling unitholders’ interest (prior to the Purchase) in the earnings and equity of TNCLP. Affiliates of CF Industries were required to purchase all of TNCLP’s fertilizer products at market prices as defined in the Amendment to the General and Administrative Services and Product Offtake Agreement, dated September 28, 2010.

Prior to April 2, 2018, TNCLP made cash distributions to the general and limited partners based on formulas defined within the TNCLP Agreement of Limited Partnership. Cash available for distribution (Available Cash) was defined in the TNCLP Agreement of Limited Partnership generally as all cash receipts less all cash disbursements, less certain reserves (including reserves for future operating and capital needs) established as the general partner determined in its reasonable discretion to be necessary or appropriate. Changes in working capital affected Available Cash, as increases in the amount of cash invested in working capital items (such as increases in receivables or inventory and decreases in accounts payable) reduced Available Cash, while declines in the amount of cash invested in working capital items increased Available Cash. Cash distributions to the limited partners and general partner varied depending on the extent to which the cumulative distributions exceeded certain target threshold levels set forth in the TNCLP Agreement of Limited Partnership.

15. Stockholders’ Equity

Treasury Stock

On August 1, 2018, our Board of Directors (the Board) authorized the repurchase of up to $500 million of CF Holdings common stock through June 30, 2020 (the 2018 Share Repurchase Program). In 2018, we completed the 2018 Share Repurchase Program with the repurchase of 10.9 million shares for $500 million, of which $33 million was accrued and unpaid at December 31, 2018. In February 2019, we retired all 10.9 million shares that were repurchased under the 2018 Share Repurchase Program.

On February 13, 2019, the Board authorized the repurchase of up to $1 billion of CF Holdings common stock through December 31, 2021 (the 2019 Share Repurchase Program). Repurchases under the 2019 Share Repurchase Program may be made from time to time in the open market, through privately negotiated transactions, block transactions or otherwise. The manner, timing and amount of repurchases will be determined by our management based on the evaluation of market conditions, stock price, and other factors. In the six months ended June 30, 2019, we repurchased approximately 4.2 million shares for $178 million, of which $2 million was accrued and unpaid at June 30, 2019. In June 2019, we retired approximately 4.2 million shares that were repurchased under the 2019 Share Repurchase Program. At June 30, 2019, we held 42,608 shares of treasury stock.

Accumulated Other Comprehensive Income (Loss)

Changes to accumulated other comprehensive income (loss) are as follows:

	Foreign Currency Translation Adjustment	Unrealized Gain (Loss) on Securities	Unrealized Gain on Derivatives	Defined Benefit Plans	Accumulated Other Comprehensive Income (Loss)
			(in millions)		
Balance as of December 31, 2017	$ (145)	$ 1	$ 4	$ (123)	$ (263)
Adoption of ASU 2016-01	—	(1)	—	—	(1)
Unrealized loss	—	(1)	—	—	(1)
Gain arising during the period	—	—	—	5	5
Reclassification to earnings[(1)]	—	—	—	1	1
Effect of exchange rate changes and deferred taxes	(50)	—	—	—	(50)
Balance as of June 30, 2018	$ (195)	$ (1)	$ 4	$ (117)	$ (309)
Balance as of December 31, 2018	$ (250)	$ —	$ 5	$ (126)	$ (371)
Gain arising during the period	—	—	—	5	5
Reclassification to earnings[(1)]	—	—	—	(1)	(1)
Effect of exchange rate changes and deferred taxes	24	—	—	(1)	23
Balance as of June 30, 2019	$ (226)	$ —	$ 5	$ (123)	$ (344)

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(1) Reclassifications out of accumulated other comprehensive income (loss) to earnings during the three and six months ended June 30, 2019 and 2018 were not material.

16. Contingencies

Litigation

West Fertilizer Co.

On April 17, 2013, there was a fire and explosion at the West Fertilizer Co. fertilizer storage and distribution facility in West, Texas. According to published reports, 15 people were killed and approximately 200 people were injured in the incident, and the fire and explosion damaged or destroyed a number of homes and buildings around the facility. Various subsidiaries of CF Industries Holdings, Inc. (the CF Entities) were named as defendants along with other companies in lawsuits filed in 2013, 2014 and 2015 in the District Court of McLennan County, Texas by the City of West, individual residents of the County and other parties seeking recovery for damages allegedly sustained as a result of the explosion. The cases were consolidated for discovery and pretrial proceedings in the District Court of McLennan County under the caption “In re: West Explosion Cases.” The two-year statute of limitations expired on April 17, 2015. As of that date, over 400 plaintiffs had filed claims, including at least 9 entities, 325 individuals, and 80 insurance companies. Plaintiffs allege various theories of negligence, strict liability, and breach of warranty under Texas law. Although we do not own or operate the facility or directly sell our products to West Fertilizer Co., products that the CF Entities manufactured and sold to others were delivered to the facility and may have been stored at the West facility at the time of the incident.

The Court granted in part and denied in part the CF Entities’ Motions for Summary Judgment in August 2015. Over two hundred cases have been resolved pursuant to confidential settlements that have been or we expect will be fully funded by insurance. The remaining cases are in various stages of discovery and pre-trial proceedings. The next group of cases was reset for trial beginning on September 16, 2019. We believe we have strong legal and factual defenses and intend to continue defending the CF Entities vigorously in the pending lawsuits. The Company cannot provide a range of reasonably possible loss due to the lack of damages discovery for many of the remaining claims and the uncertain nature of this litigation, including uncertainties around the potential allocation of responsibility by a jury to other defendants or responsible third parties. The recognition of a potential loss in the future in the West Fertilizer Co. litigation could negatively affect our results in the period of recognition. However, based upon currently available information, including available insurance coverage, we do not believe that this litigation will have a material adverse effect on our consolidated financial position, results of operations or cash flows.

Other Litigation

From time to time, we are subject to ordinary, routine legal proceedings related to the usual conduct of our business, including proceedings regarding public utility and transportation rates, environmental matters, taxes and permits relating to the operations of our various plants and facilities. Based on the information available as of the date of this filing, we believe that the ultimate outcome of these routine matters will not have a material adverse effect on our consolidated financial position, results of operations or cash flows.

Environmental

From time to time, we receive notices from governmental agencies or third parties alleging that we are a potentially responsible party at certain cleanup sites under CERCLA or other environmental cleanup laws. In 2011, we received a notice from the Idaho Department of Environmental Quality (IDEQ) that alleged that we were a potentially responsible party for the cleanup of a former phosphate mine site we owned in the late 1950s and early 1960s located in Georgetown Canyon, Idaho. The current property owner and a former mining contractor received similar notices for the site. In 2014, we and the current property owner entered into a Consent Order with IDEQ and the U.S. Forest Service to conduct a remedial investigation and feasibility study of the site. In 2015, we and several other parties received a notice that the U.S. Department of the Interior and other trustees intend to undertake a natural resource damage assessment for 17 former phosphate mines in southeast Idaho, one of which is the former Georgetown Canyon mine. We are not able to estimate at this time our potential liability, if any, with respect to the cleanup of the site or a possible claim for natural resource damages. However, based on currently available information, we do not expect the remedial or financial obligations to which we may be subject involving this or other cleanup sites will have a material adverse effect on our consolidated financial position, results of operations or cash flows.

17. Segment Disclosures

Our reportable segments consist of ammonia, granular urea, UAN, AN and Other. These segments are differentiated by products. Our management uses gross margin to evaluate segment performance and allocate resources. Total other operating costs and expenses (consisting of selling, general and administrative expenses and other operating—net) and non-operating expenses (interest and income taxes) are centrally managed and are not included in the measurement of segment profitability reviewed by management.

Our assets, with the exception of goodwill, are not monitored by or reported to our chief operating decision maker by segment; therefore, we do not present total assets by segment. Goodwill by segment is presented in Note 7—Goodwill and Other Intangible Assets.

Segment data for sales, cost of sales and gross margin for the three and six months ended June 30, 2019 and 2018 are presented in the tables below.

	Ammonia	Granular Urea[1]	UAN[1]	AN[1]	Other[1]	Consolidated
	(in millions)					
Three months ended June 30, 2019						
Net sales	$ 473	$ 433	$ 369	$ 126	$ 101	$ 1,502
Cost of sales	300	251	277	94	81	1,003
Gross margin	$ 173	$ 182	$ 92	$ 32	$ 20	499
Total other operating costs and expenses						25
Equity in earnings of operating affiliate						1
Operating earnings						$ 475
Three months ended June 30, 2018						
Net sales	$ 374	$ 360	$ 339	$ 124	$ 103	$ 1,300
Cost of sales	272	255	258	117	86	988
Gross margin	$ 102	$ 105	$ 81	$ 7	$ 17	312
Total other operating costs and expenses						56
Equity in earnings of operating affiliate						18
Operating earnings						$ 274

	Ammonia	Granular Urea[1]	UAN[1]	AN[1]	Other[1]	Consolidated
	(in millions)					
Six months ended June 30, 2019						
Net sales	$ 660	$ 776	$ 625	$ 253	$ 189	$ 2,503
Cost of sales	466	479	472	208	159	1,784
Gross margin	$ 194	$ 297	$ 153	$ 45	$ 30	719
Total other operating costs and expenses						87
Equity in earnings of operating affiliate						8
Operating earnings						$ 640
Six months ended June 30, 2018						
Net sales	$ 586	$ 624	$ 622	$ 224	$ 201	$ 2,257
Cost of sales	460	444	488	191	172	1,755
Gross margin	$ 126	$ 180	$ 134	$ 33	$ 29	502
Total other operating costs and expenses						92
Equity in earnings of operating affiliate						25
Operating earnings						$ 435

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[1] The cost of the products that are upgraded into other products is transferred at cost into the upgraded product results.

18. Condensed Consolidating Financial Statements

The following condensed consolidating financial information is presented in accordance with SEC Regulation S-X Rule 3-10, *Financial statements of guarantors and issuers of guaranteed securities registered or being registered*, and relates to (i) the senior notes due 2020, 2023, 2034, 2043 and 2044 (described in Note 12—Financing Agreements and referred to in this report as the Public Senior Notes) issued by CF Industries, Inc. (CF Industries), a 100% owned subsidiary of CF Industries Holdings, Inc. (Parent), and guarantees of the Public Senior Notes by Parent and by CFE, CFS, CF USA and CFIDF (the Subsidiary Guarantors), which are 100% owned subsidiaries of Parent, and (ii) debt securities of CF Industries (Other Debt Securities), and guarantees thereof by Parent and the Subsidiary Guarantors, that may be offered and sold from time to time under registration statements that may be filed by Parent, CF Industries and the Subsidiary Guarantors with the SEC.

In the event that a subsidiary of Parent, other than CF Industries, becomes a borrower or a guarantor under the Revolving Credit Agreement (or any renewal, replacement or refinancing thereof), such subsidiary would be required to become a guarantor of the Public Senior Notes, provided that such requirement will no longer apply with respect to the Public Senior Notes due 2023, 2034, 2043 and 2044 following the repayment of the Public Senior Notes due 2020 or the subsidiaries of Parent, other than CF Industries, otherwise becoming no longer subject to such a requirement to guarantee the Public Senior Notes due 2020. The Subsidiary Guarantors became guarantors of the Public Senior Notes as a result of this requirement.

All of the guarantees of the Public Senior Notes are, and we have assumed for purposes of this presentation of condensed consolidating financial information that the guarantees of any Other Debt Securities would be, full and unconditional (as such term is defined in SEC Regulation S-X Rule 3-10(h)) and joint and several. The guarantee of a Subsidiary Guarantor will be automatically released with respect to a series of the Public Senior Notes (1) upon the release, discharge or termination of such Subsidiary Guarantor's guarantee of the Revolving Credit Agreement (or any renewal, replacement or refinancing thereof), (2) upon legal defeasance with respect to the Public Senior Notes of such series or satisfaction and discharge of the indenture with respect to such series of Public Senior Notes or (3) in the case of the Public Senior Notes due 2023, 2034, 2043 and 2044, upon the discharge, termination or release of, or the release of such Subsidiary Guarantor from its obligations under, such Subsidiary Guarantor's guarantee of the Public Senior Notes due 2020, including, without limitation, any such discharge, termination or release as a result of retirement, discharge or legal or covenant defeasance of, or satisfaction and discharge of the supplemental indenture governing, the Public Senior Notes due 2020.

For purposes of the presentation of condensed consolidating financial information, the subsidiaries of Parent other than CF Industries and the Subsidiary Guarantors are referred to as the Non-Guarantors.

Presented below are condensed consolidating statements of operations and statements of comprehensive income for Parent, CF Industries, the Subsidiary Guarantors and the Non-Guarantors for the three and six months ended June 30, 2019 and 2018, condensed consolidating statements of cash flows for Parent, CF Industries, the Subsidiary Guarantors and the Non-Guarantors for the six months ended June 30, 2019 and 2018, and condensed consolidating balance sheets for Parent, CF Industries, the Subsidiary Guarantors and the Non-Guarantors as of June 30, 2019 and December 31, 2018. The condensed consolidating financial information presented below is not necessarily indicative of the financial position, results of operations, comprehensive income or cash flows of Parent, CF Industries, the Subsidiary Guarantors or the Non-Guarantors on a stand-alone basis.

In these condensed consolidating financial statements, investments in subsidiaries are presented under the equity method, in which our investments are recorded at cost and adjusted for our ownership share of a subsidiary's cumulative results of operations, distributions and other equity changes, and the eliminating entries reflect primarily intercompany transactions such as sales, accounts receivable and accounts payable and the elimination of equity investments and earnings of subsidiaries. As of June 30, 2019, two of our consolidated entities have made elections to be taxed as partnerships for U.S. federal income tax purposes and are included in the Non-Guarantors column. Due to the partnership tax treatment, these subsidiaries do not record taxes on their financial statements. The tax provision pertaining to the income of these partnerships, plus applicable deferred tax balances are reflected on the financial statements of the parent company owner that is included in the Subsidiary Guarantors column in the following financial information. Liabilities related to benefit plan obligations are reflected on the legal entity that funds the obligation, while the benefit plan expense is included on the legal entity to which the employee provides services.

Condensed Consolidating Statement of Operations

	Three months ended June 30, 2019					
	Parent	CF Industries	Subsidiary Guarantors	Non-Guarantors	Eliminations	Consolidated
	(in millions)					
Net sales	$ —	$ 96	$ 1,262	$ 989	$ (845)	$ 1,502
Cost of sales	—	69	1,052	725	(843)	1,003
Gross margin	—	27	210	264	(2)	499
Selling, general and administrative expenses	1	(2)	46	19	(2)	62
Other operating—net	—	3	(40)	—	—	(37)
Total other operating costs and expenses	1	1	6	19	(2)	25
Equity in earnings of operating affiliates	—	—	—	1	—	1
Operating (loss) earnings	(1)	26	204	246	—	475
Interest expense	1	62	—	—	(4)	59
Interest expense—mandatorily redeemable preferred shares	—	—	—	1	(1)	—
Interest income	—	—	(5)	(4)	5	(4)
Net earnings of wholly owned subsidiaries	(285)	(314)	(199)	—	798	—
Other non-operating—net	—	—	(1)	(1)	—	(2)
Earnings before income taxes	283	278	409	250	(798)	422
Income tax (benefit) provision	(1)	(7)	104	6	—	102
Net earnings	284	285	305	244	(798)	320
Less: Net earnings attributable to noncontrolling interests	—	—	—	37	—	37
Net earnings attributable to common stockholders	$ 284	$ 285	$ 305	$ 207	$ (798)	$ 283

Condensed Consolidating Statement of Comprehensive Income

	Three months ended June 30, 2019					
	Parent	CF Industries	Subsidiary Guarantors	Non-Guarantors	Eliminations	Consolidated
	(in millions)					
Net earnings	$ 284	$ 285	$ 305	$ 244	$ (798)	$ 320
Other comprehensive (loss) income	(3)	(3)	2	(7)	8	(3)
Comprehensive income	281	282	307	237	(790)	317
Less: Comprehensive income attributable to noncontrolling interests	—	—	—	37	—	37
Comprehensive income attributable to common stockholders	$ 281	$ 282	$ 307	$ 200	$ (790)	$ 280

Condensed Consolidating Statement of Operations

	Six months ended June 30, 2019					
	Parent	CF Industries	Subsidiary Guarantors	Non-Guarantors	Eliminations	Consolidated
	(in millions)					
Net sales	$ —	$ 186	$ 2,001	$ 1,939	$ (1,623)	$ 2,503
Cost of sales	—	157	1,768	1,478	(1,619)	1,784
Gross margin	—	29	233	461	(4)	719
Selling, general and administrative expenses	2	(1)	85	38	(4)	120
Other operating—net	—	4	(39)	2	—	(33)
Total other operating costs and expenses	2	3	46	40	(4)	87
Equity in earnings of operating affiliates	—	1	—	7	—	8
Operating (loss) earnings	(2)	27	187	428	—	640
Interest expense	1	123	1	1	(7)	119
Interest expense—mandatorily redeemable preferred shares	—	—	—	2	(2)	—
Interest income	(1)	—	(8)	(8)	9	(8)
Net earnings of wholly owned subsidiaries	(375)	(451)	(376)	—	1,202	—
Other non-operating—net	—	—	(1)	(2)	—	(3)
Earnings before income taxes	373	355	571	435	(1,202)	532
Income tax (benefit) provision	(1)	(20)	134	(19)	—	94
Net earnings	374	375	437	454	(1,202)	438
Less: Net earnings attributable to noncontrolling interests	—	—	—	65	—	65
Net earnings attributable to common stockholders	$ 374	$ 375	$ 437	$ 389	$ (1,202)	$ 373

Condensed Consolidating Statement of Comprehensive Income

	Six months ended June 30, 2019					
	Parent	CF Industries	Subsidiary Guarantors	Non-Guarantors	Eliminations	Consolidated
	(in millions)					
Net earnings	$ 374	$ 375	$ 437	$ 454	$ (1,202)	$ 438
Other comprehensive income	28	28	22	24	(75)	27
Comprehensive income	402	403	459	478	(1,277)	465
Less: Comprehensive income attributable to noncontrolling interests	—	—	—	65	—	65
Comprehensive income attributable to common stockholders	$ 402	$ 403	$ 459	$ 413	$ (1,277)	$ 400

Condensed Consolidating Statement of Operations

	Three months ended June 30, 2018					
	Parent	CF Industries	Subsidiary Guarantors	Non-Guarantors	Eliminations	Consolidated
	(in millions)					
Net sales	$ —	$ 85	$ 1,063	$ 918	$ (766)	$ 1,300
Cost of sales	—	69	922	761	(764)	988
Gross margin	—	16	141	157	(2)	312
Selling, general and administrative expenses	—	2	33	20	(2)	53
Other operating—net	—	5	1	(3)	—	3
Total other operating costs and expenses	—	7	34	17	(2)	56
Equity in (losses) earnings of operating affiliate	—	(1)	—	19	—	18
Operating earnings	—	8	107	159	—	274
Interest expense	—	61	6	2	(8)	61
Interest income	—	(1)	(2)	(7)	8	(2)
Net earnings of wholly owned subsidiaries	(148)	(188)	(139)	—	475	—
Other non-operating—net	—	—	—	(3)	—	(3)
Earnings before income taxes	148	136	242	167	(475)	218
Income tax (benefit) provision	—	(12)	56	—	—	44
Net earnings	148	148	186	167	(475)	174
Less: Net earnings attributable to noncontrolling interests	—	—	—	26	—	26
Net earnings attributable to common stockholders	$ 148	$ 148	$ 186	$ 141	$ (475)	$ 148

Condensed Consolidating Statement of Comprehensive Income

	Three months ended June 30, 2018					
	Parent	CF Industries	Subsidiary Guarantors	Non-Guarantors	Eliminations	Consolidated
	(in millions)					
Net earnings	$ 148	$ 148	$ 186	$ 167	$ (475)	$ 174
Other comprehensive loss	(61)	(61)	(35)	(62)	158	(61)
Comprehensive income	87	87	151	105	(317)	113
Less: Comprehensive income attributable to noncontrolling interests	—	—	—	26	—	26
Comprehensive income attributable to common stockholders	$ 87	$ 87	$ 151	$ 79	$ (317)	$ 87

Condensed Consolidating Statement of Operations

	Six months ended June 30, 2018					
	Parent	CF Industries	Subsidiary Guarantors	Non-Guarantors	Eliminations	Consolidated
	(in millions)					
Net sales	$ —	$ 190	$ 1,775	$ 1,803	$ (1,511)	$ 2,257
Cost of sales	—	159	1,638	1,461	(1,503)	1,755
Gross margin	—	31	137	342	(8)	502
Selling, general and administrative expenses	1	3	72	42	(8)	110
Other operating—net	—	(8)	(2)	(8)	—	(18)
Total other operating costs and expenses	1	(5)	70	34	(8)	92
Equity in earnings of operating affiliates	—	2	—	23	—	25
Operating (loss) earnings	(1)	38	67	331	—	435
Interest expense	—	123	10	3	(15)	121
Interest income	(1)	(3)	(5)	(11)	15	(5)
Net earnings of wholly owned subsidiaries	(211)	(275)	(274)	—	760	—
Other non-operating—net	—	—	—	(4)	—	(4)
Earnings before income taxes	211	193	336	343	(760)	323
Income tax (benefit) provision	—	(18)	73	6	—	61
Net earnings	211	211	263	337	(760)	262
Less: Net earnings attributable to noncontrolling interests	—	—	—	51	—	51
Net earnings attributable to common stockholders	$ 211	$ 211	$ 263	$ 286	$ (760)	$ 211

Condensed Consolidating Statement of Comprehensive Income

	Six months ended June 30, 2018					
	Parent	CF Industries	Subsidiary Guarantors	Non-Guarantors	Eliminations	Consolidated
	(in millions)					
Net earnings	$ 211	$ 211	$ 263	$ 337	$ (760)	$ 262
Other comprehensive loss	(46)	(46)	(34)	(47)	128	(45)
Comprehensive income	165	165	229	290	(632)	217
Less: Comprehensive income attributable to noncontrolling interests	—	—	—	51	—	51
Comprehensive income attributable to common stockholders	$ 165	$ 165	$ 229	$ 239	$ (632)	$ 166

CF INDUSTRIES HOLDINGS, INC.

Condensed Consolidating Balance Sheet

	June 30, 2019					
	Parent	CF Industries	Subsidiary Guarantors	Non-Guarantors	Eliminations and Reclassifications	Consolidated
	(in millions)					
Assets						
Current assets:						
Cash and cash equivalents	$ 68	$ 10	$ 45	$ 735	$ —	$ 858
Accounts and notes receivable—net	145	512	1,376	804	(2,524)	313
Inventories	—	—	136	154	—	290
Prepaid income taxes	—	—	—	1	—	1
Other current assets	—	—	18	8	—	26
Total current assets	213	522	1,575	1,702	(2,524)	1,488
Property, plant and equipment—net	—	—	109	8,227	—	8,336
Investments in affiliates	3,893	8,377	6,719	101	(18,989)	101
Goodwill	—	—	2,064	289	—	2,353
Operating lease right-of-use assets	—	—	276	5	—	281
Other assets	—	3	146	327	(172)	304
Total assets	$ 4,106	$ 8,902	$ 10,889	$ 10,651	$ (21,685)	$ 12,863
Liabilities and Equity						
Current liabilities:						
Accounts and notes payable and accrued expenses	$ 1,040	$ 293	$ 1,309	$ 298	$ (2,524)	$ 416
Income taxes payable	—	—	13	—	—	13
Customer advances	—	—	21	—	—	21
Current operating lease liabilities	—	—	87	2	—	89
Current maturities of long-term debt	—	498	—	—	—	498
Other current liabilities	—	—	5	—	—	5
Total current liabilities	1,040	791	1,435	300	(2,524)	1,042
Long-term debt, net of current maturities	—	4,203	44	126	(170)	4,203
Dividends payable—mandatorily redeemable preferred shares	—	—	—	2	(2)	—
Deferred income taxes	—	—	1,047	160	—	1,207
Operating lease liabilities	—	—	194	3	—	197
Other liabilities	—	15	230	151	—	396
Equity:						
Stockholders' equity:						
Preferred stock	—	—	—	—	—	—
Common stock	2	—	—	5,147	(5,147)	2
Paid-in capital	1,299	1,799	8,760	1,263	(11,822)	1,299
Retained earnings	2,111	2,438	(558)	1,039	(2,919)	2,111
Treasury stock	(2)	—	—	—	—	(2)
Accumulated other comprehensive loss	(344)	(344)	(255)	(300)	899	(344)
Total stockholders' equity	3,066	3,893	7,947	7,149	(18,989)	3,066
Noncontrolling interests	—	—	(8)	2,760	—	2,752
Total equity	3,066	3,893	7,939	9,909	(18,989)	5,818
Total liabilities and equity	$ 4,106	$ 8,902	$ 10,889	$ 10,651	$ (21,685)	$ 12,863

Condensed Consolidating Balance Sheet

	December 31, 2018					
	Parent	CF Industries	Subsidiary Guarantors	Non-Guarantors	Eliminations and Reclassifications	Consolidated
	(in millions)					
Assets						
Current assets:						
Cash and cash equivalents	$ 36	$ 27	$ 65	$ 554	$ —	$ 682
Accounts and notes receivable—net	135	500	1,203	911	(2,514)	235
Inventories	—	4	142	163	—	309
Prepaid income taxes	—	—	24	4	—	28
Other current assets	—	—	15	5	—	20
Total current assets	171	531	1,449	1,637	(2,514)	1,274
Property, plant and equipment—net	—	—	118	8,505	—	8,623
Investments in affiliates	3,656	8,208	6,857	94	(18,722)	93
Goodwill	—	—	2,064	289	—	2,353
Other assets	—	4	126	320	(132)	318
Total assets	$ 3,827	$ 8,743	$ 10,614	$ 10,845	$ (21,368)	$ 12,661
Liabilities and Equity						
Current liabilities:						
Accounts and notes payable and accrued expenses	$ 870	$ 374	$ 1,429	$ 386	$ (2,514)	$ 545
Income taxes payable	—	—	5	—	—	5
Customer advances	—	—	149	—	—	149
Other current liabilities	—	—	6	—	—	6
Total current liabilities	870	374	1,589	386	(2,514)	705
Long-term debt	—	4,698	43	89	(132)	4,698
Deferred income taxes	—	—	960	157	—	1,117
Other liabilities	—	15	232	163	—	410
Equity:						
Stockholders' equity:						
Preferred stock	—	—	—	—	—	—
Common stock	2	—	—	5,363	(5,363)	2
Paid-in capital	1,368	1,799	9,070	1,265	(12,134)	1,368
Retained earnings	2,463	2,229	(995)	965	(2,199)	2,463
Treasury stock	(504)	—	—	—	—	(504)
Accumulated other comprehensive loss	(372)	(372)	(277)	(324)	974	(371)
Total stockholders' equity	2,957	3,656	7,798	7,269	(18,722)	2,958
Noncontrolling interests	—	—	(8)	2,781	—	2,773
Total equity	2,957	3,656	7,790	10,050	(18,722)	5,731
Total liabilities and equity	$ 3,827	$ 8,743	$ 10,614	$ 10,845	$ (21,368)	$ 12,661

CF INDUSTRIES HOLDINGS, INC.

Condensed Consolidating Statement of Cash Flows

	Six months ended June 30, 2019					
	Parent	CF Industries	Subsidiary Guarantors	Non-Guarantors	Eliminations	Consolidated
	(in millions)					
Operating Activities:						
Net earnings	$ 374	$ 375	$ 437	$ 454	$ (1,202)	$ 438
Adjustments to reconcile net earnings to net cash provided by (used in) operating activities:						
Depreciation and amortization	—	4	12	424	—	440
Deferred income taxes	—	—	86	(1)	—	85
Stock-based compensation expense	17	—	—	—	—	17
Unrealized net loss on natural gas derivatives	—	—	1	—	—	1
Unrealized loss on embedded derivative	—	—	2	—	—	2
Gain on disposal of property, plant and equipment	—	—	(45)	—	—	(45)
Undistributed earnings of affiliates—net	(375)	(451)	(376)	(10)	1,202	(10)
Changes in:						
Intercompany accounts receivable/accounts payable—net	(9)	(11)	(22)	42	—	—
Accounts receivable—net	—	(1)	(70)	(7)	—	(78)
Inventories	—	4	5	12	—	21
Accrued and prepaid income taxes	(1)	(20)	63	(7)	—	35
Accounts and notes payable and accrued expenses	—	(4)	(21)	(69)	—	(94)
Customer advances	—	—	(128)	—	—	(128)
Other—net	—	—	2	7	—	9
Net cash provided by (used in) operating activities	6	(104)	(54)	845	—	693
Investing Activities:						
Additions to property, plant and equipment	—	—	(8)	(146)	—	(154)
Proceeds from sale of property, plant and equipment	—	—	55	8	—	63
Distributions received from unconsolidated affiliates	—	225	209	(434)	—	—
Net cash provided by (used in) investing activities	—	225	256	(572)	—	(91)
Financing Activities:						
Long-term debt—net	—	—	(39)	39	—	—
Short-term debt—net	199	29	(183)	(45)	—	—
Dividends paid on common stock	(133)	(167)	—	—	167	(133)
Dividends to/from affiliates	167	—	—	—	(167)	—
Distribution to noncontrolling interest	—	—	—	(86)	—	(86)
Purchases of treasury stock	(209)	—	—	—	—	(209)
Issuances of common stock under employee stock plans	6	—	—	—	—	6
Shares withheld for taxes	(4)	—	—	—	—	(4)
Net cash provided by (used in) financing activities	26	(138)	(222)	(92)	—	(426)
Increase (decrease) in cash and cash equivalents	32	(17)	(20)	181	—	176
Cash and cash equivalents at beginning of period	36	27	65	554	—	682
Cash and cash equivalents at end of period	$ 68	$ 10	$ 45	$ 735	$ —	$ 858

Condensed Consolidating Statement of Cash Flows

	Six months ended June 30, 2018					
	Parent	CF Industries	Subsidiary Guarantors	Non-Guarantors	Eliminations	Consolidated
	(in millions)					
Operating Activities:						
Net earnings	$ 211	$ 211	$ 263	$ 337	$ (760)	$ 262
Adjustments to reconcile net earnings to net cash (used in) provided by operating activities:						
Depreciation and amortization	—	4	11	419	—	434
Deferred income taxes	—	—	12	(10)	—	2
Stock-based compensation expense	11	—	—	—	—	11
Unrealized net loss (gain) on natural gas derivatives	—	—	(5)	(3)	—	(8)
Unrealized loss on embedded derivative	—	—	1	—	—	1
Undistributed earnings of affiliates—net	(211)	(275)	(274)	(3)	760	(3)
Changes in:						
Intercompany accounts receivable/accounts payable—net	(15)	(84)	124	(25)	—	—
Accounts receivable—net	—	(16)	(20)	2	—	(34)
Inventories	—	4	4	13	—	21
Accrued and prepaid income taxes	—	(18)	69	1	—	52
Accounts and notes payable and accrued expenses	—	(9)	(1)	(36)	—	(46)
Customer advances	—	—	(68)	—	—	(68)
Other—net	—	(1)	4	(29)	—	(26)
Net cash (used in) provided by operating activities	(4)	(184)	120	666	—	598
Investing Activities:						
Additions to property, plant and equipment	—	—	(4)	(141)	—	(145)
Proceeds from sale of property, plant and equipment	—	—	—	16	—	16
Distributions received from unconsolidated affiliates	—	—	184	(174)	—	10
Investments in consolidated subs - capital contributions	—	(31)	(415)	446	—	—
Other—net	—	—	—	1	—	1
Net cash (used in) provided by investing activities	—	(31)	(235)	148	—	(118)
Financing Activities:						
Long-term debt—net	—	—	178	(178)	—	—
Short-term debt—net	141	202	(371)	28	—	—
Financing fees	—	1	—	—	—	1
Dividends paid on common stock	(140)	—	—	(49)	49	(140)
Dividends to/from affiliates	—	—	49	—	(49)	—
Acquisition of noncontrolling interest in TNCLP	—	—	—	(388)	—	(388)
Distributions to noncontrolling interests	—	—	—	(59)	—	(59)
Issuances of common stock under employee stock plans	4	—	—	—	—	4
Shares withheld for taxes	(1)	—	—	—	—	(1)
Net cash provided by (used in) financing activities	4	203	(144)	(646)	—	(583)
Effect of exchange rate changes on cash and cash equivalents	—	—	—	(4)	—	(4)
(Decrease) increase in cash and cash equivalents	—	(12)	(259)	164	—	(107)
Cash and cash equivalents at beginning of period	—	15	388	432	—	835
Cash and cash equivalents at end of period	$ —	$ 3	$ 129	$ 596	$ —	$ 728

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

You should read the following discussion and analysis in conjunction with our annual consolidated financial statements and related notes, which were included in our 2018 Annual Report on Form 10-K filed with the Securities and Exchange Commission on February 22, 2019, as well as Item 1. Financial Statements, in this Form 10-Q. All references to "CF Holdings," "we," "us," "our" and "the Company" refer to CF Industries Holdings, Inc. and its subsidiaries, except where the context makes clear that the reference is only to CF Industries Holdings, Inc. itself and not its subsidiaries. All references to "CF Industries" refer to CF Industries, Inc., a 100% owned subsidiary of CF Industries Holdings, Inc. References to tons refer to short-tons. Notes referenced in this discussion and analysis refer to the notes to our unaudited interim consolidated financial statements that are found in the preceding section: Item 1. Financial Statements. The following is an outline of the discussion and analysis included herein:

- *Overview of CF Holdings*
  - *Our Company*
  - *Items Affecting Comparability of Results*
  - *Financial Executive Summary*
- *Results of Consolidated Operations*
  - *Second Quarter of 2019 Compared to Second Quarter of 2018*
  - *Six Months Ended June 30, 2019 Compared to Six Months Ended June 30, 2018*
  - *Operating Results by Business Segment*
- *Liquidity and Capital Resources*
- *Off-Balance Sheet Arrangements*
- *Critical Accounting Policies and Estimates*
- *Recent Accounting Pronouncements*
- *Forward-Looking Statements*

Overview of CF Holdings

Our Company

We are a leading global fertilizer and chemical company. Our 3,000 employees operate world-class manufacturing complexes in Canada, the United Kingdom and the United States. Our principal customers are cooperatives, independent fertilizer distributors, traders, wholesalers, farmers and industrial users. Our principal nitrogen fertilizer products are ammonia, granular urea, urea ammonium nitrate solution (UAN) and ammonium nitrate (AN). Our other nitrogen products include diesel exhaust fluid (DEF), urea liquor, nitric acid and aqua ammonia, which are sold primarily to our industrial customers, and compound fertilizer products (NPKs), which are solid granular fertilizer products for which the nutrient content is a combination of nitrogen, phosphorus, and potassium. We serve our customers in North America through our production, storage, transportation and distribution network. We also reach a global customer base with exports from our Donaldsonville, Louisiana, plant, the world's largest and most flexible nitrogen complex. Additionally, we move product to international destinations from our Verdigris, Oklahoma, facility, our Yazoo City, Mississippi, facility, our Billingham and Ince facilities in the United Kingdom, and from a joint venture ammonia facility in the Republic of Trinidad and Tobago in which we own a 50 percent interest.

Our principal assets as of June 30, 2019 include:

- five U.S. nitrogen fertilizer manufacturing facilities located in Donaldsonville, Louisiana (the largest nitrogen fertilizer complex in the world); Port Neal, Iowa; Yazoo City, Mississippi; Verdigris, Oklahoma; and Woodward, Oklahoma. These facilities are owned by CF Industries Nitrogen, LLC (CFN), of which we own approximately 89% and CHS Inc. (CHS) owns the remainder. See Note 14—Noncontrolling Interests for additional information on our strategic venture with CHS;
- two Canadian nitrogen fertilizer manufacturing facilities located in Medicine Hat, Alberta (the largest nitrogen fertilizer complex in Canada) and Courtright, Ontario;
- two United Kingdom nitrogen manufacturing facilities located in Billingham and Ince;

- an extensive system of terminals and associated transportation equipment located primarily in the Midwestern United States; and
- a 50% interest in Point Lisas Nitrogen Limited (PLNL), an ammonia production joint venture located in the Republic of Trinidad and Tobago that we account for under the equity method.

Items Affecting Comparability of Results

Sales Volume

Sales volume for our products in each of the first six months of 2019 and 2018 was 9.8 million product tons. However, persistent cold and wet weather across most of North America early in 2019 delayed spring planting activity and fertilizer applications from the first quarter into the second quarter. In addition, high water levels impacted shipping and logistics on inland rivers and delayed certain barge shipments. This resulted in delays in certain customers taking delivery of fertilizer and other customers delaying purchases, which resulted in high inventory levels entering the second quarter of 2019 as volume typically shipped in the first quarter was instead shipped in the second quarter. These factors were a primary driver of the increase in our second quarter sales volume.

Sales volume for the three months ended June 30, 2019 was 5.7 million product tons, an increase of 3% compared to sales volume of 5.5 million product tons for the three months ended June 30, 2018, which resulted in an increase in net sales of approximately $54 million. Sales volumes of ammonia, granular urea and UAN increased as a result of the delay in the spring application season. In addition, due to the late planting and wet field conditions, customer preference for granular urea and UAN increased, and we set a quarterly record for shipments of granular urea. Partially offsetting these increases was a decline in sales volumes of AN due primarily to lower supply availability.

Selling Prices

The U.S. Gulf is a major global fertilizer pricing point due to the volume of nitrogen fertilizer that trades there. In 2018, higher energy costs in Asia and Europe, along with continued enforcement of environmental regulations in China, resulted in lower nitrogen production in these regions. In addition, plant outages impacted the nitrogen supply and demand balance. These factors collectively drove global nitrogen prices higher in the latter half of 2018.

Upon entering the first quarter of 2019, our average selling prices were higher than the first quarter of 2018, driven by the impact of a tighter global nitrogen supply and demand balance experienced throughout late 2018. During the first half of 2019, our average selling prices for all fertilizer products remained strong due to the limited supply of fertilizer as high water levels and flooding impacted shipping and logistics on inland rivers and limited access for imports.

The average selling price for our products for the three months ended June 30, 2019 was $263 per ton compared to $235 per ton for the three months ended June 30, 2018, an increase of 12%, which resulted in an increase in net sales of approximately $148 million. Each of our segments reported higher average selling prices in the second quarter of 2019 as compared to the second quarter of 2018. The average selling price for our products for the six months ended June 30, 2019 was $255 per ton compared to $229 per ton for the six months ended June 30, 2018, an increase of 11%, which resulted in an increase in net sales of approximately $210 million.

Other Items Affecting Comparability

In addition to the impact of market conditions on nitrogen fertilizer selling prices and sales volume, certain items impacted the comparability of our financial results during the three and six months ended June 30, 2019 and 2018. The following table and related discussion outline these items and how they impacted the comparability of our financial results during these periods. During the three months ended June 30, 2019 and 2018, we reported net earnings attributable to common stockholders of $283 million and $148 million, respectively. During the six months ended June 30, 2019 and 2018, we reported net earnings attributable to common stockholders of $373 million and $211 million, respectively.

	Three Months Ended June 30,				Six Months Ended June 30,			
	2019		2018		2019		2018	
	Pre-Tax	After-Tax	Pre-Tax	After-Tax	Pre-Tax	After-Tax	Pre-Tax	After-Tax
	(in millions)							
Unrealized net mark-to-market (gain) loss on natural gas derivatives[1]	$ (1)	$ —	$ (5)	$ (4)	$ 1	$ 1	$ (8)	$ (6)
Loss (gain) on foreign currency transactions, including intercompany loans[2]	5	4	2	2	7	5	(3)	(2)
Gain on sale of Pine Bend facility[2]	(45)	(35)	—	—	(45)	(35)	—	—
Louisiana incentive tax credit[3]	—	—	—	—	—	(30)	—	—
Costs related to the acquisition of TNCLP Public Units[4]	—	—	—	—	—	—	2	1
Earnings attributable to noncontrolling interests - TNCLP[5]	—	—	—	—	—	—	8	8
PLNL settlement income[6]	—	—	(19)	(19)	—	—	(19)	(19)

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(1) Included in cost of sales in our consolidated statements of operations.

(2) Included in other operating—net in our consolidated statements of operations.

(3) Included in income tax provision in our consolidated statement of operations.

(4) Included in selling, general and administrative expenses in our consolidated statement of operations.

(5) Included in net earnings attributable to noncontrolling interests in our consolidated statements of operations.

(6) Included in equity in earnings of operating affiliate in our consolidated statements of operations.

The following describes these items, identified in the table above, that impacted the comparability of our financial results for the three and six months ended June 30, 2019 and 2018. Descriptions of items below that refer to amounts in the table above refer to the pre-tax amounts.

Unrealized net mark-to-market (gain) loss on natural gas derivatives

Natural gas is typically the largest and most volatile single component of the manufacturing cost for nitrogen-based products. At certain times, we have managed the risk of changes in natural gas prices through the use of derivative financial instruments. The derivatives that we may use for this purpose are primarily natural gas fixed price swaps, natural gas basis swaps and natural gas options. We use natural gas derivatives as an economic hedge of natural gas price risk, but without the application of hedge accounting. This can result in volatility in reported earnings due to the unrealized mark-to-market adjustments that occur from changes in the value of the derivatives, which is reflected in cost of sales in our consolidated statements of operations. In the three months ended June 30, 2019 and 2018, we recognized unrealized net mark-to-market gains of $1 million and $5 million, respectively. In the six months ended June 30, 2019 and 2018, we recognized an unrealized net mark-to-market loss (gain) of $1 million and $(8) million, respectively.

Loss (gain) on foreign currency transactions, including intercompany loans

In the three and six months ended June 30, 2019, we recognized losses of $5 million and $7 million, respectively, from the impact of changes in foreign currency exchange rates on primarily British pound and Canadian dollar denominated intercompany loans that were not permanently invested.

Gain on sale of Pine Bend facility

During the first quarter of 2019, we entered into an agreement to sell our Pine Bend dry bulk storage and logistics facility in Minnesota. In April of 2019, we completed the sale, received proceeds of $55 million and recognized a pre-tax gain of $45 million. The gain is reflected in other operating—net in our consolidated statement of operations for the three and six months ended June 30, 2019.

Louisiana incentive tax credit

For the six months ended June 30, 2019, our income tax provision includes an incentive tax credit from the State of Louisiana of $30 million, net of federal income tax, related to certain capital projects at our Donaldsonville, Louisiana complex.

Acquisition of the Terra Nitrogen Company, L.P. (TNCLP) Public Units

In the first quarter of 2018, we announced that, in accordance with the terms of TNCLP's First Amended and Restated Agreement of Limited Partnership (as amended by Amendment No. 1 to the First Amended and Restated Agreement of Limited Partnership, the TNCLP Agreement of Limited Partnership), Terra Nitrogen GP Inc. (TNGP), the sole general partner of TNCLP and an indirect wholly owned subsidiary of CF Holdings, elected to exercise its right to purchase all of the 4,612,562 publicly traded common units of TNCLP (the TNCLP Public Units). TNGP completed its purchase of the TNCLP Public Units on April 2, 2018 (the Purchase) for an aggregate cash purchase price of $388 million. We funded the Purchase with cash on hand. Upon completion of the Purchase, CF Holdings owned, through its subsidiaries, 100 percent of the general and limited partnership interests of TNCLP.

In the six months ended June 30, 2018, we incurred $2 million of costs for various legal services associated with the acquisition of the TNCLP Public Units. These costs are reflected in selling, general and administrative expenses in our consolidated statement of operations.

Beginning in the second quarter of 2018, as a result of the April 2, 2018 acquisition of the TNCLP Public Units, there are no longer earnings attributable to noncontrolling interests in TNCLP. In the six months ended June 30, 2018, earnings attributable to noncontrolling interests in TNCLP was $8 million.

PLNL settlement income

Our joint venture in the Republic of Trinidad and Tobago, PLNL, operates an ammonia plant that relies on natural gas supplied, under a Gas Sales Contract (the NGC Contract), by The National Gas Company of Trinidad and Tobago Limited (NGC). PLNL experienced past curtailments in the supply of natural gas, which reduced historical ammonia production at PLNL. The NGC Contract had an initial expiration date of September 2018 and was extended on the same terms until September 2023. Any NGC commitment to supply gas beyond 2023 will be based on new agreements. In May 2018, the NGC and PLNL reached a settlement of an arbitration proceeding regarding PLNL's claims for damages due to natural gas supply curtailments. The net after-tax impact of the settlement reached between NGC and PLNL that is recognized in our consolidated statements of operations for the three and six months ended June 30, 2018 was an increase in our equity in earnings of operating affiliate of approximately $19 million.

Financial Executive Summary

We reported net earnings attributable to common stockholders of $283 million for the three months ended June 30, 2019 compared to $148 million for the three months ended June 30, 2018, or an increase in net earnings of 91%, or $135 million. Diluted net earnings per share attributable to common stockholders increased 103%, or $0.65 per share to $1.28 in the second quarter of 2019 compared to $0.63 in the second quarter of 2018. The increase in net earnings of $135 million was due primarily to the following:

- Net sales were $1.50 billion in the second quarter of 2019, an increase of $0.20 billion, or 16%, from $1.30 billion in the second quarter of 2018, reflecting an increase in average selling prices of 12% and a 3% increase in sales volume.

- Gross margin increased by $187 million in the second quarter of 2019 to $499 million as compared to $312 million in the second quarter of 2018. The increase in gross margin was driven by an increase in average selling prices, reflecting the impact of a tighter global nitrogen supply and demand balance, and an increase in sales volume. This increase was partially offset by higher shipping and distribution costs due to weather related factors. The 12% increase in average selling prices increased gross margin by $148 million, and the 3% increase in sales volume increased gross margin by $33 million.

- The second quarter of 2019 includes a pre-tax gain on the sale of the Pine Bend facility of $45 million, which is more fully described in the section above titled "Items Affecting Comparability of Results."

- Our income tax provision increased by $58 million in the second quarter of 2019 to $102 million as compared to $44 million in the second quarter of 2018 due to higher earnings before income taxes.

On February 13, 2019, our Board of Directors (the Board) authorized the repurchase of up to $1 billion of CF Holdings common stock through December 31, 2021 (the 2019 Share Repurchase Program). Repurchases under the 2019 Share Repurchase Program may be made from time to time in the open market, through privately negotiated transactions, block transactions or otherwise. The manner, timing and amount of repurchases will be determined by our management based on the evaluation of market conditions, stock price and other factors. In the second quarter of 2019, we repurchased approximately

2.7 million shares for $118 million and from January 1, 2019 to June 30, 2019, we repurchased a total of 4.2 million shares for $178 million.

Results of Consolidated Operations

The following table presents our consolidated results of operations and supplemental data:

	Three Months Ended June 30,				Six Months Ended June 30,			
	2019	2018	2019 v. 2018		2019	2018	2019 v. 2018	
	(in millions, except as noted)							
Net sales	$ 1,502	$ 1,300	$ 202	16 %	$ 2,503	$ 2,257	$ 246	11 %
Cost of sales	1,003	988	15	2 %	1,784	1,755	29	2 %
Gross margin	499	312	187	60 %	719	502	217	43 %
Gross margin percentage	33.2%	24.0%	9.2%		28.7%	22.2%	6.5%	
Selling, general and administrative expenses	62	53	9	17 %	120	110	10	9 %
Other operating—net	(37)	3	(40)	N/M	(33)	(18)	(15)	(83)%
Total other operating costs and expenses	25	56	(31)	(55)%	87	92	(5)	(5)%
Equity in earnings of operating affiliate	1	18	(17)	(94)%	8	25	(17)	(68)%
Operating earnings	475	274	201	73 %	640	435	205	47 %
Interest expense—net	55	59	(4)	(7)%	111	116	(5)	(4)%
Other non-operating—net	(2)	(3)	1	33 %	(3)	(4)	1	25 %
Earnings before income taxes	422	218	204	94 %	532	323	209	65 %
Income tax provision	102	44	58	132 %	94	61	33	54 %
Net earnings	320	174	146	84 %	438	262	176	67 %
Less: Net earnings attributable to noncontrolling interests	37	26	11	42 %	65	51	14	27 %
Net earnings attributable to common stockholders	$ 283	$ 148	$ 135	91 %	$ 373	$ 211	$ 162	77 %
Diluted net earnings per share attributable to common stockholders	$ 1.28	$ 0.63	$ 0.65	103 %	$ 1.67	$ 0.90	$ 0.77	86 %
Diluted weighted-average common shares outstanding	222.3	234.9	(12.6)	(5)%	223.4	234.8	(11.4)	(5)%
Dividends declared per common share	$ 0.30	$ 0.30	$ —	— %	$ 0.60	$ 0.60	$ —	— %
Natural gas supplemental data (per MMBtu)								
Natural gas costs in cost of sales[1]	$ 2.81	$ 2.92	$ (0.11)	(4)%	$ 3.16	$ 3.08	$ 0.08	3 %
Realized derivatives loss (gain) in cost of sales[2]	—	0.03	(0.03)	(100)%	(0.01)	0.03	(0.04)	N/M
Cost of natural gas in cost of sales	$ 2.81	$ 2.95	$ (0.14)	(5)%	$ 3.15	$ 3.11	$ 0.04	1 %
Average daily market price of natural gas Henry Hub (Louisiana)	$ 2.51	$ 2.82	$ (0.31)	(11)%	$ 2.70	$ 2.92	$ (0.22)	(8)%
Average daily market price of natural gas National Balancing Point (UK)	$ 4.07	$ 7.34	$ (3.27)	(45)%	$ 5.15	$ 7.77	$ (2.62)	(34)%
Unrealized net mark-to-market (gain) loss on natural gas derivatives	$ (1)	$ (5)	$ 4	80 %	$ 1	$ (8)	$ 9	N/M
Depreciation and amortization	$ 252	$ 241	$ 11	5 %	$ 440	$ 434	$ 6	1 %
Capital expenditures	$ 74	$ 77	$ (3)	(4)%	$ 154	$ 145	$ 9	6 %
Sales volume by product tons (000s)	5,716	5,538	178	3 %	9,803	9,841	(38)	— %
Production volume by product tons (000s):								
Ammonia[3]	2,661	2,460	201	8 %	5,228	4,968	260	5 %
Granular urea	1,324	1,228	96	8 %	2,630	2,379	251	11 %
UAN (32%)	1,589	1,557	32	2 %	3,226	3,362	(136)	(4)%
AN	551	423	128	30 %	1,033	881	152	17 %

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N/M—Not Meaningful

[1] Includes the cost of natural gas and related transportation that is included in cost of sales during the period under the first-in, first-out inventory cost method.

(2) Includes realized gains and losses on natural gas derivatives settled during the period. Excludes unrealized mark-to-market gains and losses on natural gas derivatives.

(3) Gross ammonia production, including amounts subsequently upgraded on-site into granular urea, UAN, or AN.

Second Quarter of 2019 Compared to Second Quarter of 2018

Net Sales

Our total net sales increased $202 million, or 16%, to $1.50 billion in the second quarter of 2019 compared to $1.30 billion in the second quarter of 2018 due to a 12% increase in average selling prices, which increased net sales by $148 million, and higher sales volumes, which increased net sales by $54 million.

Average selling prices were $263 per ton in the second quarter of 2019 compared to $235 per ton in the second quarter of 2018 due to higher average selling prices in all segments, driven by the impact of a tighter global nitrogen supply and demand balance. Additionally, high water levels and flooding in the second quarter of 2019 impacted shipping and logistics on inland rivers and reduced access to imports, which contributed to higher average selling prices.

Our total sales volume increased 3% from the second quarter of 2018 to the second quarter of 2019, due primarily to higher ammonia, granular urea and UAN sales volumes shipped in the second quarter of 2019 that was shifted from the first quarter of 2019 as a result of the delayed spring application season. This impact was partially offset by lower AN sales volume due to lower supply availability.

Cost of Sales

Our total cost of sales increased $15 million, or 2%, from the second quarter of 2018 to the second quarter of 2019. The increase in our cost of sales was due primarily to the impact of higher volumes and higher shipping and distribution costs due to weather related factors and the delay in the spring application season, partially offset by lower realized natural gas costs, including the impact of realized derivatives, and lower costs related to plant turnaround and maintenance activity. Cost of sales averaged $175 per ton in the second quarter of 2019, a 2% decrease from $178 per ton in the same quarter of 2018. Realized natural gas costs, including the impact of realized derivatives, decreased 5% from $2.95 per MMBtu in 2018 to $2.81 per MMBtu in 2019.

Selling, General and Administrative Expenses

Selling, general and administrative expenses increased $9 million to $62 million in the second quarter of 2019 as compared to $53 million in the comparable period of 2018, due primarily to certain equity award modifications, higher incentive compensation due to strong operating performance and the cost of certain corporate office initiatives.

Other Operating—Net

Other operating—net was $37 million of income in the second quarter of 2019 compared to $3 million of expense in the comparable period of 2018. The $37 million of income in the second quarter of 2019 was primarily due to the pre-tax gain recognized on the sale of the Pine Bend facility of $45 million, partially offset by foreign currency transaction losses.

Equity in Earnings of Operating Affiliate

Equity in earnings of operating affiliate was $1 million in the second quarter of 2019 compared to $18 million in the second quarter of 2018. Earnings in the second quarter of 2018 includes approximately $19 million related to the net after-tax impact of a settlement reached between NGC and PLNL of an arbitration proceeding regarding PLNL's claims for damages due to historical natural gas supply curtailments. See above under "Items Affecting Comparability of Results—PLNL settlement income" for additional information.

Interest Expense—Net

Net interest expense was $55 million in the second quarter of 2019 compared to $59 million in the second quarter of 2018, primarily reflecting higher interest income.

Income Taxes

For the three months ended June 30, 2019, we recorded an income tax provision of $102 million on pre-tax income of $422 million, or an effective tax rate of 24.2%, compared to an income tax provision of $44 million on pre-tax income of $218 million, or an effective tax rate of 20.2%, for the three months ended June 30, 2018.

Our effective tax rate is impacted by earnings attributable to the noncontrolling interest, as our consolidated income tax provision does not include a tax provision on the earnings attributable to the noncontrolling interest. Our effective tax rate for the three months ended June 30, 2019 of 24.2%, which is based on pre-tax income of $422 million, would be 26.5% exclusive of the earnings attributable to the noncontrolling interests of $37 million. Our effective tax rate for the three months ended June 30, 2018 of 20.2%, which is based on pre-tax income of $218 million, would be 23.0% exclusive of the earnings attributable to the noncontrolling interests of $26 million. See Note 10—Income Taxes and Note 14—Noncontrolling Interests for additional information.

On April 2, 2018, we acquired the TNCLP Public Units. Our effective tax rate in the second quarter of 2018 was impacted by a $20 million reduction to our deferred tax liability as a result of the change in our effective state income tax rate as a result of the implementation of legal entity structure changes related to the acquisition.

Net Earnings Attributable to Noncontrolling Interests

Net earnings attributable to noncontrolling interests increased $11 million in the second quarter of 2019 compared to the second quarter of 2018 due to higher earnings from CFN primarily driven by higher average selling prices due to the impact of a tighter global nitrogen supply and demand balance and lower realized natural gas costs.

Diluted Net Earnings Per Share Attributable to Common Stockholders

Net earnings per share attributable to common stockholders increased $0.65 to $1.28 per diluted share in the second quarter of 2019 from $0.63 per diluted share in the second quarter of 2018. This increase is due primarily to higher gross margin from higher average selling prices due to the impact of a tighter global nitrogen supply and demand balance, an increase in ammonia, granular urea and UAN sales volumes and a 5% reduction in diluted weighted-average common shares outstanding due to repurchases made under our share repurchase programs.

Six Months Ended June 30, 2019 Compared to Six Months Ended June 30, 2018

Net Sales

Our total net sales increased $246 million, or 11%, to $2.50 billion in the first six months of 2019 compared to $2.26 billion in the first six months of 2018 due primarily to an 11% increase in average selling prices, which increased net sales by $210 million.

Average selling prices were $255 per ton in the first six months of 2019, or 11% higher, as compared to $229 per ton in the first six months of 2018 due to higher average selling prices in our granular urea, UAN, ammonia and AN segments, driven by the impact of a tighter global nitrogen supply and demand balance.

Our total sales volume was essentially unchanged from the first six months of 2018 to the first six months of 2019, as higher sales volume in our granular urea, ammonia and AN segments were offset by lower sales volumes in our UAN and Other segments.

Cost of Sales

Our total cost of sales increased $29 million, or 2%, from the first six months of 2018 to the first six months of 2019. The increase in our cost of sales was due primarily to the impact of higher shipping costs, higher realized natural gas costs and an unrealized net mark-to-market loss on natural gas derivatives in the first six months of 2019 compared to a gain in the same period of 2018. These increases were partially offset by lower costs related to plant turnaround and maintenance activity. The cost of sales per ton averaged $182 per ton in the first six months of 2019, a 2% increase from $178 per ton in the same period of 2018. The first six months of 2019 included a $1 million unrealized net mark-to-market loss compared to an $8 million unrealized net mark-to-market gain in the first six months of 2018. Additionally, realized natural gas costs, including the impact of realized derivatives, increased 1% from $3.11 per MMBtu in the first six months of 2018 to $3.15 in the first six months of 2019.

Selling, General and Administrative Expenses

Selling, general and administrative expenses increased $10 million to $120 million in the first six months of 2019 as compared to $110 million in the comparable period of 2018. The increase was due primarily to certain equity award modifications, higher incentive compensation due to strong operating performance and the cost of certain corporate office initiatives.

Other Operating—Net

Other operating—net was $33 million of income in the first six months of 2019 compared to $18 million of income in the comparable period of 2018. The income in the first six months of 2019 was primarily due to the pre-tax gain recognized on the sale of the Pine Bend facility of $45 million, partially offset by foreign currency transaction losses. The income in the first six months of 2018 was due to a combination of changes in legal reserves, unrealized foreign currency gains pertaining to British pound denominated intercompany loans that have not been permanently invested and a gain due to the recovery of certain precious metals used in the manufacturing process.

Equity in Earnings of Operating Affiliates

Equity in earnings of operating affiliates was $8 million in the first six months of 2019 compared to $25 million in the first six months of 2018. Earnings in the first six months of 2018 includes approximately $19 million related to the net after-tax impact of a settlement reached between NGC and PLNL of an arbitration proceeding regarding PLNL's claims for damages due to historical natural gas supply curtailments. See above under "Items Affecting Comparability of Results—PLNL settlement income" for additional information.

Interest Expense—Net

Net interest expense was $111 million in the first six months of 2019 compared to $116 million in the first six months of 2018. The $5 million decrease is due primarily to an increase in interest income.

Income Taxes

For the six months ended June 30, 2019, we recorded an income tax provision of $94 million on pre-tax income of $532 million, or an effective tax rate of 17.7%, compared to an income tax provision of $61 million on pre-tax income of $323 million, or an effective tax rate of 18.8%, for the six months ended June 30, 2018.

For the six months ended June 30, 2019, our income tax provision includes an incentive tax credit from the State of Louisiana of $30 million, net of federal income tax, related to certain capital projects at our Donaldsonville, Louisiana complex.

Our effective tax rate is impacted by earnings attributable to the noncontrolling interests in CFN, and in the first quarter of 2018 by earnings attributable to the noncontrolling interests in TNCLP, as our consolidated income tax provision does not include a tax provision on the earnings attributable to the noncontrolling interests. Our effective tax rate for the six months ended June 30, 2019 of 17.7%, which is based on pre-tax income of $532 million, would be 20.1% exclusive of the earnings attributable to the noncontrolling interests of $65 million. Our effective tax rate for the six months ended June 30, 2018 of 18.8%, which is based on pre-tax income of $323 million, would be 22.4% exclusive of the earnings attributable to the noncontrolling interests of $51 million.

On April 2, 2018, we acquired the TNCLP Public Units. Our effective tax rate in the first six months of 2018 was impacted by a $20 million reduction to our deferred tax liability as a result of the change in our effective state income tax rate as a result of the implementation of legal entity structure changes related to the acquisition.

See Note 10—Income Taxes and Note 14—Noncontrolling Interests for additional information.

Net Earnings Attributable to Noncontrolling Interests

Net earnings attributable to noncontrolling interests increased $14 million in the first six months of 2019 compared to the first six months of 2018 due to higher earnings from CFN driven by higher average selling prices due to the impact of a tighter global nitrogen supply and demand balance and lower realized natural gas costs, partially offset by the reduction in noncontrolling interests due to the April 2, 2018 purchase of the noncontrolling interests in TNCLP. In the six months ended June 30, 2018, earnings attributable to noncontrolling interests in TNCLP was $8 million.

Diluted Net Earnings Per Share Attributable to Common Stockholders

Net earnings per share attributable to common stockholders increased $0.77 to $1.67 per diluted share in the first six months of 2019 from $0.90 per diluted share in the first six months of 2018. This increase is due primarily to higher gross margin driven by higher selling prices due to the impact of a tighter global nitrogen supply and demand balance and a 5% reduction in diluted weighted-average common shares outstanding due to repurchases made under our share repurchase programs.

Operating Results by Business Segment

Our reportable segments consist of ammonia, granular urea, UAN, AN and Other. These segments are differentiated by products. Our management uses gross margin to evaluate segment performance and allocate resources. Total other operating costs and expenses (consisting of selling, general and administrative expenses and other operating—net) and non-operating expenses (interest and income taxes), are centrally managed and are not included in the measurement of segment profitability reviewed by management. The following table presents summary operating results by business segment:

	Ammonia	Granular Urea[(1)]	UAN[(1)]	AN[(1)]	Other[(1)]	Consolidated
			(in millions, except percentages)			
Three months ended June 30, 2019						
Net sales	$ 473	$ 433	$ 369	$ 126	$ 101	$ 1,502
Cost of sales	300	251	277	94	81	1,003
Gross margin	$ 173	$ 182	$ 92	$ 32	$ 20	$ 499
Gross margin percentage	36.6%	42.0%	24.9%	25.4%	19.8%	33.2%
Three months ended June 30, 2018						
Net sales	$ 374	$ 360	$ 339	$ 124	$ 103	$ 1,300
Cost of sales	272	255	258	117	86	988
Gross margin	$ 102	$ 105	$ 81	$ 7	$ 17	$ 312
Gross margin percentage	27.3%	29.2%	23.9%	5.6%	16.5%	24.0%
Six months ended June 30, 2019						
Net sales	$ 660	$ 776	$ 625	$ 253	$ 189	$ 2,503
Cost of sales	466	479	472	208	159	1,784
Gross margin	$ 194	$ 297	$ 153	$ 45	$ 30	$ 719
Gross margin percentage	29.4%	38.3%	24.5%	17.8%	15.9%	28.7%
Six months ended June 30, 2018						
Net sales	$ 586	$ 624	$ 622	$ 224	$ 201	$ 2,257
Cost of sales	460	444	488	191	172	1,755
Gross margin	$ 126	$ 180	$ 134	$ 33	$ 29	$ 502
Gross margin percentage	21.5%	28.8%	21.5%	14.7%	14.4%	22.2%

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(1) The cost of products that are upgraded into other products is transferred at cost into the upgraded product results.

Ammonia Segment

Our ammonia segment produces anhydrous ammonia (ammonia), which is our most concentrated nitrogen fertilizer as it contains 82% nitrogen. The results of our ammonia segment consist of sales of ammonia to external customers. In addition, ammonia is the “basic” nitrogen product that we upgrade into other nitrogen products such as granular urea, UAN and AN. We produce ammonia at all of our nitrogen manufacturing complexes.

The following table presents summary operating data for our ammonia segment:

	Three Months Ended June 30,				Six Months Ended June 30,			
	2019	2018	2019 v. 2018		2019	2018	2019 v. 2018	
	(dollars in millions, except per ton amounts)							
Net sales	$ 473	$ 374	$ 99	26%	$ 660	$ 586	$ 74	13%
Cost of sales	300	272	28	10%	466	460	6	1%
Gross margin	$ 173	$ 102	$ 71	70%	$ 194	$ 126	$ 68	54%
Gross margin percentage	36.6%	27.3%	9.3%		29.4%	21.5%	7.9%	
Sales volume by product tons (000s)	1,222	1,094	128	12%	1,828	1,758	70	4%
Sales volume by nutrient tons (000s)(1)	1,002	898	104	12%	1,499	1,442	57	4%
Average selling price per product ton	$ 387	$ 342	$ 45	13%	$ 361	$ 333	$ 28	8%
Average selling price per nutrient ton(1)	$ 472	$ 416	$ 56	13%	$ 440	$ 406	$ 34	8%
Gross margin per product ton	$ 142	$ 93	$ 49	53%	$ 106	$ 72	$ 34	47%
Gross margin per nutrient ton(1)	$ 173	$ 114	$ 59	52%	$ 129	$ 87	$ 42	48%
Depreciation and amortization	$ 53	$ 52	$ 1	2%	$ 82	$ 77	$ 5	6%
Unrealized net mark-to-market gain on natural gas derivatives	$ —	$ (1)	$ 1	100%	$ —	$ (2)	$ 2	100%

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(1) Ammonia represents 82% nitrogen content. Nutrient tons represent the equivalent tons of nitrogen within the product tons.

Second Quarter of 2019 Compared to Second Quarter of 2018

Net Sales. Net sales in our ammonia segment increased by $99 million, or 26%, in the second quarter of 2019 from the second quarter of 2018 due primarily to a 13% increase in average selling prices and a 12% increase in sales volume. Average selling prices increased to $387 per ton in the second quarter of 2019 compared to $342 in the comparable period of 2018 due primarily to the impact of a tighter nitrogen supply and demand balance. Sales volume was higher due to the delay in the spring application season that resulted in high inventory levels entering the second quarter as volume typically shipped in the first quarter shipped in the second quarter of 2019.

Cost of Sales. Cost of sales in our ammonia segment averaged $245 per ton in the second quarter of 2019, a 2% decrease from $249 per ton in the comparable period of 2018. The decrease is due primarily to lower costs associated with plant turnaround and maintenance activity, partially offset by higher realized natural gas costs in cost of sales in the second quarter of 2019 as compared to the second quarter of 2018.

Six Months Ended June 30, 2019 Compared to Six Months Ended June 30, 2018

Net Sales. Net sales in our ammonia segment increased by $74 million, or 13%, in the six months ended June 30, 2019 from the six months ended June 30, 2018 due primarily to an 8% increase in average selling prices and a 4% increase in sales volume. The increase in selling prices was due to the impact of a tighter nitrogen supply and demand balance. Sales volume was higher due to greater supply availability as a result of increased production.

Cost of Sales. Cost of sales in our ammonia segment averaged $255 per ton in the six months ended June 30, 2019, a 2% decrease from $261 per ton in the comparable period of 2018, reflecting the impact of lower costs associated with plant turnaround and maintenance activity, partially offset by higher realized natural gas costs.

Granular Urea Segment

Our granular urea segment produces granular urea, which contains 46% nitrogen. Produced from ammonia and carbon dioxide, it has the highest nitrogen content of any of our solid nitrogen fertilizers. Granular urea is produced at our Donaldsonville, Louisiana; Medicine Hat, Alberta; and Port Neal, Iowa, nitrogen complexes.

The following table presents summary operating data for our granular urea segment:

	Three Months Ended June 30,				Six Months Ended June 30,			
	2019	2018	2019 v. 2018		2019	2018	2019 v. 2018	
	(dollars in millions, except per ton amounts)							
Net sales	$ 433	$ 360	$ 73	20 %	$ 776	$ 624	$ 152	24%
Cost of sales	251	255	(4)	(2)%	479	444	35	8%
Gross margin	$ 182	$ 105	$ 77	73 %	$ 297	$ 180	$ 117	65%
Gross margin percentage	42.0%	29.2%	12.8%		38.3%	28.8%	9.5%	
Sales volume by product tons (000s)	1,496	1,434	62	4 %	2,680	2,416	264	11%
Sales volume by nutrient tons (000s)(1)	688	659	29	4 %	1,233	1,111	122	11%
Average selling price per product ton	$ 289	$ 251	$ 38	15 %	$ 290	$ 258	$ 32	12%
Average selling price per nutrient ton(1)	$ 629	$ 546	$ 83	15 %	$ 629	$ 562	$ 67	12%
Gross margin per product ton	$ 122	$ 73	$ 49	67 %	$ 111	$ 75	$ 36	48%
Gross margin per nutrient ton(1)	$ 265	$ 159	$ 106	67 %	$ 241	$ 162	$ 79	49%
Depreciation and amortization	$ 79	$ 81	$ (2)	(2)%	$ 145	$ 140	$ 5	4%
Unrealized net mark-to-market (gain) loss on natural gas derivatives	$ —	$ (1)	$ 1	100 %	$ 1	$ (2)	$ 3	N/M

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N/M—Not Meaningful

(1) Granular urea represents 46% nitrogen content. Nutrient tons represent the tons of nitrogen within the product tons.

Second Quarter of 2019 Compared to Second Quarter of 2018

Net Sales. Net sales in our granular urea segment increased $73 million, or 20%, in the second quarter of 2019 from the second quarter of 2018 due primarily to a 15% increase in average selling prices and a 4% increase in sales volume. Average selling prices increased to $289 per ton in the second quarter of 2019 compared to $251 per ton in the comparable period of 2018. The increase was due primarily to the impact of a tighter global nitrogen supply and demand balance and the impact high water levels and flooding had on the shipping and logistics on inland rivers, including limiting access to the U.S. Gulf for imports. Sales volume was higher due to strong demand resulting from a delayed spring application season and greater supply availability as a result of our decision to increase granular urea production.

Cost of Sales. Cost of sales in our granular urea segment averaged $167 per ton in the second quarter of 2019, a 6% decrease from $178 per ton in the comparable period of 2018, driven by higher plant efficiencies and lower realized natural gas costs.

Six Months Ended June 30, 2019 Compared to Six Months Ended June 30, 2018

Net Sales. Net sales in our granular urea segment increased $152 million, or 24%, in the six months ended June 30, 2019 from the six months ended June 30, 2018 due primarily to a 12% increase in average selling prices and an 11% increase in sales volume. Average selling prices increased to $290 per ton in the six months ended June 30, 2019 compared to $258 per ton in the comparable period of 2018. The increase was due primarily to the impact of a tighter global nitrogen supply and demand balance and the impact high water levels and flooding had on the shipping and logistics on inland rivers, including limiting access to the U.S. Gulf for imports. Sales volume was higher due to greater supply availability as a result of our decision to increase granular urea production in the six months ended June 30, 2019.

Cost of Sales. Cost of sales in our granular urea segment averaged $179 per ton in the six months ended June 30, 2019, a 2% decrease from $183 per ton in the comparable period of 2018. The decrease was due primarily to higher plant efficiencies.

UAN Segment

Our UAN segment produces urea ammonium nitrate solution (UAN). UAN, a liquid fertilizer product with a nitrogen content that typically ranges from 28% to 32%, is produced by combining urea and ammonium nitrate. UAN is produced at our nitrogen complexes in Courtright, Ontario; Donaldsonville, Louisiana; Port Neal, Iowa; Verdigris, Oklahoma; Woodward, Oklahoma; and Yazoo City, Mississippi.

The following table presents summary operating data for our UAN segment:

	Three Months Ended June 30,				Six Months Ended June 30,			
	2019	2018	2019 v. 2018		2019	2018	2019 v. 2018	
	(dollars in millions, except per ton amounts)							
Net sales	$ 369	$ 339	$ 30	9 %	$ 625	$ 622	$ 3	— %
Cost of sales	277	258	19	7 %	472	488	(16)	(3)%
Gross margin	$ 92	$ 81	$ 11	14 %	$ 153	$ 134	$ 19	14 %
Gross margin percentage	24.9%	23.9%	1.0%		24.5%	21.5%	3.0%	
Sales volume by product tons (000s)	1,871	1,820	51	3 %	3,139	3,489	(350)	(10)%
Sales volume by nutrient tons (000s)[(1)]	591	575	16	3 %	987	1,102	(115)	(10)%
Average selling price per product ton	$ 197	$ 186	$ 11	6 %	$ 199	$ 178	$ 21	12 %
Average selling price per nutrient ton[(1)]	$ 624	$ 590	$ 34	6 %	$ 633	$ 564	$ 69	12 %
Gross margin per product ton	$ 49	$ 45	$ 4	9 %	$ 49	$ 38	$ 11	29 %
Gross margin per nutrient ton[(1)]	$ 156	$ 141	$ 15	11 %	$ 155	$ 122	$ 33	27 %
Depreciation and amortization	$ 71	$ 72	$ (1)	(1)%	$ 117	$ 135	$ (18)	(13)%
Unrealized net mark-to-market gain on natural gas derivatives	$ (1)	$ (2)	$ 1	50 %	$ —	$ (3)	$ 3	100 %

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(1) UAN represents between 28% and 32% of nitrogen content, depending on the concentration specified by the customer. Nutrient tons represent the tons of nitrogen within the product tons.

Second Quarter of 2019 Compared to Second Quarter of 2018

Net Sales. Net sales in our UAN segment increased $30 million, or 9%, in the second quarter of 2019 from the second quarter of 2018 due primarily to a 6% increase in average selling prices and a 3% increase in sales volume. Average selling prices increased to $197 per ton in the second quarter of 2019 compared to $186 per ton in the comparable period of 2018 due primarily to the impact of a tighter global nitrogen supply and demand balance and the impact high water levels and flooding had on the shipping and logistics on inland rivers. The increase in sales volume was due primarily to demand resulting from the delayed spring application season as well as higher inventory entering the quarter.

Cost of Sales. Cost of sales in our UAN segment averaged $148 per ton in the second quarter of 2019, a 5% increase from $141 per ton in the second quarter of 2018 primarily driven by higher maintenance activity and higher freight costs due to the mix of transportation modes.

Six Months Ended June 30, 2019 Compared to Six Months Ended June 30, 2018

Net Sales. Net sales in our UAN segment increased $3 million in the six months ended June 30, 2019 from the six months ended June 30, 2018 due to a 12% increase in average selling prices, partially offset by a 10% decline in sales volume. Average selling prices increased to $199 per ton in the six months ended June 30, 2019, compared to $178 per ton in the comparable period of 2018, due primarily to the impact of a tighter global nitrogen supply and demand balance and the impact high water levels and flooding had on the shipping and logistics on inland rivers. The decrease in sales volume was due primarily to lower production due to the focus on granular urea production in 2019 and the impact of late planting in North America that delayed some fertilizer shipments and applications into the third quarter.

In April 2019, the European Commission (the Commission) published a regulation imposing provisional anti-dumping duties on imports to the European Union of UAN manufactured in Russia, Trinidad and Tobago and the United States. The regulation included a rate of 22.6% for the provisional anti-dumping duty applicable to imports of UAN manufactured in the United States. In July 2019, the Commission announced its intention to impose definitive anti-dumping measures in the form of fixed duty rates. For imports of UAN manufactured in the United States, the fixed duty rate is €29.48 per metric ton. This proposal will be presented to the European Member States for discussion and approval.

Cost of Sales. Cost of sales in our UAN segment averaged $150 per ton in the six months ended June 30, 2019, a 7% increase from $140 per ton in the comparable period of 2018. The increase was due primarily to higher realized natural gas costs, higher maintenance activity and higher freight costs due to the mix of transportation modes.

AN Segment

Our AN segment produces ammonium nitrate (AN). AN is a nitrogen-based product with a nitrogen content between 29% and 35%. AN is used as nitrogen fertilizer and is also used by industrial customers for commercial explosives and blasting systems. AN is produced at our nitrogen complexes in Yazoo City, Mississippi and Ince and Billingham, United Kingdom.

The following table presents summary operating data for our AN segment:

	Three Months Ended June 30,				Six Months Ended June 30,			
	2019	2018	2019 v. 2018		2019	2018	2019 v. 2018	
	(dollars in millions, except per ton amounts)							
Net sales	$ 126	$ 124	$ 2	2 %	$ 253	$ 224	$ 29	13%
Cost of sales	94	117	(23)	(20)%	208	191	17	9%
Gross margin	$ 32	$ 7	$ 25	N/M	$ 45	$ 33	$ 12	36%
Gross margin percentage	25.4%	5.6%	19.8%		17.8%	14.7%	3.1%	
Sales volume by product tons (000s)	528	568	(40)	(7)%	1,029	985	44	4%
Sales volume by nutrient tons (000s)(1)	179	193	(14)	(7)%	345	333	12	4%
Average selling price per product ton	$ 239	$ 218	$ 21	10 %	$ 246	$ 227	$ 19	8%
Average selling price per nutrient ton(1)	$ 704	$ 642	$ 62	10 %	$ 733	$ 673	$ 60	9%
Gross margin per product ton	$ 61	$ 12	$ 49	N/M	$ 44	$ 34	$ 10	29%
Gross margin per nutrient ton(1)	$ 179	$ 36	$ 143	N/M	$ 130	$ 99	$ 31	31%
Depreciation and amortization	$ 21	$ 14	$ 7	50 %	$ 43	$ 32	$ 11	34%
Unrealized net mark-to-market (gain) loss on natural gas derivatives	$ —	$ —	$ —	— %	$ —	$ —	$ —	—%

N/M—Not Meaningful

(1) Nutrient tons represent the tons of nitrogen within the product tons.

Second Quarter of 2019 Compared to Second Quarter of 2018

Net Sales. Net sales in our AN segment increased $2 million, or 2%, in the second quarter of 2019 from the second quarter of 2018 due to a 10% increase in average selling prices, partially offset by a 7% decrease in sales volume. Average selling prices increased to $239 per ton in the second quarter of 2019 compared to $218 per ton in the second quarter of 2018 due primarily to the impact of a tighter global nitrogen supply and demand balance. Sales volume declined due primarily to lower beginning inventory in the United Kingdom entering the second quarter, which reflected the impact of higher sales volume in the first quarter of 2019 as a result of an earlier start of the spring application season in the United Kingdom.

Cost of Sales. Cost of sales in our AN segment averaged $178 per ton in the second quarter of 2019, a 14% decrease from $206 per ton in the comparable period of 2018. The decrease was due primarily to lower realized natural gas costs.

Six Months Ended June 30, 2019 Compared to Six Months Ended June 30, 2018

Net Sales. Net sales in our AN segment increased $29 million, or 13%, in the six months ended June 30, 2019 from the six months ended June 30, 2018 due primarily to an 8% increase in average selling prices and a 4% increase in sales volume. Average selling prices increased to $246 per ton in the six months ended June 30, 2019 compared to $227 per ton in the comparable period of 2018 due primarily to the impact of a tighter global nitrogen supply and demand balance. Sales volume increased as a result of higher domestic sales in the United Kingdom and North America due to strong demand.

Cost of Sales. Cost of sales in our AN segment averaged $202 per ton in the six months ended June 30, 2019, a 5% increase from $193 per ton in the comparable period of 2018. The increase was due primarily to higher costs related to plant maintenance activity, partially offset by lower realized natural gas costs.

Other Segment

Our Other segment primarily includes the following products:

- Diesel exhaust fluid (DEF) is an aqueous urea solution typically made with 32.5% high-purity urea and 67.5% deionized water.
- Urea liquor is a liquid product that we sell in concentrations of 40%, 50% and 70% urea as a chemical intermediate.
- Nitric acid is a nitrogen-based product with a nitrogen content of 22.2%.
- Compound fertilizer products (NPKs) are solid granular fertilizer products for which the nutrient content is a combination of nitrogen, phosphorus, and potassium.

The following table presents summary operating data for our Other segment:

	Three Months Ended June 30,				Six Months Ended June 30,			
	2019	2018	2019 v. 2018		2019	2018	2019 v. 2018	
	(dollars in millions, except per ton amounts)							
Net sales	$ 101	$ 103	$ (2)	(2)%	$ 189	$ 201	$ (12)	(6)%
Cost of sales	81	86	(5)	(6)%	159	172	(13)	(8)%
Gross margin	$ 20	$ 17	$ 3	18 %	$ 30	$ 29	$ 1	3 %
Gross margin percentage	19.8%	16.5%	3.3%		15.9%	14.4%	1.5%	
Sales volume by product tons (000s)	599	622	(23)	(4)%	1,127	1,193	(66)	(6)%
Sales volume by nutrient tons (000s)[1]	121	122	(1)	(1)%	224	233	(9)	(4)%
Average selling price per product ton	$ 169	$ 166	$ 3	2 %	$ 168	$ 168	$ —	— %
Average selling price per nutrient ton[1]	$ 835	$ 844	$ (9)	(1)%	$ 844	$ 863	$ (19)	(2)%
Gross margin per product ton	$ 33	$ 27	$ 6	22 %	$ 27	$ 24	$ 3	13 %
Gross margin per nutrient ton[1]	$ 165	$ 139	$ 26	19 %	$ 134	$ 124	$ 10	8 %
Depreciation and amortization	$ 19	$ 14	$ 5	36 %	$ 36	$ 31	$ 5	16 %
Unrealized net mark-to-market gain on natural gas derivatives	$ —	$ (1)	$ 1	100 %	$ —	$ (1)	$ 1	100 %

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(1) Nutrient tons represent the tons of nitrogen within the product tons.

Second Quarter of 2019 Compared to Second Quarter of 2018

Net Sales. Net sales in our Other segment decreased by $2 million, or 2%, in the second quarter of 2019 from the second quarter of 2018 due to a 4% decrease in sales volume, partially offset by a 2% increase in average selling prices. The decrease in sales volume was due primarily to lower nitric acid and NPK sales volume, partially offset by higher DEF sales volume. The increase in average selling prices is due primarily to the mix of products sold.

Cost of Sales. Cost of sales in our Other segment averaged $136 per ton in the second quarter of 2019, a 2% decrease from $139 per ton in the comparable period of 2018 due primarily to lower realized natural gas costs, partially offset by higher freight costs.

Six Months Ended June 30, 2019 Compared to Six Months Ended June 30, 2018

Net Sales. Net sales in our Other segment decreased by $12 million, or 6%, in the six months ended June 30, 2019 from the six months ended June 30, 2018 due to a 6% decrease in sales volume. The decrease in sales volume was due primarily to lower NPK and nitric acid sales volume, partially offset by higher DEF sales volume.

Cost of Sales. Cost of sales in our Other segment averaged $141 per ton in the six months ended June 30, 2019, a 2% decrease from $144 per ton in the comparable period of 2018 due primarily to lower realized natural gas costs, partially offset by higher freight costs.

Liquidity and Capital Resources

Our primary uses of cash are generally for operating costs, working capital, capital expenditures, debt service, investments, taxes, share repurchases and dividends. Our working capital requirements are affected by several factors, including demand for our products, selling prices, raw material costs, freight costs and seasonal factors inherent in the business. Generally, our primary source of cash is cash from operations, which includes cash generated by customer advances. We may also from time to time access the capital markets or engage in borrowings under our credit agreement.

During the six months ended June 30, 2019, we repurchased approximately 4.2 million shares of our common stock for $178 million. See discussion under “Share Repurchase Programs,” below, for further information.

At June 30, 2019, we were in compliance with all applicable covenant requirements under our Revolving Credit Agreement, Public Senior Notes and Senior Secured Notes. There were no borrowings outstanding under the Revolving Credit Agreement as of June 30, 2019 or December 31, 2018, or during the six months ended June 30, 2019. See discussion under “Debt,” below, for further information.

Our cash and cash equivalents balance was $858 million and $682 million as of June 30, 2019 and December 31, 2018, respectively.

Cash Equivalents

Cash equivalents include highly liquid investments that are readily convertible to known amounts of cash with original maturities of three months or less. Under our short-term investment policy, we may invest our cash balances, either directly or through mutual funds, in several types of investment-grade securities, including notes and bonds issued by governmental entities or corporations. Securities issued by governmental entities include those issued directly by the U.S. and Canadian federal governments; those issued by state, local or other governmental entities; and those guaranteed by entities affiliated with governmental entities.

Share Repurchase Programs

On August 1, 2018, the Board authorized the repurchase of up to $500 million of CF Holdings common stock through June 30, 2020 (the 2018 Share Repurchase Program). In 2018, we completed the 2018 Share Repurchase Program with the repurchase of 10.9 million shares for $500 million, of which $33 million was accrued and unpaid at December 31, 2018. In February 2019, we retired all 10.9 million shares that were repurchased under the 2018 Share Repurchase Program.

On February 13, 2019, the Board authorized the repurchase of up to $1 billion of CF Holdings common stock through December 31, 2021 (the 2019 Share Repurchase Program). Repurchases under the 2019 Share Repurchase Program may be made from time to time in the open market, through privately negotiated transactions, block transactions or otherwise. The manner, timing and amount of repurchases will be determined by our management based on the evaluation of market conditions, stock price, and other factors. During the six months ended June 30, 2019, we repurchased approximately 4.2 million shares for $178 million, of which $2 million was accrued and unpaid at June 30, 2019. In June 2019, we retired approximately 4.2 million shares that were repurchased under the 2019 Share Repurchase Program. At June 30, 2019, we held 42,608 shares of treasury stock.

Capital Spending

We make capital expenditures to sustain our asset base, increase our capacity, improve plant efficiency and comply with various environmental, health and safety requirements. Capital expenditures totaled $154 million in the first six months of 2019 compared to $145 million in the first six months of 2018.

Capital expenditures in 2019 are estimated to be in the range of $400 to $450 million. Planned capital expenditures are subject to change due to delays in regulatory approvals or permitting, unanticipated increases in cost, changes in scope and completion time, performance of third parties, delays in the receipt of equipment, adverse weather, defects in materials and workmanship, labor or material shortages, transportation constraints, acceleration or delays in the timing of the work and other unforeseen difficulties.

Debt

Revolving Credit Agreement

We have a senior secured revolving credit agreement (the Revolving Credit Agreement) providing for a revolving credit facility of up to $750 million with a maturity of September 18, 2020. The Revolving Credit Agreement includes a letter of credit sub-limit of $125 million. Borrowings under the Revolving Credit Agreement may be used for working capital and general corporate purposes. CF Industries is the borrower under the Revolving Credit Agreement and may also designate as borrowers one or more wholly owned subsidiaries that are organized in the United States or any state thereof, or the District of Columbia.

Borrowings under the Revolving Credit Agreement may be denominated in U.S. dollars, Canadian dollars, euro and British pounds, and bear interest at a per annum rate equal to an applicable eurocurrency rate or base rate plus, in either case, a specified margin, and the borrowers are required to pay an undrawn commitment fee on the undrawn portion of the commitments under the Revolving Credit Agreement and customary letter of credit fees. The specified margin and the amount of the commitment fee depend on CF Holdings' credit rating at the time.

The guarantors under the Revolving Credit Agreement are currently comprised of CF Holdings and CF Holdings' wholly owned subsidiaries CF Industries Enterprises, LLC (CFE), CF Industries Sales, LLC (CFS), CF USA Holdings, LLC (CF USA) and CF Industries Distribution Facilities, LLC (CFIDF).

As of June 30, 2019, we had excess borrowing capacity under the Revolving Credit Agreement of $750 million and no outstanding letters of credit. In addition, there were no borrowings outstanding under the Revolving Credit Agreement as of June 30, 2019 or December 31, 2018, or during the six months ended June 30, 2019.

The Revolving Credit Agreement contains representations and warranties and affirmative and negative covenants, including financial covenants. As of June 30, 2019, we were in compliance with all covenants under the Revolving Credit Agreement.

Letters of Credit

In addition to the letter of credit capacity under the Revolving Credit Agreement, as described above, we have also entered into a bilateral agreement with capacity to issue letters of credit up to $145 million (reflecting an increase of $20 million in January 2019). As of June 30, 2019, approximately $131 million of letters of credit were outstanding under this agreement.

Senior Notes

Long-term debt, including current maturities of long-term debt, presented on our consolidated balance sheets as of June 30, 2019 and December 31, 2018 consisted of the following Public Senior Notes (unsecured) and Senior Secured Notes issued by CF Industries:

	Effective Interest Rate	June 30, 2019		December 31, 2018	
		Principal	Carrying Amount (1)	Principal	Carrying Amount (1)
		(in millions)			
Public Senior Notes:					
7.125% due May 2020	7.529%	$ 500	$ 498	$ 500	$ 497
3.450% due June 2023	3.562%	750	747	750	747
5.150% due March 2034	5.279%	750	740	750	740
4.950% due June 2043	5.031%	750	742	750	741
5.375% due March 2044	5.465%	750	741	750	741
Senior Secured Notes:					
3.400% due December 2021	3.782%	500	495	500	495
4.500% due December 2026	4.759%	750	738	750	737
Total long-term debt		$ 4,750	$ 4,701	$ 4,750	$ 4,698
Less: Current maturities of long-term debt		500	498	—	—
Long-term debt, net of current maturities		$ 4,250	$ 4,203	$ 4,750	$ 4,698

(1) Carrying amount is net of unamortized debt discount and deferred debt issuance costs. Total unamortized debt discount was $11 million as of both June 30, 2019 and December 31, 2018, and total deferred debt issuance costs were $38 million and $41 million as of June 30, 2019 and December 31, 2018, respectively.

Public Senior Notes

Under the indentures (including the applicable supplemental indentures) governing our senior notes due 2020, 2023, 2034, 2043 and 2044 identified in the table above (the Public Senior Notes), each series of Public Senior Notes is guaranteed by CF Holdings and CF Holdings' wholly owned subsidiaries CFE, CFS, CF USA and CFIDF. CFE, CFS, CF USA and CFIDF became subsidiary guarantors of the Public Senior Notes as a result of their becoming guarantors under the Revolving Credit Agreement. Interest on the Public Senior Notes is payable semiannually, and the Public Senior Notes are redeemable at our option, in whole at any time or in part from time to time, at specified make-whole redemption prices.

Senior Secured Notes

On November 21, 2016, CF Industries issued $500 million aggregate principal amount of 3.400% senior secured notes due 2021 (the 2021 Notes) and $750 million aggregate principal amount of 4.500% senior secured notes due 2026 (the 2026 Notes, and together with the 2021 Notes, the Senior Secured Notes). CF Holdings and the subsidiary guarantors of the Public Senior Notes are also guarantors of the Senior Secured Notes. Interest on the Senior Secured Notes is payable semiannually on December 1 and June 1, and the Senior Secured Notes are redeemable at our option, in whole at any time or in part from time to time, at specified make-whole redemption prices.

Forward Sales and Customer Advances

We offer our customers the opportunity to purchase products from us on a forward basis at prices and on delivery dates we propose. Therefore, our reported fertilizer selling prices and margins may differ from market spot prices and margins available at the time of shipment.

Customer advances, which typically represent a portion of the contract's value, are received shortly after the contract is executed, with any remaining unpaid amount generally being collected by the time control transfers to the customer, thereby reducing or eliminating the accounts receivable related to such sales. Any cash payments received in advance from customers in connection with forward sales contracts are reflected on our consolidated balance sheets as a current liability until control transfers and revenue is recognized. As of June 30, 2019 and December 31, 2018, we had $21 million and $149 million, respectively, in customer advances on our consolidated balance sheets.

While customer advances are generally a significant source of liquidity, the level of forward sales contracts is affected by many factors including current market conditions and our customers' outlook of future market fundamentals. During periods of declining prices, customers tend to delay purchasing fertilizer in anticipation that prices in the future will be lower than the current prices. If the level of sales under our forward sales programs were to decrease in the future, our cash received from customer advances would likely decrease and our accounts receivable balances would likely increase. Additionally, borrowing under the Revolving Credit Agreement could become necessary. Due to the volatility inherent in our business and changing customer expectations, we cannot estimate the amount of future forward sales activity.

Under our forward sales programs, a customer may delay delivery of an order due to weather conditions or other factors. These delays generally subject the customer to potential charges for storage or may be grounds for termination of the contract by us. Such a delay in scheduled shipment or termination of a forward sales contract due to a customer's inability or unwillingness to perform may negatively impact our reported sales.

Derivative Financial Instruments

We may use derivative financial instruments to reduce our exposure to changes in prices for natural gas that will be purchased in the future. Natural gas is the largest and most volatile component of our manufacturing cost for nitrogen-based fertilizers. From time to time, we also use derivative financial instruments to reduce our exposure to changes in foreign currency exchange rates. Volatility in reported quarterly earnings can result from the unrealized mark-to-market adjustments in the value of the derivatives. As of June 30, 2019 and December 31, 2018, our open derivative contracts consisted of natural gas basis swaps for 10.3 million MMBtus and 6.6 million MMBtus, respectively.

Defined Benefit Pension Plans

We contributed $13 million to our pension plans during the six months ended June 30, 2019. Over the remainder of 2019, we expect to contribute an additional $48 million to our pension plans, or a total of approximately $61 million for the full year 2019.

Distribution on Noncontrolling Interest in CFN

On July 31, 2019, the CFN Board of Managers approved semi-annual distribution payments for the distribution period ended June 30, 2019 in accordance with CFN's limited liability company agreement. On July 31, 2019, CFN distributed $100 million to CHS for the distribution period ended June 30, 2019.

Cash Flows

Operating Activities

Net cash provided by operating activities during the first six months of 2019 was $693 million, an increase of $95 million, as compared to $598 million in the first six months of 2018. This increase was due primarily to an increase in cash earnings generated by the business, partially offset by changes in working capital. Cash earnings from the business increased as net earnings in the first six months of 2019 increased by $176 million as compared to the first six months of 2018. The changes in working capital primarily include customer advances, as more customers prepaid their 2019 purchases by making customer advances in late 2018, accelerating cash receipts and impacting working capital.

Investing Activities

Net cash used in investing activities was $91 million in the first six months of 2019 as compared to $118 million in the first six months of 2018. During the first six months of 2019, capital expenditures totaled $154 million compared to $145 million in the first six months of 2018. Net cash used in investing activities in the first six months of 2019 included proceeds of $55 million related to the sale of our Pine Bend facility.

Financing Activities

Net cash used in financing activities was $426 million in the first six months of 2019 compared to $583 million in the same period of 2018. Dividends paid on common stock during the six months ended June 30, 2019 and 2018 were $133 million and $140 million, respectively. The decrease in dividends was due to lower shares outstanding as a result of shares repurchased under our share repurchase programs in 2018 and 2019. In the first six months of 2019, we spent $209 million to repurchase shares of our common stock, which included approximately $33 million related to shares repurchased in late 2018 that were paid for in 2019. In the first six months of 2019, we repurchased approximately 4.2 million shares for approximately $178 million, of which $2 million was accrued and not yet settled at June 30, 2019. Distributions to noncontrolling interests totaled $86 million in the first six months of 2019 as compared to $59 million in the first six months of 2018. Net cash used in financing activities in the first six months of 2018 included $388 million related to our acquisition of all of the outstanding publicly traded common units of TNCLP.

Sale of Pine Bend Facility

In March of 2019, we entered into an agreement to sell our Pine Bend dry bulk storage and logistics facility located in Minnesota. In April of 2019, we completed the sale, received proceeds of $55 million and recognized a pre-tax gain of $45 million. The gain is reflected in other operating—net in our consolidated statement of operations for the three and six months ended June 30, 2019.

Contractual Obligations

As of June 30, 2019, there have been no material changes outside the ordinary course of business to our contractual obligations as described in our 2018 Annual Report on Form 10-K filed with the SEC on February 22, 2019.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements that have or are reasonably likely to have a material current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources. See “Recent Accounting Pronouncements,” below for a discussion of our recent adoption of Accounting Standards Update (ASU) No. 2016-02, Leases (Topic 842).

Critical Accounting Policies and Estimates

There were no changes to our significant accounting policies or estimates during the first six months of 2019.

Recent Accounting Pronouncements

See Note 2—New Accounting Standards for a discussion of recent accounting pronouncements, including our January 1, 2019 adoption of ASU No. 2016-02, Leases (Topic 842), which requires lessees to recognize the rights and obligations resulting from virtually all leases (other than leases that meet the definition of a short-term lease) on their balance sheets as right-of-use assets with corresponding lease liabilities.

FORWARD-LOOKING STATEMENTS

From time to time, in this Quarterly Report on Form 10-Q as well as in other written reports and oral statements, we make forward-looking statements that are not statements of historical fact and may involve a number of risks and uncertainties. These statements relate to analyses and other information that are based on forecasts of future results and estimates of amounts not yet determinable. These statements may also relate to our prospects, future developments and business strategies. We have used the words “anticipate,” “believe,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “predict,” “project,” “will,” or “would” and similar terms and phrases, including references to assumptions, to identify forward-looking statements in this document. These forward-looking statements are made based on currently available competitive, financial and economic data, our current expectations, estimates, forecasts and projections about the industries and markets in which we operate and management’s beliefs and assumptions concerning future events affecting us. These statements are not guarantees of future performance and are subject to risks, uncertainties and factors relating to our operations and business environment, all of which are difficult to predict and many of which are beyond our control. Therefore, our actual results may differ materially from what is expressed in or implied by any forward-looking statements. We want to caution you not to place undue reliance on any forward-looking statements. We do not undertake any responsibility to release publicly any revisions to these forward-looking statements to take into account events or circumstances that occur after the date of this document. Additionally, we do not undertake any responsibility to provide updates regarding the occurrence of any unanticipated events which may cause actual results to differ from those expressed or implied by the forward-looking statements contained in this document.

Important factors that could cause actual results to differ materially from our expectations are disclosed under “Risk Factors” in Item 1A in our 2018 Annual Report on Form 10-K filed with the SEC on February 22, 2019. Such factors include, among others:

- the cyclical nature of our business and the impact of global supply and demand on our selling prices;
- the global commodity nature of our fertilizer products, the conditions in the international market for nitrogen products, and the intense global competition from other fertilizer producers;
- conditions in the U.S. and European agricultural industry;
- the volatility of natural gas prices in North America and Europe;
- difficulties in securing the supply and delivery of raw materials, increases in their costs or delays or interruptions in their delivery;
- reliance on third party providers of transportation services and equipment;
- the significant risks and hazards involved in producing and handling our products against which we may not be fully insured;
- our ability to manage our indebtedness;
- operating and financial restrictions imposed on us by the agreements governing our senior secured indebtedness;
- risks associated with our incurrence of additional indebtedness;
- our ability to maintain compliance with covenants under the agreements governing our indebtedness;
- downgrades of our credit ratings;
- risks associated with cyber security;
- weather conditions;
- risks associated with changes in tax laws and disagreements with taxing authorities;
- our reliance on a limited number of key facilities;
- potential liabilities and expenditures related to environmental, health and safety laws and regulations and permitting requirements;
- future regulatory restrictions and requirements related to greenhouse gas emissions;
- risks associated with expansions of our business, including unanticipated adverse consequences and the significant resources that could be required;
- the seasonality of the fertilizer business;
- the impact of changing market conditions on our forward sales programs;
- risks involving derivatives and the effectiveness of our risk measurement and hedging activities;
- risks associated with the operation or management of the CHS strategic venture, risks and uncertainties relating to the market prices of the fertilizer products that are the subject of our supply agreement with CHS over the life of the supply agreement, and the risk that any challenges related to the CHS strategic venture will harm our other business relationships;
- risks associated with our PLNL joint venture;
- acts of terrorism and regulations to combat terrorism;
- risks associated with international operations; and
- deterioration of global market and economic conditions.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

There were no significant changes to our quantitative and qualitative disclosures about market risk during the six months ended June 30, 2019. Please refer to Part II, Item 7A. Quantitative and Qualitative Disclosures about Market Risk included in our 2018 Annual Report on Form 10-K filed with the SEC on February 22, 2019 for a more complete discussion of the market risks we encounter.

ITEM 4. CONTROLS AND PROCEDURES.

(a) Disclosure Controls and Procedures. The Company's management, with the participation of the Company's principal executive officer and principal financial officer, has evaluated the effectiveness of the Company's disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act)) as of the end of the period covered by this report. Based on such evaluation, the Company's principal executive officer and principal financial officer have concluded that, as of the end of such period, the Company's disclosure controls and procedures are effective in (i) ensuring that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and (ii) ensuring that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Company's management, including the Company's principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure.

(b) Changes in Internal Control Over Financial Reporting. There have not been any changes in the Company's internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the quarter ended June 30, 2019 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

PART II—OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS.

West Fertilizer Co.

On April 17, 2013, there was a fire and explosion at the West Fertilizer Co. fertilizer storage and distribution facility in West, Texas. According to published reports, 15 people were killed and approximately 200 people were injured in the incident, and the fire and explosion damaged or destroyed a number of homes and buildings around the facility. Various subsidiaries of CF Industries Holdings, Inc. (the CF Entities) were named as defendants along with other companies in lawsuits filed in 2013, 2014 and 2015 in the District Court of McLennan County, Texas by the City of West, individual residents of the County and other parties seeking recovery for damages allegedly sustained as a result of the explosion. The cases were consolidated for discovery and pretrial proceedings in the District Court of McLennan County under the caption "In re: West Explosion Cases." The two-year statute of limitations expired on April 17, 2015. As of that date, over 400 plaintiffs had filed claims, including at least 9 entities, 325 individuals, and 80 insurance companies. Plaintiffs allege various theories of negligence, strict liability, and breach of warranty under Texas law. Although we do not own or operate the facility or directly sell our products to West Fertilizer Co., products that the CF Entities manufactured and sold to others were delivered to the facility and may have been stored at the West facility at the time of the incident.

The Court granted in part and denied in part the CF Entities' Motions for Summary Judgment in August 2015. Over two hundred cases have been resolved pursuant to confidential settlements that have been or we expect will be fully funded by insurance. The remaining cases are in various stages of discovery and pre-trial proceedings. The next group of cases was reset for trial beginning on September 16, 2019. We believe we have strong legal and factual defenses and intend to continue defending the CF Entities vigorously in the pending lawsuits. The Company cannot provide a range of reasonably possible loss due to the lack of damages discovery for many of the remaining claims and the uncertain nature of this litigation, including uncertainties around the potential allocation of responsibility by a jury to other defendants or responsible third parties. The recognition of a potential loss in the future in the West Fertilizer Co. litigation could negatively affect our results in the period of recognition. However, based upon currently available information, including available insurance coverage, we do not believe that this litigation will have a material adverse effect on our consolidated financial position, results of operations or cash flows.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS.

The following table sets forth stock repurchases, on a trade date basis, for each of the three months of the quarter ended June 30, 2019.

	Issuer Purchases of Equity Securities			
Period	**Total number of shares (or units) purchased**	**Average price paid per share (or unit)** [1]	**Total number of shares (or units) purchased as part of publicly announced plans or programs** [2]	**Maximum number (or approximate dollar value) of shares (or units) that may yet be purchased under the plans or programs (in thousands)** [2]
April 1, 2019 - April 30, 2019	482,743 [3]	$ 43.50	482,732	$ 919,001
May 1, 2019 - May 31, 2019	1,320,344 [4]	41.29	1,319,960	864,502
June 1, 2019 - June 30, 2019	974,874	43.64	974,874	821,961
Total	2,777,961	$ 42.50	2,777,566	

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(1) Average price paid per share of CF Industries Holdings, Inc. (CF Holdings) common stock repurchased under the 2019 Stock Repurchase Program, as defined below, is the execution price, excluding commissions paid to brokers.

(2) On February 13, 2019, our Board of Directors authorized management to repurchase CF Holdings common stock for a total expenditure of up to $1 billion through December 31, 2021 (the 2019 Stock Repurchase Program). This program is discussed in Note 15—Stockholders' Equity, in the notes to the unaudited consolidated financial statements included in Part I.

(3) Includes 11 shares withheld to pay employee tax obligations upon the lapse of restrictions on restricted stock units.

(4) Includes 384 shares withheld to pay employee tax obligations upon the lapse of restrictions on restricted stock units.

ITEM 6. EXHIBITS.

A list of exhibits filed with this Report on Form 10-Q (or incorporated by reference to exhibits previously filed or furnished) is provided in the Exhibit Index on page 55 of this report.

EXHIBIT INDEX

Exhibit No.	Description
10.1	Transition and Separation Agreement, dated as of May 30, 2019, between CF Industries Holdings, Inc. and Dennis P. Kelleher (incorporated by reference to Exhibit 10.1 to CF Industries Holdings, Inc.'s Current Report on Form 8-K filed with the SEC on May 31, 2019, File No. 001-32597)
31.1	Certification of Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Certification of Principal Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2	Certification of Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101	The following financial information from CF Industries Holdings, Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2019, formatted in Inline XBRL (eXtensible Business Reporting Language): (1) Consolidated Statements of Operations, (2) Consolidated Statements of Comprehensive Income, (3) Consolidated Balance Sheets, (4) Consolidated Statements of Equity, (5) Consolidated Statements of Cash Flows, and (6) the Notes to Unaudited Consolidated Financial Statements
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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.

	CF INDUSTRIES HOLDINGS, INC.
Date: August 1, 2019	By: /s/ W. ANTHONY WILL
	W. Anthony Will *President and Chief Executive Officer* *(Principal Executive Officer)*
Date: August 1, 2019	By: /s/ DENNIS P. KELLEHER
	Dennis P. Kelleher *Senior Vice President and Chief Financial Officer* *(Principal Financial Officer)*

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Section 2: EX-31.1 (EXHIBIT 31.1)

CF INDUSTRIES HOLDINGS, INC.

Exhibit 31.1

CERTIFICATION PURSUANT TO SECTION 302
OF THE SARBANES-OXLEY ACT OF 2002

I, W. Anthony Will, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of CF Industries Holdings, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) 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(s) 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.

Date:	August 1, 2019	/s/ W. ANTHONY WILL
		W. Anthony Will *President and Chief Executive Officer* *(Principal Executive Officer)*

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Section 3: EX-31.2 (EXHIBIT 31.2)

CF INDUSTRIES HOLDINGS, INC.

Exhibit 31.2

CERTIFICATION PURSUANT TO SECTION 302
OF THE SARBANES-OXLEY ACT OF 2002

I, Dennis P. Kelleher, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of CF Industries Holdings, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) 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(s) 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.

Date: August 1, 2019 /s/ DENNIS P. KELLEHER

Dennis P. Kelleher
Senior Vice President and Chief Financial Officer
(Principal Financial Officer)

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Section 4: EX-32.1 (EXHIBIT 32.1)

CF INDUSTRIES HOLDINGS, INC.

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of CF Industries Holdings, Inc. (the Company) for the period ended June 30, 2019 as filed with the Securities and Exchange Commission on the date hereof (the Report), I, W. Anthony Will, as President and Chief Executive Officer of the Company, hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

(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.

/s/ W. ANTHONY WILL

W. Anthony Will
President and Chief Executive Officer
(Principal Executive Officer)

Date: August 1, 2019

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Section 5: EX-32.2 (EXHIBIT 32.2)

CF INDUSTRIES HOLDINGS, INC.

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of CF Industries Holdings, Inc. (the Company) for the period ended June 30, 2019 as filed with the Securities and Exchange Commission on the date hereof (the Report), I, Dennis P. Kelleher, as Senior Vice President and Chief Financial Officer of the Company, hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

(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.

/s/ DENNIS P. KELLEHER

Dennis P. Kelleher
Senior Vice President and Chief Financial Officer
(Principal Financial Officer)

Date: August 1, 2019

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