UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D. C. 20549

FORM 10-Q

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

For Quarterly Period Ended March 31, 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 1-12658

ALBEMARLE CORPORATION
(Exact name of registrant as specified in its charter)

VIRGINIA	**54-1692118**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

4250 Congress Street, Suite 900
Charlotte, North Carolina 28209
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code - (980) 299-5700

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes x No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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. (Check one):

Large accelerated filer	x	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 x

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

Title of each class	Trading Symbol	Name of each exchange on which registered
COMMON STOCK, $.01 Par Value	**ALB**	**NEW YORK STOCK EXCHANGE**

Number of shares of common stock, $.01 par value, outstanding as of April 30, 2019: 105,956,723

ALBEMARLE CORPORATION

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PART I. FINANCIAL INFORMATION

Item 1. **Financial Statements (Unaudited).**

ALBEMARLE CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME
(In Thousands, Except Per Share Amounts)
(Unaudited)

	Three Months Ended March 31,	
	2019	**2018**
Net sales	$ 832,064	$ 821,629
Cost of goods sold	548,578	516,650
Gross profit	283,486	304,979
Selling, general and administrative expenses	113,355	101,370
Research and development expenses	14,977	20,986
Operating profit	155,154	182,623
Interest and financing expenses	(12,586)	(13,538)
Other income (expenses), net	11,291	(30,476)
Income before income taxes and equity in net income of unconsolidated investments	153,859	138,609
Income tax expense	37,514	20,361
Income before equity in net income of unconsolidated investments	116,345	118,248
Equity in net income of unconsolidated investments (net of tax)	35,181	20,677
Net income	151,526	138,925
Net income attributable to noncontrolling interests	(17,957)	(7,165)
Net income attributable to Albemarle Corporation	$ 133,569	$ 131,760
Basic earnings per share	$ 1.26	$ 1.19
Diluted earnings per share	$ 1.26	$ 1.18
Weighted-average common shares outstanding – basic	105,799	110,681
Weighted-average common shares outstanding – diluted	106,356	111,867

See accompanying Notes to the Condensed Consolidated Financial Statements.

ALBEMARLE CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In Thousands)
(Unaudited)

	Three Months Ended March 31,	
	2019	**2018**
Net income	$ 151,526	$ 138,925
Other comprehensive (loss) income, net of tax:		
Foreign currency translation	(10,855)	64,891
Pension and postretirement benefits	7	3
Net investment hedge	3,304	(14,421)
Interest rate swap	641	642
Total other comprehensive (loss) income, net of tax	(6,903)	51,115
Comprehensive income	144,623	190,040
Comprehensive income attributable to noncontrolling interests	(17,910)	(7,351)
Comprehensive income attributable to Albemarle Corporation	$ 126,713	$ 182,689

See accompanying Notes to the Condensed Consolidated Financial Statements.

ALBEMARLE CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(In Thousands)
(Unaudited)

	March 31, 2019	December 31, 2018
Assets		
Current assets:		
Cash and cash equivalents	$ 465,274	$ 555,320
Trade accounts receivable, less allowance for doubtful accounts (2019 – $4,486; 2018 – $4,460)	603,542	605,712
Other accounts receivable	57,019	52,059
Inventories	756,193	700,540
Other current assets	105,148	84,790
Total current assets	1,987,176	1,998,421
Property, plant and equipment, at cost	4,983,385	4,799,063
Less accumulated depreciation and amortization	1,813,195	1,777,979
Net property, plant and equipment	3,170,190	3,021,084
Investments	563,030	528,722
Other assets	211,073	80,135
Goodwill	1,561,092	1,567,169
Other intangibles, net of amortization	378,501	386,143
Total assets	$ 7,871,062	$ 7,581,674
Liabilities And Equity		
Current liabilities:		
Accounts payable	$ 482,433	$ 522,516
Accrued expenses	263,868	257,323
Current portion of long-term debt	425,684	307,294
Dividends payable	38,716	35,169
Current operating lease liability	21,299	—
Income taxes payable	46,191	60,871
Total current liabilities	1,278,191	1,183,173
Long-term debt	1,393,904	1,397,916
Postretirement benefits	45,862	46,157
Pension benefits	282,082	285,396
Other noncurrent liabilities	616,007	526,942
Deferred income taxes	390,977	382,982
Commitments and contingencies (Note 9)		
Equity:		
Albemarle Corporation shareholders' equity:		
Common stock, $.01 par value, issued and outstanding – 105,950 in 2019 and 105,616 in 2018	1,059	1,056
Additional paid-in capital	1,368,069	1,368,897
Accumulated other comprehensive loss	(357,538)	(350,682)
Retained earnings	2,660,684	2,566,050
Total Albemarle Corporation shareholders' equity	3,672,274	3,585,321
Noncontrolling interests	191,765	173,787
Total equity	3,864,039	3,759,108
Total liabilities and equity	$ 7,871,062	$ 7,581,674

See accompanying Notes to the Condensed Consolidated Financial Statements.

ALBEMARLE CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
(Unaudited)

	Common Stock							
(In Thousands, Except Share Data)	**Shares**	**Amounts**	**Additional Paid-in Capital**	**Accumulated Other Comprehensive (Loss) Income**	**Retained Earnings**	**Total Albemarle Shareholders' Equity**	**Noncontrolling Interests**	**Total Equity**
Balance at January 1, 2019	**105,616,028**	**$ 1,056**	**$ 1,368,897**	**$ (350,682)**	**$ 2,566,050**	**$ 3,585,321**	**$ 173,787**	**$ 3,759,108**
Net income					133,569	133,569	17,957	151,526
Other comprehensive loss				(6,856)		(6,856)	(47)	(6,903)
Cash dividends declared, $0.3675 per common share					(38,935)	(38,935)	—	(38,935)
Stock-based compensation and other			7,277			7,277		7,277
Exercise of stock options	114,128	1	2,675			2,676		2,676
Issuance of common stock, net	340,111	3	(3)			—		—
Increase in ownership interest of noncontrolling interest			(523)			(523)	68	(455)
Shares withheld for withholding taxes associated with common stock issuances	(120,256)	(1)	(10,254)			(10,255)		(10,255)
Balance at March 31, 2019	**105,950,011**	**$ 1,059**	**$ 1,368,069**	**$ (357,538)**	**$ 2,660,684**	**$ 3,672,274**	**$ 191,765**	**$ 3,864,039**
Balance at January 1, 2018	**110,546,674**	**$ 1,105**	**$ 1,863,949**	**$ (225,668)**	**$ 2,035,163**	**$ 3,674,549**	**$ 143,147**	**$ 3,817,696**
Net income					131,760	131,760	7,165	138,925
Other comprehensive income				50,929		50,929	186	51,115
Cash dividends declared, $0.335 per common share					(37,103)	(37,103)	(7,378)	(44,481)
Cumulative adjustment from adoption of income tax standard update (Note 1)					(11,199)	(11,199)		(11,199)
Stock-based compensation and other			5,737			5,737		5,737
Exercise of stock options	12,740	—	646			646		646
Issuance of common stock, net	319,440	3	(3)			—		—
Shares withheld for withholding taxes associated with common stock issuances	(122,740)	(1)	(15,008)			(15,009)		(15,009)
Balance at March 31, 2018	**110,756,114**	**$ 1,107**	**$ 1,855,321**	**$ (174,739)**	**$ 2,118,621**	**$ 3,800,310**	**$ 143,120**	**$ 3,943,430**

See accompanying Notes to the Condensed Consolidated Financial Statements.

ALBEMARLE CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In Thousands)
(Unaudited)

	Three Months Ended March 31,	
	2019	**2018**
Cash and cash equivalents at beginning of year	$ 555,320	$ 1,137,303
Cash flows from operating activities:		
Net income	151,526	138,925
Adjustments to reconcile net income to cash flows from operating activities:		
Depreciation and amortization	49,283	50,330
Gain on sale of property	(11,079)	—
Stock-based compensation	5,556	2,869
Equity in net income of unconsolidated investments (net of tax)	(35,181)	(20,677)
Dividends received from unconsolidated investments and nonmarketable securities	3,034	25,462
Pension and postretirement expense (benefit)	578	(890)
Pension and postretirement contributions	(3,555)	(3,548)
Unrealized gain on investments in marketable securities	(476)	(393)
Deferred income taxes	7,580	29,067
Working capital changes	(122,939)	(95,050)
Other, net	10,589	(4,541)
Net cash provided by operating activities	54,916	121,554
Cash flows from investing activities:		
Capital expenditures	(216,132)	(131,815)
Proceeds from sale of property and equipment	10,356	—
Sales of marketable securities, net	1,090	10
Investments in equity and other corporate investments	(2,509)	(735)
Net cash used in investing activities	(207,195)	(132,540)
Cash flows from financing activities:		
Other borrowings (repayments), net	118,223	(381,159)
Dividends paid to shareholders	(35,387)	(35,382)
Dividends paid to noncontrolling interests	—	(7,378)
Proceeds from exercise of stock options	2,676	646
Withholding taxes paid on stock-based compensation award distributions	(10,255)	(15,009)
Net cash provided by (used in) financing activities	75,257	(438,282)
Net effect of foreign exchange on cash and cash equivalents	(13,024)	4,153
Decrease in cash and cash equivalents	(90,046)	(445,115)
Cash and cash equivalents at end of period	$ 465,274	$ 692,188

See accompanying Notes to the Condensed Consolidated Financial Statements.

NOTE 1—Basis of Presentation:

In the opinion of management, the accompanying unaudited condensed consolidated financial statements of Albemarle Corporation and our wholly-owned, majority-owned and controlled subsidiaries (collectively, “Albemarle,” “we,” “us,” “our” or “the Company”) contain all adjustments necessary for a fair statement, in all material respects, of our condensed consolidated balance sheets as of March 31, 2019 and December 31, 2018, our consolidated statements of income, consolidated statements of comprehensive income, consolidated statements of changes in equity and condensed consolidated statements of cash flows for the three-month periods ended March 31, 2019 and 2018. All adjustments are of a normal and recurring nature. These unaudited condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and notes thereto included in our Annual Report on Form 10-K for the year ended December 31, 2018, which was filed with the Securities and Exchange Commission (“SEC”) on February 27, 2019. The December 31, 2018 condensed consolidated balance sheet data herein was derived from audited financial statements, but does not include all disclosures required by generally accepted accounting principles (“GAAP”) in the United States (“U.S.”). The results of operations for the three-month period ended March 31, 2019 are not necessarily indicative of the results to be expected for the full year. The three-month period ended March 31, 2018 includes an $11.2 million cumulative adjustment to decrease Retained earnings due to the adoption of accounting guidance that eliminated the deferral of tax effects of intra-entity asset transfers other than inventory.

Effective January 1, 2019, we adopted Accounting Standards Update (“ASU”) No. 2016-02, “Leases” and all related amendments using the modified retrospective method. Adoption of the new standard resulted in the recording of additional net lease assets and lease liabilities of $139.1 million as of January 1, 2019. Comparative periods have not been restated and are reported in accordance with our historical accounting. The standard did not have an impact on our consolidated Net income or cash flows. In addition, as a result of the adoption of this new standard, we have implemented internal controls and system changes to prepare the financial information.

As part of this adoption, we have elected the practical expedient relief package allowed by the new standard, which does not require the reassessment of (1) whether existing contracts contain a lease, (2) the lease classification or (3) unamortized initial direct costs for existing leases; and have elected to apply hindsight to the existing leases. Additionally, we have made accounting policy elections such as exclusion of short-term leases (leases with a term of 12 months or less and which do not include a purchase option that we are reasonably certain to exercise) from the balance sheet presentation, use of portfolio approach in determination of discount rate and accounting for non-lease components in a contract as part of a single lease component for all asset classes.

See Note 2, “Leases” and Note 17, “Recently Issued Accounting Pronouncements,” for additional information. In addition, see below for a description of our updated lease accounting policy.

Leases

We determine if an arrangement is a lease at inception. 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. Operating lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. As an implicit rate for most of our leases is not determinable, we use our incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments. The lease payments for the initial measurement of lease ROU assets and lease liabilities include fixed and variable payments based on an index or a rate. Variable lease payments that are not index or rate based are recorded as expenses when incurred. Our variable lease payments typically include real estate taxes, insurance costs and common-area maintenance. The operating lease ROU asset also includes any lease payments made, net of lease incentives. The lease term is the non-cancelable period of the lease, including any options to extend, purchase or terminate the lease when it is reasonably certain that we will exercise that option. We amortize the operating lease ROU assets on a straight-line basis over the period of the lease and the finance lease ROU assets on a straight-line basis over the shorter of their estimated useful lives or the lease terms. Leases with an initial term of 12 months or less are not recorded on the balance sheet, and we recognize lease expense for these leases on a straight-line basis over the lease term.

NOTE 2—Leases:

We lease certain office space, buildings, transportation and equipment in various countries. The initial lease terms generally range from 1 to 30 years for real estate leases, and from 2 to 15 years for non-real estate leases. Leases with an initial term of 12 months or less are not recorded on the balance sheet, and we recognize lease expense for these leases on a straight-line basis over the lease term.

Many leases include options to terminate or renew, with renewal terms that can extend the lease term from 1 to 50 years or more. The exercise of lease renewal options is at our sole discretion. Certain leases also include options to purchase the leased property. The depreciable life of assets and leasehold improvements are limited by the expected lease term, unless there is a transfer of title or purchase option reasonably certain of exercise. Our lease agreements do not contain any material residual value guarantees or material restrictive covenants.

The following table provides details of our lease contracts for the three months ended March 31, 2019 (in thousands):

	Three Months Ended March 31, 2019
Operating lease cost	$ 9,421
Finance lease cost:	
Amortization of right of use assets	178
Interest on lease liabilities	33
Total finance lease cost	211
Short-term lease cost	1,966
Variable lease cost	1,086
Total lease cost	$ 12,684

Supplemental cash flow information related to our lease contracts for the three months ended March 31, 2019 is as follows (in thousands):

	Three Months Ended March 31, 2019
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from operating leases	$ 8,930
Operating cash flows from finance leases	33
Financing cash flows from finance leases	171

Supplemental balance sheet information related to our lease contracts, including the location on balance sheet, at March 31, 2019 is as follows (in thousands, except as noted):

	March 31, 2019
Operating leases:	
Other assets	$ 130,628
Current operating lease liability	21,299
Other noncurrent liabilities	110,058
Total operating lease liabilities	131,357
Finance leases:	
Net property, plant and equipment	4,105
Current portion of long-term debt	684
Long-term debt	3,601
Total finance lease liabilities	4,285
Weighted average remaining lease term (in years):	
Operating leases	11.9
Finance leases	6.5
Weighted average discount rate (%):	
Operating leases	3.88%
Finance leases	2.90%

Maturities of lease liabilities as of March 31, 2019 were as follows (in thousands):

	Operating Leases	Finance Leases
Remainder of 2019	$ 18,801	$ 607
2020	21,096	765
2021	12,435	676
2022	10,546	676
2023	10,198	676
Thereafter	93,911	1,352
Total lease payments	166,987	4,752
Less imputed interest	35,630	467
Total	$ 131,357	$ 4,285

As of December 31, 2018, future non-cancelable minimum lease payments were $25.6 million in 2019; $17.9 million in 2020; $12.5 million in 2021; $10.8 million in 2022; $10.1 million in 2023; and $87.1 million thereafter.

NOTE 3—Goodwill and Other Intangibles:

The following table summarizes the changes in goodwill by reportable segment for the three months ended March 31, 2019 (in thousands):

	Lithium	Bromine Specialties	Catalysts	All Other	Total
Balance at December 31, 2018	$ 1,354,779	$ 20,319	$ 185,485	$ 6,586	$ 1,567,169
Foreign currency translation adjustments	(4,369)	—	(1,708)	—	(6,077)
Balance at March 31, 2019	$ 1,350,410	$ 20,319	$ 183,777	$ 6,586	$ 1,561,092

The following table summarizes the changes in other intangibles and related accumulated amortization for the three months ended March 31, 2019 (in thousands):

	Customer Lists and Relationships	Trade Names and Trademarks(a)	Patents and Technology	Other	Total
Gross Asset Value					
Balance at December 31, 2018	$ 428,372	$ 18,453	$ 55,801	$ 43,708	$ 546,334
Foreign currency translation adjustments	(1,662)	(76)	217	166	(1,355)
Balance at March 31, 2019	$ 426,710	$ 18,377	$ 56,018	$ 43,874	$ 544,979
Accumulated Amortization					
Balance at December 31, 2018	$ (95,797)	$ (8,176)	$ (35,248)	$ (20,970)	$ (160,191)
Amortization	(5,808)	—	(355)	(664)	(6,827)
Foreign currency translation adjustments	412	25	113	(10)	540
Balance at March 31, 2019	$ (101,193)	$ (8,151)	$ (35,490)	$ (21,644)	$ (166,478)
Net Book Value at December 31, 2018	$ 332,575	$ 10,277	$ 20,553	$ 22,738	$ 386,143
Net Book Value at March 31, 2019	$ 325,517	$ 10,226	$ 20,528	$ 22,230	$ 378,501

(a) Includes only indefinite-lived intangible assets.

NOTE 4—Income Taxes:

The effective income tax rate for the three-month period ended March 31, 2019 was 24.4%, compared to 14.7% for the three-month period ended March 31, 2018. The Company’s effective income tax rate fluctuates based on, among other factors, its level and location of income. The difference between the U.S. federal statutory income tax rate and our effective income tax rate for the three-months ended March 31, 2019 was impacted by a variety of factors, primarily stemming from the location in which income was earned and discrete net tax expenses primarily related to uncertain tax positions. The difference between the U.S. federal statutory income tax rate and our effective income tax rate for the three-months ended March 31, 2018 was impacted by a variety of factors, primarily stemming from discrete tax benefits related to adjustments recorded for the U.S. Tax Cuts and Jobs Act (“TCJA”) and excess tax benefits realized from stock-based compensation arrangements.

NOTE 5—Earnings Per Share:

Basic and diluted earnings per share for the three-month periods ended March 31, 2019 and 2018 are calculated as follows (in thousands, except per share amounts):

	Three Months Ended March 31,	
	2019	2018
Basic earnings per share		
Numerator:		
Net income attributable to Albemarle Corporation	$ 133,569	$ 131,760
Denominator:		
Weighted-average common shares for basic earnings per share	105,799	110,681
Basic earnings per share	$ 1.26	$ 1.19
Diluted earnings per share		
Numerator:		
Net income attributable to Albemarle Corporation	$ 133,569	$ 131,760
Denominator:		
Weighted-average common shares for basic earnings per share	105,799	110,681
Incremental shares under stock compensation plans	557	1,186
Weighted-average common shares for diluted earnings per share	106,356	111,867
Diluted earnings per share	$ 1.26	$ 1.18

At March 31, 2019, there were 119,265 common stock equivalents not included in the computation of diluted earnings per share because their effect would have been anti-dilutive.

On February 26, 2019, the Company increased the regular quarterly dividend by 10% to $0.3675 per share and declared a cash dividend of said amount for the first quarter of 2019, which was paid on April 1, 2019 to shareholders of record at the close of business as of March 15, 2019. On May 8, 2019, the Company declared a cash dividend of $0.3675 per share, which is payable on July 1, 2019 to shareholders of record at the close of business as of June 14, 2019.

NOTE 6—Inventories:

The following table provides a breakdown of inventories at March 31, 2019 and December 31, 2018 (in thousands):

	March 31, 2019	December 31, 2018
Finished goods[(a)]	$ 535,201	$ 482,355
Raw materials and work in process[(b)]	159,429	158,290
Stores, supplies and other	61,563	59,895
Total	$ 756,193	$ 700,540

(a) Increase primarily due to the build-up of inventory in our Lithium and Catalysts segments for a forecasted increase in sales in 2019.
(b) Included $76.4 million and $71.4 million at March 31, 2019 and December 31, 2018, respectively, of work in process related to lithium brine.

NOTE 7—Investments:

The Company holds a 49% equity interest in Windfield Holdings Pty. Ltd. (“Windfield”), where the ownership parties share risks and benefits disproportionate to their voting interests. As a result, the Company considers Windfield to be a variable interest entity (“VIE”), however this investment is not consolidated as the Company is not the primary beneficiary. The carrying amount of our 49% equity interest in Windfield, which is our most significant VIE, was $380.6 million and $349.6 million at March 31, 2019 and December 31, 2018, respectively. The Company’s aggregate net investment in all other entities which it considers to be VIEs for which the Company is not the primary beneficiary was $8.3 million and $8.1 million at March 31, 2019 and December 31, 2018, respectively. Our unconsolidated VIEs are reported in Investments on the condensed consolidated balance sheets. The Company does not guarantee debt for, or have other financial support obligations to, these entities, and its maximum exposure to loss in connection with its continuing involvement with these entities is limited to the carrying value of the investments.

NOTE 8—Long-Term Debt:

Long-term debt at March 31, 2019 and December 31, 2018 consisted of the following (in thousands):

	March 31, 2019	December 31, 2018
1.875% Senior notes, net of unamortized discount and debt issuance costs of $2,576 at March 31, 2019 and $2,841 at December 31, 2018	$ 440,098	$ 444,155
4.15% Senior notes, net of unamortized discount and debt issuance costs of $2,762 at March 31, 2019 and $2,884 at December 31, 2018	422,238	422,116
4.50% Senior notes, net of unamortized discount and debt issuance costs of $514 at March 31, 2019 and $589 at December 31, 2018	174,701	174,626
5.45% Senior notes, net of unamortized discount and debt issuance costs of $3,966 at March 31, 2019 and $4,004 at December 31, 2018	346,034	345,996
Commercial paper notes	425,000	306,606
Variable-rate foreign bank loans	7,232	7,216
Finance lease obligations	4,285	4,495
Total long-term debt	1,819,588	1,705,210
Less amounts due within one year	425,684	307,294
Long-term debt, less current portion	$ 1,393,904	$ 1,397,916

Current portion of long-term debt at March 31, 2019 consisted primarily of commercial paper notes with a weighted-average interest rate of approximately 2.89% and a weighted-average maturity of 42 days.

The carrying value of our 1.875% Euro-denominated senior notes has been designated as an effective hedge of our net investment in certain foreign subsidiaries where the Euro serves as the functional currency, and gains or losses on the revaluation of these senior notes to our reporting currency are recorded in accumulated other comprehensive loss. During the three-month periods ended March 31, 2019 and 2018, gains (losses) of $3.3 million and ($14.4) million (net of income taxes), respectively, were recorded in accumulated other comprehensive loss in connection with the revaluation of these senior notes to our reporting currency.

NOTE 9—Commitments and Contingencies:

Environmental

We had the following activity in our recorded environmental liabilities for the three months ended March 31, 2019 (in thousands):

Beginning balance at December 31, 2018	$ 49,569
Expenditures	(2,080)
Accretion of discount	223
Additions and changes in estimates	1,070
Foreign currency translation adjustments and other	(506)
Ending balance at March 31, 2019	48,276
Less amounts reported in Accrued expenses	9,826
Amounts reported in Other noncurrent liabilities	$ 38,450

Environmental remediation liabilities included discounted liabilities of $39.1 million and $40.4 million at March 31, 2019 and December 31, 2018, respectively, discounted at rates with a weighted-average of 3.7%, with the undiscounted amount totaling $72.7 million and $74.5 million at March 31, 2019 and December 31, 2018, respectively. For certain locations where the Company is operating groundwater monitoring and/or remediation systems, prior owners or insurers have assumed all or most of the responsibility.

The amounts recorded represent our future remediation and other anticipated environmental liabilities. These liabilities typically arise during the normal course of our operational and environmental management activities or at the time of acquisition of the site, and are based on internal analysis as well as input from outside consultants. As evaluations proceed at each relevant site, changes in risk assessment practices, remediation techniques and regulatory requirements can occur, therefore such liability estimates may be adjusted accordingly. The timing and duration of remediation activities at these sites will be determined when evaluations are completed. Although it is difficult to quantify the potential financial impact of these remediation liabilities, management estimates (based on the latest available information) that there is a reasonable possibility that future environmental remediation costs associated with our past operations, could be an additional $10 million to $35 million before income taxes, in excess of amounts already recorded. The variability of this range is primarily driven by possible environmental remediation activity at a formerly owned site where we indemnify the buyer through a set cutoff date in 2024.

We believe that any sum we may be required to pay in connection with environmental remediation matters in excess of the amounts recorded would likely occur over a period of time and would likely not have a material adverse effect upon our results of operations, financial condition or cash flows on a consolidated annual basis although any such sum could have a material adverse impact on our results of operations, financial condition or cash flows in a particular quarterly reporting period.

Litigation

We are involved from time to time in legal proceedings of types regarded as common in our business, including administrative or judicial proceedings seeking remediation under environmental laws, such as the federal Comprehensive Environmental Response, Compensation and Liability Act, commonly known as CERCLA or Superfund, products liability, breach of contract liability and premises liability litigation. Where appropriate, we may establish financial reserves for such proceedings. We also maintain insurance to mitigate certain of such risks. Costs for legal services are generally expensed as incurred.

As previously reported in 2018, following receipt of information regarding potential improper payments being made by third party sales representatives of our Refining Solutions business, within our Catalysts segment, we promptly retained outside counsel and forensic accountants to investigate potential violations of the Company's Code of Conduct, the Foreign Corrupt Practices Act and other potentially applicable laws. Based on this internal investigation, we have voluntarily self-reported potential issues relating to the use of third party sales representatives in our Refining Solutions business, within our Catalysts segment, to the U.S. Department of Justice ("DOJ"), the SEC, and the Dutch Public Prosecutor ("DPP"), and are cooperating with the DOJ, the SEC, and DPP in their review of these matters. In connection with our internal investigation, we have implemented, and are continuing to implement, appropriate remedial measures.

At this time, we are unable to predict the duration, scope, result or related costs associated with any investigations by the DOJ, the SEC, or DPP. We are unable to predict what, if any, action may be taken by the DOJ, the SEC, or DPP, or what penalties or remedial actions they may seek to impose. Any determination that our operations or activities are not in compliance with existing laws or regulations could result in the imposition of fines, penalties, disgorgement, equitable relief, or other losses. We do not believe, however, that any fines, penalties, disgorgement, equitable relief or other losses would have a material adverse effect on our financial condition or liquidity.

Indemnities

We are indemnified by third parties in connection with certain matters related to acquired and divested businesses. Although we believe that the financial condition of those parties who may have indemnification obligations to the Company is generally sound, in the event the Company seeks indemnity under any of these agreements or through other means, there can be no assurance that any party who may have obligations to indemnify us will adhere to their obligations and we may have to resort to legal action to enforce our rights under the indemnities.

The Company may be subject to indemnity claims relating to properties or businesses it divested, including properties or businesses of acquired businesses that were divested prior to the completion of the acquisition. In the opinion of management, and based upon information currently available, the ultimate resolution of any indemnification obligations owed to the Company or by the Company is not expected to have a material effect on the Company's financial condition, results of operations or cash flows. The Company had approximately $27.8 million and $45.3 million at March 31, 2019 and December 31, 2018, respectively, recorded in Other noncurrent liabilities, and $19.2 million recorded in Accrued expenses at March 31, 2019, related to the indemnification of certain income and non-income tax liabilities associated with the Chemetall Surface Treatment entities sold, as well as the proposed settlement of an ongoing audit of a previously disposed business in Germany.

Other

We have contracts with certain of our customers, which serve as guarantees on product delivery and performance according to customer specifications that can cover both shipments on an individual basis as well as blanket coverage of multiple shipments under certain customer supply contracts. The financial coverage provided by these guarantees is typically based on a percentage of net sales value.

NOTE 10—Segment Information:

Our three reportable segments include: (1) Lithium; (2) Bromine Specialties; and (3) Catalysts. Each segment has a dedicated team of sales, research and development, process engineering, manufacturing and sourcing, and business strategy personnel and has full accountability for improving execution through greater asset and market focus, agility and responsiveness. This business structure aligns with the markets and customers we serve through each of the segments. This structure also facilitates the continued standardization of business processes across the organization, and is consistent with the manner in which information is presently used internally by the Company's chief operating decision maker to evaluate performance and make resource allocation decisions.

Summarized financial information concerning our reportable segments is shown in the following tables. The "All Other" category includes only the fine chemistry services business that does not fit into any of our core businesses.

The Corporate category is not considered to be a segment and includes corporate-related items not allocated to the operating segments. Pension and OPEB service cost (which represents the benefits earned by active employees during the period) and amortization of prior service cost or benefit are allocated to the reportable segments, All Other, and Corporate, whereas the remaining components of pension and OPEB benefits cost or credit ("Non-operating pension and OPEB items") are included in Corporate. Segment data includes intersegment transfers of raw materials at cost and allocations for certain corporate costs.

The Company's chief operating decision maker uses adjusted EBITDA (as defined below) to assess the ongoing performance of the Company's business segments and to allocate resources. The Company defines adjusted EBITDA as earnings before interest, taxes, depreciation and amortization, as adjusted on a consistent basis for certain non-recurring or unusual items in a balanced manner and on a segment basis. These non-recurring or unusual items may include acquisition and integration related costs, gains or losses on sales of businesses, restructuring charges, facility divestiture charges, non-operating pension and OPEB items and other significant non-recurring items. In addition, management uses adjusted EBITDA for business planning purposes and as a significant component in the calculation of performance-based compensation for management and other employees. The Company has reported adjusted EBITDA because management believes it provides transparency to investors and enables period-to-period comparability of financial performance. Adjusted EBITDA is a financial measure that is not required by, or presented in accordance with, U.S. GAAP. Adjusted EBITDA should not be considered as an alternative to Net income attributable to Albemarle Corporation, the most directly comparable financial measure calculated and reported in accordance with U.S. GAAP, or any other financial measure reported in accordance with U.S. GAAP.

ALBEMARLE CORPORATION AND SUBSIDIARIES
Notes to the Condensed Consolidated Financial Statements
(Unaudited)

	Three Months Ended March 31,	
	2019	2018
	(In thousands)	
Net sales:		
Lithium	$ 291,886	$ 298,032
Bromine Specialties	249,052	225,639
Catalysts	251,648	260,717
All Other	39,478	37,165
Corporate	—	76
Total net sales	$ 832,064	$ 821,629
Adjusted EBITDA:		
Lithium	$ 115,616	$ 131,014
Bromine Specialties	78,597	69,969
Catalysts	60,071	67,830
All Other	7,243	3,862
Corporate	(35,660)	(23,957)
Total adjusted EBITDA	$ 225,867	$ 248,718

See below for a reconciliation of adjusted EBITDA, the non-GAAP financial measure, from Net income attributable to Albemarle Corporation, the most directly comparable financial measure calculated and reported in accordance with U.S. GAAP (in thousands):

	Lithium	Bromine Specialties	Catalysts	Reportable Segments Total	All Other	Corporate	Consolidated Total
Three months ended March 31, 2019							
Net income (loss) attributable to Albemarle Corporation	$ 93,169	$ 67,480	$ 47,859	$ 208,508	$ 5,206	$ (80,145)	$ 133,569
Depreciation and amortization	22,092	11,117	12,212	45,421	2,037	1,825	49,283
Acquisition and integration related costs(a)	—	—	—	—	—	5,285	5,285
Gain on sale of property(b)	—	—	—	—	—	(11,079)	(11,079)
Interest and financing expenses	—	—	—	—	—	12,586	12,586
Income tax expense	—	—	—	—	—	37,514	37,514
Non-operating pension and OPEB items	—	—	—	—	—	(583)	(583)
Other(c)	355	—	—	355	—	(1,063)	(708)
Adjusted EBITDA	$ 115,616	$ 78,597	$ 60,071	$ 254,284	$ 7,243	$ (35,660)	$ 225,867
Three months ended March 31, 2018							
Net income (loss) attributable to Albemarle Corporation	$ 108,334	$ 59,536	$ 55,660	$ 223,530	$ 1,760	$ (93,530)	$ 131,760
Depreciation and amortization	24,065	10,433	12,170	46,668	2,102	1,560	50,330
Acquisition and integration related costs(a)	—	—	—	—	—	2,201	2,201
Interest and financing expenses	—	—	—	—	—	13,538	13,538
Income tax expense	—	—	—	—	—	20,361	20,361
Non-operating pension and OPEB items	—	—	—	—	—	(2,197)	(2,197)
Legal accrual(d)	—	—	—	—	—	17,628	17,628
Environmental accrual(e)	—	—	—	—	—	15,597	15,597
Other(f)	(1,385)	—	—	(1,385)	—	885	(500)
Adjusted EBITDA	$ 131,014	$ 69,969	$ 67,830	$ 268,813	$ 3,862	$ (23,957)	$ 248,718

(a) Included acquisition and integration related costs relating to various significant projects. For the three-month period ended March 31, 2019, $5.3 million was recorded in Selling, general and administrative expenses. For the three-month period ended March 31, 2018, $1.0 million and $1.2 million was recorded in Cost of goods sold and Selling, general and administrative expenses, respectively.

(b) Gain recorded in Other income (expenses), net related to the sale of land in Pasadena, Texas not used as part of our operations.
(c) Included amounts for the three months ended March 31, 2019 recorded in:
- Cost of goods sold - $0.4 million related to non-routine labor and compensation related costs in Chile that are outside normal compensation arrangements.
- Selling, general and administrative expenses - Expected severance payments as part of a business reorganization plan of $0.5 million, with the unpaid balance recorded in Accrued expenses as of March 31, 2019.
- Other income (expenses), net - $1.6 million of a net gain resulting from the revision of indemnifications and other liabilities related to previously disposed businesses.

(d) Included in Other income (expenses), net is a charge of $17.6 million resulting from a jury rendered verdict against Albemarle related to certain business concluded under a 2014 sales agreement for products that Albemarle no longer manufactures.
(e) Increase in environmental reserve to indemnify the buyer of a formerly owned site recorded in Other income (expenses), net. As defined in the agreement of sale, this indemnification has a set cutoff date in 2024, at which point we will no longer be required to provide financial coverage.
(f) Included amounts for the three months ended March 31, 2018 recorded in:
- Cost of goods sold - $1.1 million for the write-off of fixed assets related to a major capacity expansion in our Jordanian joint venture.
- Selling, general and administrative expenses - $1.4 million gain related to a refund from Chilean authorities due to an overpayment made in a prior year.
- Other income (expenses), net - $0.2 million of a net gain resulting from the revision of indemnifications and other liabilities related to previously disposed businesses.

NOTE 11—Pension Plans and Other Postretirement Benefits:

The components of pension and postretirement benefits cost (credit) for the three-month periods ended March 31, 2019 and 2018 were as follows (in thousands):

	Three Months Ended March 31, 2019	Three Months Ended March 31, 2018
Pension Benefits Cost (Credit):		
Service cost	$ 1,130	$ 1,268
Interest cost	8,320	8,027
Expected return on assets	(9,452)	(10,764)
Amortization of prior service benefit	6	22
Total net pension benefits cost (credit)	$ 4	$ (1,447)
Postretirement Benefits Cost (Credit):		
Service cost	$ 24	$ 29
Interest cost	549	542
Expected return on assets	—	(2)
Amortization of prior service benefit	—	(12)
Total net postretirement benefits cost	$ 573	$ 557
Total net pension and postretirement benefits cost (credit)	$ 577	$ (890)

All components of net benefit cost (credit), other than service cost, are included in Other income (expenses), net on the consolidated statements of income.

During the three-month periods ended March 31, 2019 and 2018, we made contributions of $2.7 million and $3.1 million, respectively, to our qualified and nonqualified pension plans.

We paid $0.9 million and $0.5 million in premiums to the U.S. postretirement benefit plan during the three-month periods ended March 31, 2019 and 2018, respectively.

NOTE 12—Fair Value of Financial Instruments:

In assessing the fair value of financial instruments, we use methods and assumptions that are based on market conditions and other risk factors existing at the time of assessment. Fair value information for our financial instruments is as follows:

Long-Term Debt—the fair values of our senior notes are estimated using Level 1 inputs and account for the difference between the recorded amount and fair value of our long-term debt. The carrying value of our remaining long-term debt reported in the accompanying condensed consolidated balance sheets approximates fair value as substantially all of such debt bears interest based on prevailing variable market rates currently available in the countries in which we have borrowings.

	March 31, 2019		December 31, 2018	
	Recorded Amount	Fair Value	Recorded Amount	Fair Value
	(In thousands)			
Long-term debt	$ 1,826,101	$ 1,875,467	$ 1,712,003	$ 1,731,271

Foreign Currency Forward Contracts—we enter into foreign currency forward contracts in connection with our risk management strategies in an attempt to minimize the financial impact of changes in foreign currency exchange rates. These derivative financial instruments are used to manage risk and are not used for trading or other speculative purposes. The fair values of our foreign currency forward contracts are estimated based on current settlement values. At March 31, 2019 and December 31, 2018, we had outstanding foreign currency forward contracts with notional values totaling $707.6 million and $626.5 million, respectively, hedging our exposure to various currencies including the Euro and Chinese Renminbi. Our foreign currency forward contracts outstanding at March 31, 2019 and December 31, 2018 have not been designated as hedging instruments under ASC 815, *Derivatives and Hedging*. The following table summarizes the fair value of our foreign currency forward contracts included in the condensed consolidated balance sheets as of March 31, 2019 and December 31, 2018 (in thousands):

	March 31, 2019	December 31, 2018
Foreign currency forward contracts - Other accounts receivable	$ 388	$ 431

Gains and losses on foreign currency forward contracts are recognized currently in Other income (expenses), net; further, fluctuations in the value of these contracts are generally expected to be offset by changes in the value of the underlying exposures being hedged, which are also reported in Other income (expenses), net. The following table summarizes these net (losses) gains recognized in our consolidated statements of income during the three-month periods ended March 31, 2019 and 2018 (in thousands):

	Three Months Ended March 31,	
	2019	2018
Foreign currency forward contracts (losses) gains	$ (10,415)	$ 4,819

In addition, for the three-month periods ended March 31, 2019 and 2018, we recorded losses (gains) of $10.4 million and ($4.8) million, respectively, related to the change in the fair value of our foreign currency forward contracts, and net cash (settlements) receipts of ($10.4) million and $0.1 million, respectively, in Other, net, in our condensed consolidated statements of cash flows.

The counterparties to our foreign currency forward contracts are major financial institutions with which we generally have other financial relationships. We are exposed to credit loss in the event of nonperformance by these counterparties. However, we do not anticipate nonperformance by the counterparties.

NOTE 13—Fair Value Measurement:

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (exit price). The inputs used to measure fair value are classified into the following hierarchy:

Level 1	Unadjusted quoted prices in active markets for identical assets or liabilities
Level 2	Unadjusted quoted prices in active markets for similar assets or liabilities, or unadjusted quoted prices for identical or similar assets or liabilities in markets that are not active, or inputs other than quoted prices that are observable for the asset or liability
Level 3	Unobservable inputs for the asset or liability

We endeavor to utilize the best available information in measuring fair value. Financial assets and liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. The following tables set forth our financial assets and liabilities that were accounted for at fair value on a recurring basis as of March 31, 2019 and December 31, 2018 (in thousands):

	March 31, 2019	Quoted Prices in Active Markets for Identical Items (Level 1)	Quoted Prices in Active Markets for Similar Items (Level 2)	Unobservable Inputs (Level 3)
Assets:				
Investments under executive deferred compensation plan[(a)]	$ 25,678	$ 25,678	$ —	$ —
Private equity securities[(b)]	$ 30	$ 30	$ —	$ —
Private equity securities measured at net asset value[(b)(c)]	$ 7,165	$ —	$ —	$ —
Foreign currency forward contracts[(d)]	$ 388	$ —	$ 388	$ —
Liabilities:				
Obligations under executive deferred compensation plan[(a)]	$ 25,678	$ 25,678	$ —	$ —

	December 31, 2018	Quoted Prices in Active Markets for Identical Items (Level 1)	Quoted Prices in Active Markets for Similar Items (Level 2)	Unobservable Inputs (Level 3)
Assets:				
Investments under executive deferred compensation plan[(a)]	$ 26,292	$ 26,292	$ —	$ —
Private equity securities[(b)]	$ 26	$ 26	$ —	$ —
Private equity securities measured at net asset value[(b)(c)]	$ 7,195	$ —	$ —	$ —
Foreign currency forward contracts[(d)]	$ 431	$ —	$ 431	$ —
Liabilities:				
Obligations under executive deferred compensation plan[(a)]	$ 26,292	$ 26,292	$ —	$ —

(a) We maintain an Executive Deferred Compensation Plan (“EDCP”) that was adopted in 2001 and subsequently amended. The purpose of the EDCP is to provide current tax planning opportunities as well as supplemental funds upon the retirement or death of certain of our employees. The EDCP is intended to aid in attracting and retaining employees of exceptional ability by providing them with these benefits. We also maintain a Benefit Protection Trust (the “Trust”) that was created to provide a source of funds to assist in meeting the obligations of the EDCP, subject to the claims of our creditors in the event of our insolvency. Assets of the Trust are consolidated in accordance with authoritative guidance. The assets of the Trust consist primarily of mutual fund investments (which are accounted for as trading securities and are marked-to-market on a monthly basis through the consolidated statements of income) and cash and cash equivalents. As such, these assets and obligations are classified within Level 1.

(b) Primarily consists of private equity securities classified as available-for-sale and are reported in Investments in the condensed consolidated balance sheets. The changes in fair value are reported in Other income (expenses), net, in our consolidated statements of income.

(c) Holdings in certain private equity securities are measured at fair value using the net asset value per share (or its equivalent) practical expedient and have not been categorized in the fair value hierarchy.

(d) As a result of our global operating and financing activities, we are exposed to market risks from changes in foreign currency exchange rates, which may adversely affect our operating results and financial position. When deemed appropriate, we minimize our risks from foreign currency exchange rate fluctuations through the use of foreign currency forward contracts. Unless otherwise noted, these derivative financial instruments are not designated as hedging instruments under ASC 815, *Derivatives and Hedging*. The foreign currency forward contracts are valued using broker quotations or market transactions in either the listed or over-the-counter markets. As such, these derivative instruments are classified within Level 2.

NOTE 14—Accumulated Other Comprehensive (Loss) Income:

The components and activity in Accumulated other comprehensive (loss) income (net of deferred income taxes) consisted of the following during the periods indicated below (in thousands):

	Foreign Currency Translation	Pension and Postretirement Benefits[(a)]	Net Investment Hedge	Interest Rate Swap[(b)]	Total
Three months ended March 31, 2019					
Balance at December 31, 2018	$ (407,646)	$ (159)	$ 72,337	$ (15,214)	$ (350,682)
Other comprehensive (loss) income before reclassifications	(10,855)	—	3,304	—	(7,551)
Amounts reclassified from accumulated other comprehensive loss	—	7	—	641	648
Other comprehensive (loss) income, net of tax	(10,855)	7	3,304	641	(6,903)
Other comprehensive loss attributable to noncontrolling interests	47	—	—	—	47
Balance at March 31, 2019	$ (418,454)	$ (152)	$ 75,641	$ (14,573)	$ (357,538)
Three months ended March 31, 2018					
Balance at December 31, 2017	$ (257,569)	$ (21)	$ 46,551	$ (14,629)	$ (225,668)
Other comprehensive income (loss) before reclassifications	64,891	—	(14,421)	—	50,470
Amounts reclassified from accumulated other comprehensive loss	—	3	—	642	645
Other comprehensive income (loss), net of tax	64,891	3	(14,421)	642	51,115
Other comprehensive income attributable to noncontrolling interests	(186)	—	—	—	(186)
Balance at March 31, 2018	$ (192,864)	$ (18)	$ 32,130	$ (13,987)	$ (174,739)

(a) The pre-tax portion of amounts reclassified from accumulated other comprehensive loss consists of amortization of prior service benefit, which is a component of pension and postretirement benefits cost (credit). See Note 11, "Pension Plans and Other Postretirement Benefits," for additional information.
(b) The pre-tax portion of amounts reclassified from accumulated other comprehensive loss is included in interest expense.

The amount of income tax (expense) benefit allocated to each component of Other comprehensive (loss) income for the three-month periods ended March 31, 2019 and 2018 is provided in the following tables (in thousands):

	Three Months Ended March 31,							
	2019				2018			
	Foreign Currency Translation	Pension and Postretirement Benefits	Net Investment Hedge	Interest Rate Swap	Foreign Currency Translation	Pension and Postretirement Benefits	Net Investment Hedge	Interest Rate Swap
Other comprehensive (loss) income, before tax	$ (10,854)	$ 7	$ 4,299	$ 834	$ 64,891	$ 3	$ (18,734)	$ 834
Income tax (expense) benefit	(1)	—	(995)	(193)	—	—	4,313	(192)
Other comprehensive (loss) income, net of tax	$ (10,855)	$ 7	$ 3,304	$ 641	$ 64,891	$ 3	$ (14,421)	$ 642

NOTE 15—Related Party Transactions:

Our consolidated statements of income include sales to and purchases from unconsolidated affiliates in the ordinary course of business as follows (in thousands):

	Three Months Ended March 31,	
	2019	2018
Sales to unconsolidated affiliates	$ 4,291	$ 4,605
Purchases from unconsolidated affiliates[a]	$ 63,499	$ 68,916

(a) Purchases from unconsolidated affiliates primarily relate to purchases from our Windfield joint venture.

Our condensed consolidated balance sheets include accounts receivable due from and payable to unconsolidated affiliates in the ordinary course of business as follows (in thousands):

	March 31, 2019	December 31, 2018
Receivables from unconsolidated affiliates	$ 2,136	$ 14,348
Payables to unconsolidated affiliates	$ 58,220	$ 68,357

NOTE 16—Supplemental Cash Flow Information:

Supplemental information related to the condensed consolidated statements of cash flows is as follows (in thousands):

	Three Months Ended March 31,	
	2019	2018
Supplemental non-cash disclosure related to investing activities:		
Capital expenditures included in Accounts payable	$ 111,225	$ 74,906

Other, net within Cash flows from operating activities on the condensed consolidated statements of cash flows for the three months ended March 31, 2019 included $3.7 million representing the reclassification of the current portion of the one-time transition tax resulting from the enactment of the TCJA, from Other noncurrent liabilities to Income taxes payable within current liabilities.

NOTE 17—Recently Issued Accounting Pronouncements:

In February 2016, the Financial Accounting Standards Board ("FASB") issued accounting guidance that requires assets and liabilities arising from leases to be recorded on the balance sheet. Additional disclosures are required regarding the amount, timing, and uncertainty of cash flows from leases. In July 2018, the FASB issued an amendment which would allow entities to initially apply this new standard at the adoption date and recognize a cumulative effect adjustment to the the opening balance of Retained earnings. The Company adopted this standard on January 1, 2019 using this transition method. See Note 1, "Basis of Presentation," for further details.

In June 2016, the FASB issued accounting guidance that, among other things, changes the way entities recognize impairment of financial assets by requiring immediate recognition of estimated credit losses expected to occur over the remaining life of the financial asset. Additional disclosures are required regarding an entity's assumptions, models and methods for estimating the expected credit loss. This guidance will be effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years, and is to be applied using a modified retrospective approach. Early adoption is permitted. We currently do not expect this guidance to have a significant impact on our financial statements.

In January 2017, the FASB issued accounting guidance to simplify the accounting for goodwill impairment. The guidance removes Step 2 of the goodwill impairment test, which requires a reporting unit to calculate the implied fair value of goodwill by assigning the fair value of a reporting unit to all of its assets and liabilities as if that reporting unit has been acquired in a business combination. A goodwill impairment will now be the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. All other goodwill impairment guidance will remain unchanged. Entities will continue to have the option to perform a qualitative assessment to determine if a quantitative impairment test is necessary. This guidance will be effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years, and is to be applied on a prospective basis. Early adoption is permitted for goodwill impairment tests performed after January 1, 2017. We expect to adopt this guidance on January 1, 2020 and do not expect it to have a significant impact on our financial statements.

In August 2017, the FASB issued accounting guidance to better align an entity’s risk management activities with hedge accounting, simplify the application of hedge accounting, and increase transparency as to the scope and results of hedging programs. This guidance will make more financial and nonfinancial hedging strategies eligible for hedge accounting. It also amends the presentation and disclosure requirements and changes how companies assess effectiveness. In October 2018, the FASB issued additional guidance that permits the use of the Overnight Index Swap Rate based on the Secured Overnight Financing Rate as a U.S. benchmark interest rate for hedge accounting purposes under ASC 815, *Derivatives and Hedging*. These new requirements became effective on January 1, 2019 and did not have a significant impact on our financial statements.

In August 2018, the FASB issued accounting guidance that requires implementation costs incurred in a cloud computing arrangement that is a service contract to be capitalized. Entities will be required to recognize the capitalized implementation costs to expense over the noncancellable term of the cloud computing arrangement. As allowed by its provisions, we early-adopted this new guidance in the first quarter of 2019. The adoption of this new guidance did not have a significant impact on our financial statements.

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

Forward-looking Statements

Some of the information presented in this Quarterly Report on Form 10-Q, including the documents incorporated by reference, may constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements are based on our current expectations, which are in turn based on assumptions that we believe are reasonable based on our current knowledge of our business and operations. We have used words such as “anticipate,” “believe,” “could,” “estimate,” “expect,” “intend,” “may,” “should,” “would,” “will” and variations of such words and similar expressions to identify such forward-looking statements.

These forward-looking statements are not guarantees of future performance and involve certain risks, uncertainties and assumptions, which are difficult to predict and many of which are beyond our control. There can be no assurance that our actual results will not differ materially from the results and expectations expressed or implied in the forward-looking statements. Factors that could cause actual results to differ materially from the outlook expressed or implied in any forward-looking statement include, without limitation:

- changes in economic and business conditions;
- changes in financial and operating performance of our major customers and industries and markets served by us;
- the timing of orders received from customers;
- the gain or loss of significant customers;
- competition from other manufacturers;
- changes in the demand for our products or the end-user markets in which our products are sold;
- limitations or prohibitions on the manufacture and sale of our products;
- availability of raw materials;
- increases in the cost of raw materials and energy, and our ability to pass through such increases to our customers;
- changes in our markets in general;
- fluctuations in foreign currencies;
- changes in laws and government regulation impacting our operations or our products;
- the occurrence of regulatory actions, proceedings, claims or litigation;
- the occurrence of cyber-security breaches, terrorist attacks, industrial accidents, natural disasters or climate change;
- hazards associated with chemicals manufacturing;
- the inability to maintain current levels of product or premises liability insurance or the denial of such coverage;
- political unrest affecting the global economy, including adverse effects from terrorism or hostilities;
- political instability affecting our manufacturing operations or joint ventures;

- changes in accounting standards;
- the inability to achieve results from our global manufacturing cost reduction initiatives as well as our ongoing continuous improvement and rationalization programs;
- changes in the jurisdictional mix of our earnings and changes in tax laws and rates;
- changes in monetary policies, inflation or interest rates that may impact our ability to raise capital or increase our cost of funds, impact the performance of our pension fund investments and increase our pension expense and funding obligations;
- volatility and uncertainties in the debt and equity markets;
- technology or intellectual property infringement, including through cyber-security breaches, and other innovation risks;
- decisions we may make in the future;
- the ability to successfully execute, operate and integrate acquisitions and divestitures; and
- the other factors detailed from time to time in the reports we file with the Securities and Exchange Commission ("SEC").

We assume no obligation to provide revisions to any forward-looking statements should circumstances change, except as otherwise required by securities and other applicable laws. The following discussion should be read together with our condensed consolidated financial statements and related notes included in this Quarterly Report on Form 10-Q.

The following is a discussion and analysis of our results of operations for the three-month periods ended March 31, 2019 and 2018. A discussion of our consolidated financial condition and sources of additional capital is included under a separate heading "Financial Condition and Liquidity" on page 30.

Overview

We are a leading global developer, manufacturer and marketer of highly-engineered specialty chemicals that are designed to meet our customers' needs across a diverse range of end markets. The end markets we serve include energy storage, petroleum refining, consumer electronics, construction, automotive, lubricants, pharmaceuticals, crop protection and custom chemistry services. We believe that our commercial and geographic diversity, technical expertise, innovative capability, flexible, low-cost global manufacturing base, experienced management team and strategic focus on our core base technologies will enable us to maintain leading market positions in those areas of the specialty chemicals industry in which we operate.

Secular trends favorably impacting demand within the end markets that we serve combined with our diverse product portfolio, broad geographic presence and customer-focused solutions will continue to be key drivers of our future earnings growth. We continue to build upon our existing green solutions portfolio and our ongoing mission to provide innovative, yet commercially viable, clean energy products and services to the marketplace. We believe our disciplined cost reduction efforts and ongoing productivity improvements, among other factors, position us well to take advantage of strengthening economic conditions as they occur, while softening the negative impact of the current challenging global economic environment.

First Quarter 2019

During the first quarter of 2019:

- Our board of directors declared a quarterly dividend of $0.3675 per share on February 26, 2019, which was paid on April 1, 2019 to shareholders of record at the close of business as of March 15, 2019.
- Our net sales for the quarter were $832.1 million, up 1% from net sales of $821.6 million in the first quarter of 2018.
- Diluted earnings per share were $1.26, an increase from first quarter 2018 results of $1.18 per diluted share.

Outlook

The current global business environment presents a diverse set of opportunities and challenges in the markets we serve. In particular, the market for lithium battery and energy storage continues to accelerate, providing the opportunity to continue to develop high quality and innovative products while managing the high cost of expanding capacity. The other markets we serve continue to present various opportunities for value and growth as we have positioned ourselves to manage the impact on our business of changing global conditions, such as slow and uneven global growth, currency exchange volatility, crude oil price fluctuation, a dynamic pricing environment, an ever-changing landscape in electronics, the continuous need for cutting edge catalysts and technology by our refinery customers and increasingly stringent environmental standards. Amidst these dynamics, we believe our business fundamentals are sound and that we are strategically well-positioned as we remain focused on increasing sales volume, optimizing and improving the value of our portfolio primarily through pricing and product development, managing costs and delivering value to our customers and shareholders. We believe that our businesses remain well-positioned to capitalize on new business opportunities and long-term trends driving growth within our end markets and to respond quickly to changes in economic conditions in these markets.

Lithium: We expect continued strong year-over-year growth for the remainder of 2019 in Lithium, led by continued strong demand in battery-grade applications and increased conversion capacity.

On a longer term basis, we believe that demand for lithium will continue to grow as new lithium applications advance and the use of plug-in hybrid electric vehicles and full battery electric vehicles increases. This demand for lithium is supported by a favorable backdrop of steadily declining lithium ion battery costs, increasing battery performance and favorable global public policy toward e-mobility/renewable energy usage. Our long-term outlook is also bolstered by our successful negotiation of long-term supply agreements with our key strategic customers, reflecting our standing as a preferred global lithium partner, highlighted by our scale, access to geographically diverse, low-cost resources and long-term track record of reliability of supply and operating execution.

Bromine Specialties: We expect to see continued growth in net sales and profitability in 2019, due to healthy demand and pricing for our flame retardants and other derivatives. However, with sustained low oil prices, we expect stable, albeit low, drilling completion fluid demand throughout the year. While it is possible oil prices could continue to rebound some in 2019, the short-term impact will be to increase raw material costs. Offshore well completions lag oil pricing, so any benefit in completion fluid volume would likely extend throughout the year.

On a longer term basis, we continue to believe that improving global standards of living, widespread digitization, increasing demand for data management capacity and the potential for increasingly stringent fire safety regulations in developing markets are likely to drive continued demand for fire safety products. Absent an increase in regulatory pressure on offshore drilling, we would expect this business to follow a long-term growth trajectory once oil prices recover from prevailing levels as we expect that deep water drilling will continue to increase around the world. We are focused on profitably growing our globally competitive bromine and derivatives production network to serve all major bromine consuming products and markets. We believe the global supply/demand gap could tighten as demand for existing and possible new uses of bromine expands over time. The combination of solid, long-term business fundamentals, with our strong cost position, product innovations and effective management of raw material costs will enable us to manage our business through end market challenges and to capitalize on opportunities that are expected with favorable market trends in select end markets.

Catalysts: We believe increased global demand for transportation fuels, new refinery start-ups and ongoing adoption of cleaner fuels will be the primary drivers of growth in our Catalysts business. We believe delivering superior end-use performance continues to be the most effective way to create sustainable value in the refinery catalysts industry. We believe our technologies continue to provide significant performance and financial benefits to refiners challenged to meet tighter regulations around the world, including those managing new contaminants present in North America tight oil, and those in the Middle East and Asia seeking to use heavier feedstock while pushing for higher propylene yields. Longer term, we believe that the global crude supply will get heavier and more sour, a trend that bodes well for our catalysts portfolio. With superior technology and production capacities, and expected growth in end market demand, we believe that Catalysts remains well-positioned for the future. In Performance Catalyst Solutions (“PCS”), we expect growth in our organometallic business due to growing global demand for plastics driven by rising standards of living and infrastructure spending.

All Other: The fine chemistry services business will continue to be reported outside the Company’s reportable segments as it does not fit in the Company’s core businesses. We expect the near future prospects for the fine chemistry services business to be impacted by a challenging agriculture industry environment and the timing of customer orders in pharmaceuticals. We continue to work to reinvigorate the pipeline of new products and services to these markets.

Corporate: In the first quarter of 2019, we increased our quarterly dividend rate to $0.3675 per share. We continue to focus on cash generation, working capital management and process efficiencies. We expect our global effective tax rate for 2019 to be between 23% and 24%; however, our rate will vary based on the locales in which income is actually earned and remains subject to potential volatility from changing legislation in the U.S., including the U.S. Tax Cuts and Jobs Act (“TCJA”), and other tax jurisdictions.

We remain committed to evaluating the merits of any opportunities that may arise for acquisitions or other business development activities that will complement our business footprint. Additional information regarding our products, markets and financial performance is provided at our website, *www.albemarle.com*. Our website is not a part of this document nor is it incorporated herein by reference.

Results of Operations

The following data and discussion provide an analysis of certain significant factors affecting our results of operations during the periods included in the accompanying consolidated statements of income.

First Quarter 2019 Compared to First Quarter 2018

Selected Financial Data (Unaudited)

	Three Months Ended March 31,		Percentage Change
	2019	2018	2019 vs. 2018
	(In thousands, except percentages and per share amounts)		
NET SALES	$ 832,064	$ 821,629	1 %
Cost of goods sold	548,578	516,650	6 %
GROSS PROFIT	283,486	304,979	(7)%
GROSS PROFIT MARGIN	34.1%	37.1%	
Selling, general and administrative expenses	113,355	101,370	12 %
Research and development expenses	14,977	20,986	(29)%
OPERATING PROFIT	155,154	182,623	(15)%
OPERATING PROFIT MARGIN	18.6%	22.2%	
Interest and financing expenses	(12,586)	(13,538)	(7)%
Other income (expenses), net	11,291	(30,476)	(137)%
INCOME BEFORE INCOME TAXES AND EQUITY IN NET INCOME OF UNCONSOLIDATED INVESTMENTS	153,859	138,609	11 %
Income tax expense	37,514	20,361	84 %
Effective tax rate	24.4%	14.7%	
INCOME BEFORE EQUITY IN NET INCOME OF UNCONSOLIDATED INVESTMENTS	116,345	118,248	(2)%
Equity in net income of unconsolidated investments (net of tax)	35,181	20,677	70 %
NET INCOME	151,526	138,925	9 %
Net income attributable to noncontrolling interests	(17,957)	(7,165)	151 %
NET INCOME ATTRIBUTABLE TO ALBEMARLE CORPORATION	$ 133,569	$ 131,760	1 %
PERCENTAGE OF NET SALES	16.1%	16.0%	
Basic earnings per share	$ 1.26	$ 1.19	6 %
Diluted earnings per share	$ 1.26	$ 1.18	7 %

Net Sales

For the three-month period ended March 31, 2019, we recorded net sales of $832.1 million, an increase of $10.4 million, or 1%, compared to net sales of $821.6 million for the three-month period ended March 31, 2018. Excluding the impact of $27.1 million related to the Polyolefin Catalysts Divestiture and $13.3 million of unfavorable currency exchange resulting from a stronger U.S. Dollar, net sales increased $50.8 million driven by $22.7 million of favorable pricing impacts in each of our reportable segments and higher volume in Bromine Specialties and Catalysts. Partially offsetting this is $8.4 million in lower Lithium volume driven by production issues at the company's La Negra, Chile site due to a rain event at the beginning of the year.

Gross Profit

For the three-month period ended March 31, 2019, our gross profit decreased $21.5 million, or 7%, from the corresponding 2018 period. Excluding the impact of $10.7 million in gross profit related to the Polyolefin Catalysts Divestiture, gross profit decreased by $10.8 million, or 3.7%, primarily due to the higher input costs within our Lithium segment, higher raw material costs in our Bromine Specialties and Catalysts segment and unfavorable currency exchange impacts resulting from the stronger U.S. Dollar against various currencies. Partially offsetting this were favorable pricing impacts in each of our reportable segments and higher volume in Bromine Specialties and Catalysts segments. Overall, these factors contributed to a gross profit margin for the three-month period ended March 31, 2019 of 34.1%, down from 37.1% in the corresponding period in 2018.

Selling, General and Administrative Expenses

For the three-month period ended March 31, 2019, our selling, general and administrative ("SG&A") expenses increased $12.0 million, or 12%, from the three-month period ended March 31, 2018. SG&A expenses for the three-month period ended March 31, 2019 included $4.1 million of additional acquisition and integration related costs for various significant projects compared to the prior year. In addition, the three-month period ended March 31, 2018 included a $1.4 million gain related to a refund from Chilean authorities due to an overpayment made in a prior year. Excluding the impact of these charges, SG&A expenses increased $6.5 million, primarily due to higher professional fees. As a percentage of net sales, SG&A expenses were 13.6% for the three-month period ended March 31, 2019, compared to 12.3% for the corresponding period in 2018.

Research and Development Expenses

For the three-month period ended March 31, 2019, our research and development ("R&D") expenses decreased $6.0 million, or 29%, from the three-month period ended March 31, 2018 due to the lower anticipated first quarter spend in our Lithium segment. As a percentage of net sales, R&D expenses were 1.8% and 2.6% for the three-month periods ended March 31, 2019 and 2018, respectively.

Interest and Financing Expenses

Interest and financing expenses for the three-month period ended March 31, 2019 decreased $1.0 million to $12.6 million from the corresponding 2018 period. This decrease is primarily due to the impact of higher capitalized interest from a continued increase in capital expenditures in 2019.

Other Income (Expenses), Net

Other income (expenses), net, for the three-month period ended March 31, 2019 was $11.3 million compared to ($30.5) million for the corresponding 2018 period. During the three-month period ended March 31, 2019, we recorded a gain of $11.1 million related to the sale of land in Pasadena, Texas. During the three-month period ended March 31, 2018, we recorded a $17.6 million legal accrual resulting from a jury rendered verdict against Albemarle related to certain business concluded under a 2014 sales agreement for products that Albemarle no longer manufactures and $15.6 million of environmental charges related to a site formerly owned by Albemarle. The remaining difference was primarily due to an increase in foreign exchange losses of $2.5 million and a decrease in interest income.

Income Tax Expense

The effective income tax rate for the first quarter of 2019 was 24.4% compared to 14.7% for the first quarter of 2018. The difference between the U.S. federal statutory income tax rate and our effective income tax rate for the three months ended March 31, 2019 was impacted by a variety of factors, primarily stemming from the location in which income was earned and discrete net tax expenses primarily related to uncertain tax positions. The difference between the U.S. federal statutory income tax rate and our effective income tax rate for the three months ended March 31, 2018 was impacted by a variety of factors, primarily stemming from discrete tax benefits related to adjustments recorded for the TCJA and excess tax benefits realized from stock-based compensation arrangements. The increase in the effective tax rate for the three month period ended March 31, 2019 compared to the same period last year was driven by a variety of factors, primarily stemming from a change in the geographic mix of earnings and discrete net tax expenses primarily related to uncertain tax positions for the three month period ended March 31, 2019, compared to discrete tax benefits for TCJA adjustments and excess tax benefits from stock-based compensation arrangements for the three-month period ended March 31, 2018.

Equity in Net Income of Unconsolidated Investments

Equity in net income of unconsolidated investments was $35.2 million for the three-month period ended March 31, 2019 compared to $20.7 million in the same period last year. This increase of $14.5 million was primarily due to higher equity income reported by our Lithium segment joint venture, Windfield Holdings Pty. Ltd., as well as an increase in equity income in our Catalysts segment.

Net Income Attributable to Noncontrolling Interests

For the three-month period ended March 31, 2019, net income attributable to noncontrolling interests was $18.0 million compared to $7.2 million in the same period last year. This increase of $10.8 million was primarily due to an increase in consolidated income related to our JBC joint venture from higher sales volume in the quarter.

Net Income Attributable to Albemarle Corporation

Net income attributable to Albemarle Corporation increased to $133.6 million in the three-month period ended March 31, 2019, from $131.8 million in the three-month period ended March 31, 2018. The increase is primarily due to favorable pricing impacts in each of our reportable segments and increased volume in Bromine Specialties and Catalysts, partially offset by higher input costs in Lithium, increased Corporate spending and a higher effective income tax rate in 2019. In addition, during the three-month period ended March 31, 2018, we recorded a $17.6 million legal accrual resulting from a jury rendered verdict against Albemarle related to certain business concluded under a 2014 sales agreement for products that Albemarle no longer manufactures and $15.6 million related to environmental charges related to a site formerly owned by Albemarle.

Other Comprehensive (Loss) Income, Net of Tax

Total other comprehensive (loss) income, after income taxes, was ($6.9) million for the three-month period ended March 31, 2019 compared to $51.1 million for the corresponding period in 2018. The majority of this loss is the result of translating our foreign subsidiary financial statements from their local currencies to U.S. Dollars. In the 2019 period, other comprehensive loss from foreign currency translation adjustments was $10.9 million, primarily as a result of unfavorable movements in the Euro of approximately $14 million and the Brazilian Real of approximately $2 million, partially offset by a net favorable variance in various other currencies totaling approximately $5 million. Also included in total other comprehensive loss for the 2019 period is income of $3.3 million in connection with the revaluation of our Euro-based 1.875% Senior notes, which have been designated as a hedge of our net investment in foreign operations. In the 2018 period, other comprehensive income from foreign currency translation adjustments was $64.9 million, mainly as a result of favorable movements in the Euro of approximately $47 million, the Chinese Renminbi of approximately $10 million and a net favorable variance in various other currencies totaling approximately $8 million. Also included in total other comprehensive income for the 2018 period is a loss of $14.4 million in connection with the revaluation of our Euro-based 1.875% Senior notes.

Segment Information Overview. We have identified three reportable segments according to the nature and economic characteristics of our products as well as the manner in which the information is used internally by the Company’s chief operating decision maker to evaluate performance and make resource allocation decisions. Our reportable business segments consist of: (1) Lithium, (2) Bromine Specialties and (3) Catalysts.

Summarized financial information concerning our reportable segments is shown in the following tables. The “All Other” category includes only the fine chemistry services business, that does not fit into any of our core businesses.

The Corporate category is not considered to be a segment and includes corporate-related items not allocated to the operating segments. Pension and OPEB service cost (which represents the benefits earned by active employees during the period) and amortization of prior service cost or benefit are allocated to the reportable segments, All Other, and Corporate, whereas the remaining components of pension and OPEB benefits cost or credit (“Non-operating pension and OPEB items”) are included in Corporate. Segment data includes intersegment transfers of raw materials at cost and allocations for certain corporate costs.

The Company’s chief operating decision maker uses adjusted EBITDA (as defined below) to assess the ongoing performance of the Company’s business segments and to allocate resources. The Company defines adjusted EBITDA as earnings before interest, taxes, depreciation and amortization, as adjusted on a consistent basis for certain non-recurring or unusual items in a balanced manner and on a segment basis. These non-recurring or unusual items may include acquisition and integration related costs, gains or losses on sales of businesses, restructuring charges, facility divestiture charges, non-operating pension and OPEB items and other significant non-recurring items. In addition, management uses adjusted EBITDA for business planning purposes and as a significant component in the calculation of performance-based compensation for management and other employees. The Company has reported adjusted EBITDA because management believes it provides transparency to investors and enables period-to-period comparability of financial performance. Adjusted EBITDA is a financial measure that is not required by, or presented in accordance with, U.S. GAAP. Adjusted EBITDA should not be considered as an alternative to Net income attributable to Albemarle Corporation, the most directly comparable financial measure calculated and reported in accordance with U.S. GAAP, or any other financial measure reported in accordance with U.S. GAAP.

	Three Months Ended March 31,				Percentage Change
	2019	%	2018	%	2019 vs. 2018
	(In thousands, except percentages)				
Net sales:					
Lithium	$ 291,886	35.1 %	$ 298,032	36.3 %	(2)%
Bromine Specialties	249,052	29.9 %	225,639	27.5 %	10 %
Catalysts	251,648	30.2 %	260,717	31.7 %	(3)%
All Other	39,478	4.8 %	37,165	4.5 %	6 %
Corporate	—	— %	76	— %	(100)%
Total net sales	$ 832,064	100.0 %	$ 821,629	100.0 %	1 %
Adjusted EBITDA:					
Lithium	$ 115,616	51.2 %	$ 131,014	52.7 %	(12)%
Bromine Specialties	78,597	34.8 %	69,969	28.1 %	12 %
Catalysts	60,071	26.6 %	67,830	27.3 %	(11)%
All Other	7,243	3.2 %	3,862	1.5 %	88 %
Corporate	(35,660)	(15.8)%	(23,957)	(9.6)%	49 %
Total adjusted EBITDA	$ 225,867	100.0 %	$ 248,718	100.0 %	(9)%

See below for a reconciliation of adjusted EBITDA, the non-GAAP financial measure, from Net income attributable to Albemarle Corporation, the most directly comparable financial measure calculated and reported in accordance with U.S. GAAP, (in thousands):

	Lithium	Bromine Specialties	Catalysts	Reportable Segments Total	All Other	Corporate	Consolidated Total
Three months ended March 31, 2019							
Net income (loss) attributable to Albemarle Corporation	$ 93,169	$ 67,480	$ 47,859	$ 208,508	$ 5,206	$ (80,145)	$ 133,569
Depreciation and amortization	22,092	11,117	12,212	45,421	2,037	1,825	49,283
Acquisition and integration related costs[(a)]	—	—	—	—	—	5,285	5,285
Gain on sale of property[(b)]	—	—	—	—	—	(11,079)	(11,079)
Interest and financing expenses	—	—	—	—	—	12,586	12,586
Income tax expense	—	—	—	—	—	37,514	37,514
Non-operating pension and OPEB items	—	—	—	—	—	(583)	(583)
Other[(c)]	355	—	—	355	—	(1,063)	(708)
Adjusted EBITDA	$ 115,616	$ 78,597	$ 60,071	$ 254,284	$ 7,243	$ (35,660)	$ 225,867
Three months ended March 31, 2018							
Net income (loss) attributable to Albemarle Corporation	$ 108,334	$ 59,536	$ 55,660	$ 223,530	$ 1,760	$ (93,530)	$ 131,760
Depreciation and amortization	24,065	10,433	12,170	46,668	2,102	1,560	50,330
Acquisition and integration related costs[(a)]	—	—	—	—	—	2,201	2,201
Interest and financing expenses	—	—	—	—	—	13,538	13,538
Income tax expense	—	—	—	—	—	20,361	20,361
Non-operating pension and OPEB items	—	—	—	—	—	(2,197)	(2,197)
Legal accrual[(d)]	—	—	—	—	—	17,628	17,628
Environmental accrual[(e)]	—	—	—	—	—	15,597	15,597
Other[(f)]	(1,385)	—	—	(1,385)	—	885	(500)
Adjusted EBITDA	$ 131,014	$ 69,969	$ 67,830	$ 268,813	$ 3,862	$ (23,957)	$ 248,718

(a) Included acquisition and integration related costs relating to various significant projects. For the three-month period ended March 31, 2019, $5.3 million was recorded in Selling, general and administrative expenses. For the three-month period ended March 31, 2018, $1.0 million and $1.2 million was recorded in Cost of goods sold and Selling, general and administrative expenses, respectively.
(b) Gain recorded in Other income (expenses), net related to the sale of land in Pasadena, Texas not used as part of our operations.
(c) Included amounts for the three months ended March 31, 2019 recorded in:

- Cost of goods sold - $0.4 million related to non-routine labor and compensation related costs in Chile that are outside normal compensation arrangements.
- SG&A expenses - Expected severance payments as part of a business reorganization plan of $0.5 million, with the unpaid balance recorded in Accrued expenses as of March 31, 2019.
- Other income (expenses), net - $1.6 million of a net gain resulting from the revision of indemnifications and other liabilities related to previously disposed businesses.

(d) Included in Other income (expenses), net is a charge of $17.6 million resulting from a jury rendered verdict against Albemarle related to certain business concluded under a 2014 sales agreement for products that Albemarle no longer manufactures.

(e) Increase in environmental reserve to indemnify the buyer of a formerly owned site recorded in Other income (expenses), net. As defined in the agreement of sale, this indemnification has a set cutoff date in 2024, at which point we will no longer be required to provide financial coverage.

(f) Included amounts for the three months ended March 31, 2018 recorded in:
- Cost of goods sold - $1.1 million for the write-off of fixed assets related to a major capacity expansion in our Jordanian joint venture.
- SG&A expenses - $1.4 million gain related to a refund from Chilean authorities due to an overpayment made in a prior year.
- Other income (expenses), net - $0.2 million of a net gain resulting from the revision of indemnifications and other liabilities related to previously disposed businesses.

Lithium

Lithium segment net sales for the three-month period ended March 31, 2019 were $291.9 million, down $6.1 million, or 2%, compared to the corresponding period of 2018. The decrease was primarily driven by $8.4 million of lower sales volume and $5.7 million of unfavorable currency translation resulting from the stronger U.S. Dollar against various currencies. The lower sales volume was primarily driven by a disruption due to a rain event in Chile at the beginning of the year. Partially offsetting this is $7.9 million of favorable pricing impacts. Adjusted EBITDA for Lithium was down 12%, or $15.4 million, to $115.6 million for the three-month period ended March 31, 2019, compared to the corresponding period of 2018, primarily driven by increased cost of goods sold, mainly related to higher input costs, and lower sales volume. This was partially offset by the favorable pricing impacts, lower S&A and R&D spend and $2.0 million of favorable currency translation.

Bromine Specialties

Bromine Specialties segment net sales for the three-month period ended March 31, 2019 were $249.1 million, up $23.4 million, or 10%, compared to the corresponding period of 2018. The increase was primarily driven by $14.4 million in higher sales volume in flame-retardants and other bromine derivatives due to continued strong demand, and $12.1 million in favorable pricing due to high demand, partially offset by $3.0 million of unfavorable currency translation resulting from the stronger U.S. Dollar against various currencies. Adjusted EBITDA for Bromine Specialties was up 12%, or $8.6 million, to $78.6 million for the three-month period ended March 31, 2019, compared to the corresponding period of 2018. This increase was primarily due to the higher sales volume and favorable pricing, which was partially offset by higher production and raw material costs of approximately $6 million and $2.7 million of unfavorable currency translation.

Catalysts

Catalysts segment net sales for the three-month period ended March 31, 2019 were $251.6 million, a decrease of $9.1 million, or 3%, compared to the corresponding period of 2018. This decrease was primarily due to the $27.1 million impact of the Polyolefin Catalysts Divestiture and $4.6 million of unfavorable currency translation resulting from the stronger U.S. Dollar against various currencies. This was partially offset by higher sales volume of $20.8 million driven by refining catalyst products and favorable pricing impacts of $1.9 million. Catalysts adjusted EBITDA decreased 11%, or $7.8 million, to $60.1 million for the three-month period ended March 31, 2019 in comparison to the corresponding period of 2018. This decrease was primarily due to the $10.9 million impact of the Polyolefin Catalysts Divestiture, higher raw material costs and $2.6 million of unfavorable currency translation, partially offset by higher sales volume and favorable pricing impacts.

All Other

All Other net sales for the three-month period ended March 31, 2019 were $39.5 million, an increase of $2.3 million, or 6%, compared to the three-month period ended March 31, 2018. This increase was primarily due to higher sales volume and favorable pricing impacts in our fine chemistry services business. All Other adjusted EBITDA increased $3.4 million for the three-month period ended March 31, 2019 in comparison to the corresponding period of 2018. This increase was primarily due to increased sales volume, favorable pricing impacts and lower spend in our fine chemistry services business.

Corporate

Corporate adjusted EBITDA was a charge of $35.7 million for the three-month period ended March 31, 2019, compared to a charge of $24.0 million for the corresponding period of 2018. The change was primarily due to higher SG&A spending for professional services and $2.5 million of unfavorable currency exchange impacts.

Financial Condition and Liquidity

Overview

The principal uses of cash in our business generally have been capital investments and resource development costs, funding working capital and service of debt. We also make contributions to our defined benefit pension plans, pay dividends to our shareholders and repurchase shares of our common stock. Historically, cash to fund the needs of our business has been principally provided by cash from operations, debt financing and equity issuances.

We are continually focused on working capital efficiency particularly in the areas of accounts receivable and inventory. We anticipate that cash on hand, cash provided by operating activities, proceeds from divestitures and borrowings will be sufficient to pay our operating expenses, satisfy debt service obligations, fund capital expenditures and other investing activities, fund pension contributions and pay dividends for the foreseeable future.

Cash Flow

During the first three months of 2019, cash on hand, cash provided by operations and commercial paper note borrowings funded $216.1 million of capital expenditures for plant, machinery and equipment, and mining resource development, and dividends to shareholders of $35.4 million. Our operations provided $54.9 million of cash flows during the first three months of 2019, as compared to $121.6 million for the first three months of 2018, with the decrease primarily arising from lower earnings in our Lithium and Catalysts reportable segments and lower dividends received from unconsolidated investments in 2019. Our cash from operations in 2019 included an outflow from working capital changes of $122.9 million, primarily due to the build-up of inventory in the Lithium and Catalysts reportable segments resulting from higher forecasted sales in 2019. Overall, our cash and cash equivalents decreased by approximately $90.0 million to $465.3 million at March 31, 2019 from $555.3 million at December 31, 2018.

Capital expenditures for the three-month period ended March 31, 2019 of $216.1 million were associated with plant, machinery and equipment, and mining resource development. We expect our capital expenditures to approximate $800 to $900 million in 2019 for Lithium growth, mining resource development and capacity increases, as well as productivity and continuity of operations projects in all segments. Of the total capital expenditures, our projects related to the continuity of operations is expected to remain in the range of 4-6% of net sales, similar to prior years.

Net current assets were $709.0 million and $815.2 million at March 31, 2019 and December 31, 2018, respectively. The decrease is primarily due to the increase in commercial paper notes outstanding and the reduction in cash and cash equivalents used primarily to fund the increase in capital expenditures during 2019. Additional changes in the components of net current assets are primarily due to the timing of the sale of goods and other ordinary transactions leading up to the balance sheet dates, are not the result of any policy changes by the Company, and do not reflect any change in either the quality of our net current assets or our expectation of success in converting net working capital to cash in the ordinary course of business.

On February 26, 2019, we increased our quarterly dividend rate to $0.3675 per share, a 10% increase from the quarterly rate of $0.335 per share paid in 2018.

At March 31, 2019 and December 31, 2018, our cash and cash equivalents included $436.5 million and $525.8 million, respectively, held by our foreign subsidiaries. The majority of these foreign cash balances are associated with earnings that we have asserted are indefinitely reinvested and which we plan to use to support our continued growth plans outside the U.S. through funding of capital expenditures, acquisitions, research, operating expenses or other similar cash needs of our foreign operations. From time to time, we repatriate cash associated with earnings from our foreign subsidiaries to the U.S. for normal operating needs through intercompany dividends, but only from subsidiaries whose earnings we have not asserted to be indefinitely reinvested or whose earnings qualify as “previously taxed income” as defined by the Internal Revenue Code. During the first three months of 2018, we repatriated $611.3 million of cash as part of these foreign earnings cash repatriation activities. There were no cash repatriations during the first three months of 2019.

While we continue to closely monitor our cash generation, working capital management and capital spending in light of continuing uncertainties in the global economy, we believe that we will continue to have the financial flexibility and capability to opportunistically fund future growth initiatives. Additionally, we anticipate that future capital spending, including business acquisitions, share repurchases and other cash outlays, should be financed primarily with cash flow provided by operations and cash on hand, with additional cash needed, if any, provided by borrowings. The amount and timing of any additional borrowings will depend on our specific cash requirements.

Long-Term Debt

We currently have the following senior notes outstanding:

Issue Month/Year	Principal (in millions)	Interest Rate	Interest Payment Dates		Maturity Date
December 2014	€393.0	1.875%	December 8		December 8, 2021
November 2014	$425.0	4.15%	June 1	December 1	December 1, 2024
November 2014	$350.0	5.45%	June 1	December 1	December 1, 2044
December 2010	$175.3	4.50%	June 15	December 15	December 15, 2020

Our senior notes are senior unsecured obligations and rank equally with all our other senior unsecured indebtedness from time to time outstanding. The senior notes are effectively subordinated to any of our existing or future secured indebtedness and to the existing and future indebtedness of our subsidiaries. As is customary for such long-term debt instruments, each senior note outstanding has terms that allow us to redeem the notes before its maturity, in whole at any time or in part from time to time, at a redemption price equal to the greater of (i) 100% of the principal amount of the senior notes to be redeemed, or (ii) the sum of the present values of the remaining scheduled payments of principal and interest thereon (exclusive of interest accrued to the date of redemption) discounted to the redemption date on a semi-annual basis using the comparable government rate (as defined in the indentures governing the senior notes) plus between 25 and 40 basis points, depending on the note, plus, in each case, accrued interest thereon to the date of redemption. Holders may require us to purchase such notes at 101% upon a change of control triggering event, as defined in the indentures. The senior notes are subject to typical events of default, including bankruptcy and insolvency events, nonpayment and the acceleration of certain subsidiary indebtedness of $40 million or more caused by a nonpayment default.

Our revolving, unsecured credit agreement dated as of June 21, 2018 (the “2018 Credit Agreement”) currently provides for borrowings of up to $1.0 billion and matures on June 21, 2023. Borrowings under the 2018 Credit Agreement bear interest at variable rates based on an average London inter-bank offered rate (“LIBOR”) for deposits in the relevant currency plus an applicable margin which ranges from 0.910% to 1.500%, depending on the Company’s credit rating from Standard & Poor’s Ratings Services, Moody’s Investors Services and Fitch Ratings. The applicable margin on the facility was 1.125% as of March 31, 2019. There were no borrowings outstanding under the 2018 Credit Agreement as of March 31, 2019.

Borrowings under the 2018 Credit Agreement are conditioned upon satisfaction of certain conditions precedent, including the absence of defaults. The Company is subject to one financial covenant, as well as customary affirmative and negative covenants. The financial covenant requires that the Company’s consolidated funded debt to consolidated EBITDA ratio (as such terms are defined in the 2018 Credit Agreement) to be less than or equal to 3.50:1, subject to adjustments in accordance with the terms of the 2018 Credit Agreement relating to a consummation of an acquisition where the consideration includes cash proceeds from issuance of funded debt in excess of $500 million. The 2018 Credit Agreement also contains customary default provisions, including defaults for non-payment, breach of representations and warranties, insolvency, non-performance of covenants and cross-defaults to other material indebtedness. The occurrence of an event of default under the 2018 Credit Agreement could result in all loans and other obligations becoming immediately due and payable and the credit facility being terminated.

On May 29, 2013, we entered into agreements to initiate a commercial paper program on a private placement basis under which we may issue unsecured commercial paper notes (the “Commercial Paper Notes”) from time-to-time up to a maximum aggregate principal amount outstanding at any time of $750.0 million. The proceeds from the issuance of the Commercial Paper Notes are expected to be used for general corporate purposes, including the repayment of other debt of the Company. Our 2018 Credit Agreement is available to repay the Commercial Paper Notes, if necessary. Aggregate borrowings outstanding under the 2018 Credit Agreement and the Commercial Paper Notes will not exceed the $1.0 billion current maximum amount available under the 2018 Credit Agreement. The Commercial Paper Notes will be sold at a discount from par, or alternatively, will be sold at par and bear interest at rates that will vary based upon market conditions at the time of issuance. The maturities of the Commercial Paper Notes will vary but may not exceed 397 days from the date of issue. The definitive documents relating to the commercial paper program contain customary representations, warranties, default and indemnification provisions. At March 31, 2019, we had $425.0 million of Commercial Paper Notes outstanding bearing a weighted-average interest rate of approximately 2.89% and a weighted-average maturity of 42 days. The Commercial Paper Notes are classified as Current portion of long-term debt in our condensed consolidated balance sheets at March 31, 2019 and December 31, 2018.

The non-current portion of our long-term debt amounted to $1.39 billion at March 31, 2019, compared to $1.40 billion at December 31, 2018. In addition, at March 31, 2019, we had availability to borrow $575.0 million under our commercial paper program and the 2018 Credit Agreement, and $579.9 million under other existing lines of credit, subject to various financial covenants under our 2018 Credit Agreement. We have the ability and intent to refinance our borrowings under our other existing credit lines with borrowings under the 2018 Credit Agreement, as applicable. Therefore, the amounts outstanding under those credit lines, if any, are classified as long-term debt. We believe that as of March 31, 2019, we were, and currently are, in compliance with all of our long term debt covenants.

Off-Balance Sheet Arrangements

In the ordinary course of business with customers, vendors and others, we have entered into off-balance sheet arrangements, including bank guarantees and letters of credit, which totaled approximately $72.7 million at March 31, 2019. None of these off-balance sheet arrangements has, or is likely to have, a material effect on our current or future financial condition, results of operations, liquidity or capital resources.

Other Obligations

Our contractual obligations have not significantly changed based on our ordinary business activities and projected capital expenditures from the information we provided in our Annual Report on Form 10-K for the year ended December 31, 2018.

Total expected 2019 contributions to our domestic and foreign qualified and nonqualified pension plans, including our SERP, should approximate $12 million. We may choose to make additional pension contributions in excess of this amount. We have made contributions of $2.7 million to our domestic and foreign pension plans (both qualified and nonqualified) during the three-month period ended March 31, 2019.

The liability related to uncertain tax positions, including interest and penalties, recorded in Other noncurrent liabilities totaled $26.5 million at March 31, 2019 and $22.9 million at December 31, 2018. Related assets for corresponding offsetting benefits recorded in Other assets totaled $12.5 million at March 31, 2019 and $13.0 million at December 31, 2018. We cannot estimate the amounts of any cash payments associated with these liabilities for the remainder of 2019 or the next twelve months, and we are unable to estimate the timing of any such cash payments in the future at this time.

We are subject to federal, state, local and foreign requirements regulating the handling, manufacture and use of materials (some of which may be classified as hazardous or toxic by one or more regulatory agencies), the discharge of materials into the environment and the protection of the environment. To our knowledge, we are currently complying and expect to continue to comply in all material respects with applicable environmental laws, regulations, statutes and ordinances. Compliance with existing federal, state, local and foreign environmental protection laws is not expected to have a material effect on capital expenditures, earnings or our competitive position, but the costs associated with increased legal or regulatory requirements could have an adverse effect on our operating results.

Among other environmental requirements, we are subject to the federal Superfund law, and similar state laws, under which we may be designated as a potentially responsible party (“PRP”), and may be liable for a share of the costs associated with cleaning up various hazardous waste sites. Management believes that in cases in which we may have liability as a PRP, our liability for our share of cleanup is de minimis. Further, almost all such sites represent environmental issues that are quite mature and have been investigated, studied and in many cases settled. In de minimis situations, our policy generally is to negotiate a consent decree and to pay any apportioned settlement, enabling us to be effectively relieved of any further liability as a PRP, except for remote contingencies. In other than de minimis PRP matters, our records indicate that unresolved PRP exposures should be immaterial. We accrue and expense our proportionate share of PRP costs. Because management has been actively involved in evaluating environmental matters, we are able to conclude that the outstanding environmental liabilities for unresolved PRP sites should not have a material adverse effect upon our results of operations or financial condition.

Liquidity Outlook

We anticipate that cash on hand and cash provided by operating activities, divestitures and borrowings will be sufficient to pay our operating expenses, satisfy debt service obligations, fund any capital expenditures and share repurchases, make acquisitions, make pension contributions and pay dividends for the foreseeable future. Our main focus over the next three years, in terms of uses of cash, will be investing in growth of the businesses and the return of value to shareholders. Additionally, we will continue to evaluate the merits of any opportunities that may arise for acquisitions of businesses or assets, which may require additional liquidity. For example, we expect that the purchase price for the announced acquisition of the Wodgina Project of approximately $1.15 billion, will primarily be funded with new debt borrowings.

Our cash flows from operations may be negatively affected by adverse consequences to our customers and the markets in which we compete as a result of moderating global economic conditions and reduced capital availability.

While we maintain business relationships with a diverse group of financial institutions, an adverse change in their credit standing could lead them to not honor their contractual credit commitments, decline funding under existing but uncommitted lines of credit, not renew their extensions of credit or not provide new financing. While the global corporate bond and bank loan markets remain strong, periods of elevated uncertainty related to global economic and/or geopolitical concerns may limit efficient access to such markets for extended periods of time. If such concerns heighten, we may incur increased borrowing costs and reduced credit capacity as our various credit facilities mature. When the U.S. Federal Reserve or similar national reserve banks in other countries decide to tighten the monetary supply in response, for example, to improving economic conditions, we may incur increased borrowing costs as interest rates increase on our variable rate credit facilities, as our various credit facilities mature or as we refinance any maturing fixed rate debt obligations, although these cost increases would be partially offset by increased income rates on portions of our cash deposits.

Overall, with generally strong cash-generative businesses and no significant long-term debt maturities before 2020, we believe we have, and will maintain, a solid liquidity position.

As previously reported in 2018, following receipt of information regarding potential improper payments being made by third party sales representatives of our Refining Solutions business, within our Catalysts segment, we promptly retained outside counsel and forensic accountants to investigate potential violations of the Company's Code of Conduct, the Foreign Corrupt Practices Act and other potentially applicable laws. Based on this internal investigation, we have voluntarily self-reported potential issues relating to the use of third party sales representatives in our Refining Solutions business, within our Catalysts segment, to the U.S. Department of Justice ("DOJ"), the SEC, and the Dutch Public Prosecutor ("DPP"), and are cooperating with the DOJ, the SEC, and DPP in their review of these matters. In connection with our internal investigation, we have implemented, and are continuing to implement, appropriate remedial measures.

At this time, we are unable to predict the duration, scope, result or related costs associated with any investigations by the DOJ, the SEC, or DPP. We are unable to predict what, if any, action may be taken by the DOJ, the SEC, or DPP, or what penalties or remedial actions they may seek to impose. Any determination that our operations or activities are not in compliance with existing laws or regulations could result in the imposition of fines, penalties, disgorgement, equitable relief or other losses. We do not believe, however, that any fines, penalties, disgorgement, equitable relief or other losses would have a material adverse effect on our financial condition or liquidity.

We had cash and cash equivalents totaling $465.3 million at March 31, 2019, of which $436.5 million is held by our foreign subsidiaries. This cash represents an important source of our liquidity and is invested in bank accounts or money market investments with no limitations on access. The cash held by our foreign subsidiaries is intended for use outside of the U.S. We anticipate that any needs for liquidity within the U.S. in excess of our cash held in the U.S. can be readily satisfied with borrowings under our existing U.S. credit facilities or our commercial paper program.

Summary of Critical Accounting Policies and Estimates

Effective January 1, 2019, we adopted ASU 2016-12, "Leases." As a result, we have updated our lease accounting policy, see Item 1 Financial Statements – Note 1, "Basis of Presentation," for additional details. There have been no other significant changes in our critical accounting policies and estimates from the information we provided in our Annual Report on Form 10-K for the year ended December 31, 2018.

Recent Accounting Pronouncements

For a description of recent accounting pronouncements, see Item 1 Financial Statements – Note 17, "Recently Issued Accounting Pronouncements."

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

There have been no significant changes in our interest rate risk, foreign currency exchange rate exposure, marketable securities price risk or raw material price risk from the information we provided in our Annual Report on Form 10-K for the year ended December 31, 2018.

We had variable interest rate borrowings of $432.2 million outstanding at March 31, 2019, bearing a weighted average interest rate of 2.84% and representing approximately 24% of our total outstanding debt. A hypothetical 10% change (approximately 28 basis points) in the interest rate applicable to these borrowings would change our annualized interest expense by approximately $1.2 million as of March 31, 2019. We may enter into interest rate swaps, collars or similar instruments with the objective of reducing interest rate volatility relating to our borrowing costs.

Our financial instruments which are subject to foreign currency exchange risk consist of foreign currency forward contracts with an aggregate notional value of $707.6 million and with a fair value representing a net asset position of $0.4 million at March 31, 2019. Fluctuations in the value of these contracts are generally offset by the value of the underlying exposures being hedged. We conducted a sensitivity analysis on the fair value of our foreign currency hedge portfolio assuming an instantaneous 10% change in select foreign currency exchange rates from their levels as of March 31, 2019, with all other variables held constant. A 10% appreciation of the U.S. Dollar against foreign currencies that we hedge would result in a decrease of approximately $36.2 million in the fair value of our foreign currency forward contracts. A 10% depreciation of the U.S. Dollar against these foreign currencies would result in an increase of approximately $25.8 million in the fair value of our foreign currency forward contracts. The sensitivity of the fair value of our foreign currency hedge portfolio represents changes in fair values estimated based on market conditions as of March 31, 2019, without reflecting the effects of underlying anticipated transactions. When those anticipated transactions are realized, actual effects of changing foreign currency exchange rates could have a material impact on our earnings and cash flows in future periods.

Item 4. Controls and Procedures.

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act), as of the end of the period covered by this report. Based on this evaluation, our principal executive officer and principal financial officer concluded that, as of the end of the period covered by this report, our disclosure controls and procedures are effective to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act, is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms, and that such information is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

The Company has begun the implementation of a new enterprise resource platform system to increase the overall efficiency and productivity of our processes, which will result in changes in our internal control over financial reporting (as such term is defined in Exchange Act Rule 13a-15(f)) throughout the implementation process in 2019. There have been no other changes during the first quarter ended March 31, 2019 to our internal control over financial reporting that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings.

We are involved from time to time in legal proceedings of types regarded as common in our business, including administrative or judicial proceedings seeking remediation under environmental laws, such as Superfund, products liability, breach of contract liability and premises liability litigation. Where appropriate, we may establish financial reserves for such proceedings. We also maintain insurance to mitigate certain of such risks. Additional information with respect to this Item 1 is contained in Note 9 to the Notes to the Condensed Consolidated Financial Statements in this Quarterly Report on Form 10-Q.

Item 1A. Risk Factors.

While we attempt to identify, manage and mitigate risks and uncertainties associated with our business to the extent practical under the circumstances, some level of risk and uncertainty will always be present. The risk factors set forth in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2018 describes some of the risks and uncertainties associated with our business. These risks and uncertainties have the potential to materially affect our results of operations and our financial condition. We do not believe that there have been any material changes to the risk factors previously disclosed in our Annual Report on Form 10-K for the year ended December 31, 2018.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

NONE

Item 6. Exhibits.

(a) Exhibits

10.1	Notice of TSR Performance Unit Award (2019)
10.2	Notice of ROIC Performance Unit Award (2019)
10.3	Notice of Option Grant (2019)
10.4	Notice of Restricted Stock Unit Award (2019)
10.5	Notice of 3-Year Cliff Vest Restricted Stock Unit Award (2019)
31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a).
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a).
32.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(b) and 18 U.S.C. Section 1350.
32.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(b) and 18 U.S.C. Section 1350.
101	Interactive Data File (Quarterly Report on Form 10-Q, for the quarterly period ended March 31, 2019, furnished in XBRL (eXtensible Business Reporting Language)).

Attached as Exhibit 101 to this report are the following documents formatted in XBRL: (i) the Consolidated Statements of Income for the three months ended March 31, 2019 and 2018, (ii) the Consolidated Statements of Comprehensive Income for the three months ended March 31, 2019 and 2018, (iii) the Condensed Consolidated Balance Sheets at March 31, 2019 and December 31, 2018, (iv) the Consolidated Statements of Changes in Equity for the three months ended March 31, 2019 and 2018, (v) the Condensed Consolidated Statements of Cash Flows for the three months ended March 31, 2019 and 2018 and (vi) the Notes to the Condensed Consolidated Financial Statements.

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.

ALBEMARLE CORPORATION
(Registrant)

Date:	May 8, 2019	By:	/s/ Scott A. Tozier
			Scott A. Tozier
			Executive Vice President and Chief Financial Officer **(principal financial officer)**

NOTICE OF TSR PERFORMANCE UNIT AWARD

under the

ALBEMARLE CORPORATION 2017 INCENTIVE PLAN

This AWARD, made as of the [__] day of February, 2019, by Albemarle Corporation, a Virginia corporation (the "Company"), to **«Name»** ("Participant"), is made pursuant to and subject to the provisions of the Company's 2017 Incentive Plan (the "Plan"). All terms that are used herein that are defined in the Plan shall have the same meanings given them in the Plan.

Contingent Performance Units

1. **Grant Date**. Pursuant to the Plan, the Company, on February [__], 2019 (the "Grant Date"), granted Participant an Award ("Award") in the form of **«# of Units»** TSR Performance Units (which number of Units is also referred to herein as the "Target Units"), subject to the terms and conditions of the Plan and subject to the terms and conditions set forth herein.

2. **Accounts.** TSR Performance Units granted to Participant shall be credited to an account (the "Account") established and maintained for Participant. The Account of Participant shall be the record of TSR Performance Units granted to the Participant under the Plan, is solely for accounting purposes and shall not require a segregation of any Company assets.

3. **Definitions**. Terms used in this Award Notice shall have the following meanings:

   (a) **"TSR"** means "Total Shareholder Return."

   (b) **"TSR %"** is calculated using the following formula:

$$\frac{\text{(Ending Stock Price + Reinvested Dividends) – Starting Stock Price}}{\text{Starting Stock Price}}$$

   (c) **"Starting Stock Price"** means the average closing price of the Company's Common Stock over the 20-trading-day period commencing January 1, 2019.

   (d) **"Ending Stock Price"** means the average closing price of the Company's Common Stock over the 20-trading-day period ending December 31, 2021.

   (e) **"Reinvested Dividends"** means the value of reinvested dividends paid on the Company's Common Stock over the Measurement Period (as defined in paragraph 5).

   (f) **"TSR Relative to Peer Group"** is the TSR % of the Company as compared to the TSR % of the Peer Group.

   (g) **"Peer Group"** is the group of companies listed on Exhibit A. If a company in the Peer Group has its common stock delisted or if it no longer exists as a separate entity, the TSR % will be retroactively calculated for the remainder of the Performance Period without such company.

4. **Terms and Conditions.** No Award shall be earned and Participant's interest in the TSR Performance Units granted hereunder shall be forfeited, except to the extent that the requirements of this Notice are satisfied.

5. **Performance Criteria.** Participant's TSR Performance Units shall be earned on the Award Date based on the following formula (to the nearest whole TSR Performance Unit). Such TSR Performance Units shall be subject to the terms and conditions set forth in the following paragraphs of this Notice of Award.

   (a) The Measurement Period is the 2019, 2020 and 2021 calendar period.

   (b) Earned Award = TSR % of Target Units x TSR Performance Units

   (c) TSR % of Target Units. The TSR % of Target Units is determined according to the following table (awards to be interpolated between the TSR %s below):

TSR Relative to Peer Group	TSR % of Target Units
75th percentile or higher	200% of Target Units
50th percentile	100% of Target Units
25th percentile	50% of Target Units
less than 25th percentile	0%

   (d) The Company shall retain discretion to decrease Awards but may not increase any Awards, directly or indirectly, hereunder.

   (e) For purposes of this Award, the number of earned TSR Performance Units will be rounded to the nearest whole number.

   (f) Notwithstanding anything herein to the contrary, if the Company's TSR for the Measurement Period is negative, no more than 100% of the TSR Performance Units may be earned and become vested and non-forfeitable hereunder.

Valuation of TSR Performance Units

6. **Value of Units**. The value of each TSR Performance Unit shall be equal to the value of one share of the Company's Common Stock.

7. **Value of Stock**. For purposes of this Award, the value of the Company's Common Stock is the Fair Market Value (as defined in the Plan) on the date any TSR Performance Units become vested and payable hereunder.

Vesting of Earned TSR Performance Units

8. **Earned Awards.** As soon as practicable after the end of the Measurement Period, a determination shall be made by the Committee of the number of whole TSR Performance Units that Participant has earned. The date as of which the Committee determines the number of TSR Performance Units earned shall be the "Award Date."

9. **Restrictions.** Except as provided herein, the earned TSR Performance Units shall remain unvested and forfeitable.

10. **Vesting.** Participant's interest in one-half of the earned TSR Performance Units shall become vested and non-forfeitable on the Award Date and will be paid as soon as practicable thereafter. The final one-half of the earned TSR Performance Units shall become vested and non-forfeitable as of January 1 of the first calendar year following the calendar year that contains the Award Date.

Termination of Employment During the Measurement Period and Vesting Period

11. **During the Measurement Period**. Notwithstanding anything in this Notice of Award to the contrary, if a Participant separates from service prior to the end of the Measurement Period on account of a Qualifying Termination Event, then a pro-rata number (as determined in accordance with the following sentence) of the Participant's TSR Performance Units shall be earned under paragraph 8 above as of the Award Date, based on the criteria set forth in paragraph 5 above, and any remaining TSR Performance Units shall be forfeited. The pro-rata number of TSR Performance Units earned pursuant to the preceding sentence shall be equal to 1/36th of the Units granted, for each full month of service performed by the Participant during the Measurement Period. The number of TSR Performance Units earned shall be determined by the Committee in its sole and absolute discretion within the limits provided in the Plan and the earned TSR Performance Units shall be fully vested as of the Award Date, and payable pursuant to paragraphs 15-17 hereof.

12. **After the Measurement Period**. Notwithstanding anything in this Notice of Award to the contrary, if after the Measurement Period ends, but prior to the Award Date, Participant experiences a Qualifying Termination Event, such Participant shall earn his TSR Performance Units pursuant to paragraph 8 and such earned Units shall be fully vested as of the Award Date and payable pursuant to paragraphs 15-17 hereof.

13. **During the Vesting Period**. Notwithstanding anything in this Notice of Award to the contrary if, after the Award Date, but prior to the forfeiture of the TSR Performance Units under paragraph 14, Participant experiences a Qualifying Termination Event, then all earned TSR Performance Units that are forfeitable shall become non-forfeitable as of the date of the Qualifying Termination Event and shall be paid pursuant to paragraphs 15-17 hereof.

14. **Forfeiture.** Except as provided in paragraph 24 hereof, all TSR Performance Units that are forfeitable shall be forfeited if Participant's employment with the Company or an Affiliate terminates for any reason except a Qualifying Termination Event.

Payment of Awards

15. **Time of Payment**. Payment of Participant's TSR Performance Units shall be made as soon as practicable after the Units have become non-forfeitable (or the Award Date, if later), but in no event later than March 15th of the calendar year after the year in which the Units become earned and non-forfeitable.

16. **Form of Payment**. The vested TSR Performance Units shall be paid in whole shares of the Company's Common Stock.

17. **Death of Participant**. If Participant dies prior to the payment of his earned and vested TSR Performance Units, an amount equal to the amount of the Participant's non-forfeitable TSR Performance Units shall be paid to his or her Beneficiary. Participant shall have the right to designate a Beneficiary in accordance with procedures established under the Plan for such purpose. If Participant fails to designate a Beneficiary, or if at the time of the Participant's

death there is no surviving Beneficiary, any amounts payable will be paid to the Participant's estate.

18. **Taxes**. The Company will withhold from the Award the number of shares of Common Stock necessary to satisfy Federal tax-withholding requirements and state and local tax-withholding requirements with respect to the state and locality designated by the Participant as their place of residence in the Company's system of record at the time the Award becomes taxable, except to the extent otherwise determined to be required by the Company, subject, however, to any special rules or provisions that may apply to Participants who are non-US employees (working inside or outside of the United States) or US employees working outside of the United States. It is the Participant's responsibility to properly report all income and remit all Federal, state, and local taxes that may be due to the relevant taxing authorities as the result of receiving this Award.

General Provisions

19. **No Right to Continued Employment.** Neither this Award nor the granting, earning or vesting of TSR Performance Units shall confer upon Participant any right with respect to continuance of employment by the Company or an Affiliate, nor shall it interfere in any way with the right of the Company or an Affiliate to terminate the Participant's employment at any time.

20. **Change in Capital Structure.** In accordance with the terms of the Plan, the terms of this Award shall be adjusted as the Committee determines is equitable in the event the Company effects one or more stock dividends, stock split-ups, subdivisions or consolidations of shares or other similar changes in capitalization.

21. **Governing Law**. This Award shall be governed by the laws of the Commonwealth of Virginia and applicable Federal law. All disputes arising under this Award shall be adjudicated solely within the state or Federal courts located within the Commonwealth of Virginia.

22. **Conflicts**. (a) In the event of any conflict between the provisions of the Plan as in effect on the Grant Date and the provisions of this Award, the provisions of the Plan shall govern. All references herein to the Plan shall mean the Plan as in effect on the Grant Date.

(b) In the event of any conflict between the provisions of this Award and the provisions of any separate Agreement between the Company and the Participant, including, but not limited to, any Severance Compensation Agreement entered between the Participant and the Company, the provisions of this Award shall govern.

23. **Binding Effect.** Subject to the limitations stated above and in the Plan, this Award shall be binding upon and inure to the benefit of the legatees, distributees, and personal representatives of Participant and the successors of the Company.

24. **Change in Control**. The provisions of this paragraph 24 shall apply in the event of a Change in Control (as defined in the Plan) prior to the forfeiture of the TSR Performance Units under paragraph 14.

(a) Subject to subparagraph (b) hereof, upon a Change in Control during the Measurement Period, a pro-rata number of TSR Performance Units equal to 1/36th of the Units granted, for each full month of service performed by the Participant during the Measurement Period, will be earned based on the higher of actual performance as of the date of the Change in Control or achievement of a TSR Relative to Peer Group at the 50th percentile as described in Section 5(c). The number of TSR Performance Units earned shall be determined by the Committee (as it exists immediately prior to the Change in Control) in its sole and absolute discretion within the limits provided in the Plan, and the earned TSR Performance Units shall be vested and paid pursuant to paragraph 16 hereof, no later than March 15th of the calendar year after the year in which the Change in Control occurs.

(b) Notwithstanding the provisions of subparagraph (a) hereof, if, following the Change in Control, the Company's shares continue to be traded on the New York Stock Exchange or another established securities market, subparagraph (a) of this paragraph shall not apply, and this Award shall remain in effect and continue subject to the remaining terms of this Notice of Award; *provided, however,* if the Participant is terminated by the Company other than for Cause or voluntarily resigns for Good Reason (as defined in subparagraph (c)) concurrent with or within two (2) years after the date of the Change in Control and during the Measurement Period, a pro-rata number of TSR Performance Units equal to 1/36th of the Units granted, for each full month of service performed by the Participant during the Measurement Period, will be earned and paid (no later than March 15th of the calendar year after the year in which the termination or resignation occurs) based on the higher of actual performance as of the date of the termination of employment or achievement of a TSR Relative to Peer Group at the 50th percentile as described in Section 5(c). If the Participant is terminated by the Company other than for Cause or voluntarily resigns for Good Reason after the Measurement Period but before the Award is fully vested, the earned unvested TSR Performance Units will become immediately vested and payable pursuant to paragraph 16 hereof no later than March 15th of the calendar year after the year in which the termination or resignation occurs.

(c) For purposes of subparagraph (b), "Good Reason" shall mean:

(i) a change in the Participant's position which in the Participant's reasonable judgment does not represent a promotion of the Participant's status or position immediately prior to the Change in Control or the assignment to the Participant of any duties or responsibilities, or diminution of duties or responsibilities, which in the Participant's reasonable judgment are inconsistent with the Participant's position in effect immediately prior to the Change in Control;

(ii) a reduction by the Company in the annual rate of the Participant's base salary as in effect immediately prior to the date of a Change in Control;

(iii) the Company's requiring the Participant's office nearest to the Participant's principal residence to be located at a different place which is more than thirty-five (35) miles from where such office is located immediately prior to a Change in Control;

(iv) the failure by the Company to continue in effect compensation or benefit plans in which the Participant participates, which in the aggregate provide the Participant compensation and benefits substantially equivalent to those prior to a Change in Control; or

(v) the failure of the Company to obtain a satisfactory agreement from any applicable successor entity to assume and agree to perform under any Severance Compensation Agreement.

In order for one of the foregoing events to constitute Good Reason, (i) Participant must notify the Company in writing no later than 90 days after the relevant event stating which Good

Reason event has occurred, and (ii) the Company shall not have corrected the Good Reason event within thirty (30) days after Participant’s notice.

25. **Qualifying Termination Event and Other Terms**

(a) For purposes of this Award, Qualifying Termination Event shall mean a Participant’s death, Disability, Retirement while in the employ of the Company or an Affiliate, or termination by the Company or an Affiliate other than for Cause.

(i) “Disability” shall mean a Participant’s permanent and total disability within the meaning of Section 22(e)(3) of the Code.

(ii) “Retirement” shall mean termination of employment after having attained age 55 and completed at least 10 years of service with the Company or an Affiliate.

(b) If the events described in (a)(i) and (ii) or paragraph 24 occur after the date that the Participant is advised (upon recommendation by the Committee) that his employment is being, or will be, terminated for Cause, on account of performance or in circumstances that prevent him from being in good standing with the Company, accelerated vesting shall not occur and all rights under this Award shall terminate, and this Award shall expire on the date of Participant’s termination of employment. The Committee shall have the authority to determine whether Participant’s termination from employment is for Cause or for any reason other than Cause.

20. **Recoupment**. In addition to any other applicable provision of the Plan, this Award is subject to the terms of the separate Albemarle Corporation Recoupment Policy, as such Policy may be amended from time to time.

IN WITNESS WHEREOF, the Company has caused this Award to be signed on its behalf.

ALBEMARLE CORPORATION

By: ______________________________

EXHIBIT A

Peer Group for Award

The Peer Group for the 2019 Performance Unit based relative TSR Award will include the following Companies:

Ashland Inc. (ASH)
Cabot Corporation (CBT)
Celanese Corporation (CE)
CF Industries Holdings, Inc. (CF)
Chemours Company (CC)
FMC Corporation (FMC)
H.B. Fuller Company (FUL)
International Flavors & Fragrances, Inc. (IFF)
Koppers Holdings, Inc. (KOP)
Minerals Technologies, Inc. (MTX)
The Mosaic Company (MOS)
Olin Corporation (OLN)
PolyOne (POL)
RPM International Inc. (RPM)
Scotts Miracle-Gro Company (SMG)
W.R. Grace & Co (GRA)

NOTICE OF ROIC PERFORMANCE UNIT AWARD

under the

ALBEMARLE CORPORATION 2017 INCENTIVE PLAN

This AWARD, made as of the [_______] day of February, 2019, by Albemarle Corporation, a Virginia corporation (the "Company"), to **«Name»** ("Participant"), is made pursuant to and subject to the provisions of the Company's 2017 Incentive Plan (the "Plan"). All terms that are used herein that are defined in the Plan shall have the same meanings given them in the Plan.

Contingent Performance Units

1. **Grant Date**. Pursuant to the Plan, the Company, on February [__], 2019 (the "Grant Date"), granted Participant an Award ("Award") in the form of **«# of Units»** ROIC Performance Units (which number of Units is also referred to herein as the "Target Units"), subject to the terms and conditions of the Plan and subject to the terms and conditions set forth herein.

2. **Accounts.** ROIC Performance Units granted to Participant shall be credited to an account (the "Account") established and maintained for Participant. The Account of Participant shall be the record of ROIC Performance Units granted to the Participant under the Plan, is solely for accounting purposes and shall not require a segregation of any Company assets.

3. **Definitions**. Terms used in this Award Notice shall have the following meanings:

   (a) **"Measurement Period"** means the 2019, 2020 and 2021 calendar period.

   (b) **"ROIC" (Return on Invested Capital)** shall be calculated for each calendar year during the Measurement Period and is determined as the amount derived pursuant to the following quotient:

   Annual ROIC = Net Income + (Interest Income and Interest Expense, net of tax) (Prior Year End Total Capital + Current Year End Total Capital) / 2

   (c) **"3-Year ROIC"** means the Company's annual ROIC averaged for the Measurement Period.

   (d) **"Net Income"** means the Net Income Attributable to Albemarle Corporation as disclosed in the Company's Annual Report on Form 10-K for the applicable year.

   (e) "**Interest Income**" means interest income included in the determination of "Other (expenses) income, net" as disclosed in the Company's Annual Report on Form 10-K for the applicable year. For purposes of this Award Notice, Interest Income shall be adjusted to be net of tax.

   (f) "**Interest Expense**" means "Interest and financing expenses" as disclosed in the Company's Annual Report on Form 10-K for the applicable year. For purposes of this Award Notice, Interest Expense shall be adjusted to be net of tax.

(g) "**Prior Year End Total Capital**" means Total Capital on the last day of the previous year.

(h) "**Current Year End Total Capital**" means Total Capital on the last day of the current year.

"**Total Capital**" means total equity plus Debt less cash and cash equivalents. Debt for these purposes shall mean the current portion of long-term debt and long-term debt as disclosed on the Company's Annual Report on Form 10-K for the applicable year.

Adjustments. Notwithstanding anything in this Notice of Award to the contrary, in accordance with the Plan and as approved by the Committee, ROIC and its component values may be adjusted to reflect nonrecurring, unanticipated or other specifically identifiable amounts that may be unknown as of the Grant Date, including, without limitation, acquisitions and divestitures, write-down or write off of intangible assets (goodwill), restructuring and realignment charges, changes in accounting or tax legislation, foreign currency translation changes, gain/loss on debt retirements, and non-GAAP adjustments or special charges.

4. **Terms and Conditions.** No Award shall be earned and Participant's interest in the ROIC Performance Units granted hereunder shall be forfeited, except to the extent that the requirements of this Notice are satisfied.

5. **Performance Criteria.** Except as otherwise provided herein, Participant's ROIC Performance Units shall be earned on the Award Date in a percentage determined by the performance level for the 3-Year ROIC achieved during the Measurement Period, as set forth on **Exhibit A**. This Award is not intended to constitute qualified performance-based compensation under Code Section 162(m) and shall not be subject to the provisions of the Plan applicable to such Awards. The performance criteria set forth on **Exhibit A** may be adjusted by the Committee in its sole and absolute discretion to reflect any extraordinary or significant events that affect ROIC.

Valuation of ROIC Performance Units

6. **Value of Units**. The value of each ROIC Performance Unit shall be equal to the value of one share of the Company's Common Stock.

7. **Value of Stock**. For purposes of this Award, the value of the Company's Common Stock is the Fair Market Value (as defined in the Plan) on the date any ROIC Performance Units become vested and payable hereunder.

Vesting of Earned ROIC Performance Units

8. **Earned Awards.** As soon as practicable after the end of the Measurement Period, a determination shall be made by the Committee of the number of whole ROIC Performance Units that Participant has earned. The date as of which the Committee determines the number of ROIC Performance Units earned shall be the "Award Date."

9. **Restrictions.** Except as provided herein, the earned ROIC Performance Units shall remain unvested and forfeitable.

10. **Vesting.** Participant's interest in one-half of the earned ROIC Performance Units shall become vested and non-forfeitable on the Award Date and will be paid as soon as practicable thereafter. The final one-half of the earned ROIC Performance Units shall

become vested and non-forfeitable as of January 1 of the first calendar year following the calendar year that contains the Award Date.

Termination of Employment During the Measurement Period and Vesting Period

11. **During the Measurement Period**. Notwithstanding anything in this Notice of Award to the contrary, if a Participant separates from service prior to the end of the Measurement Period on account of a Qualifying Termination Event, then a pro-rata number (as determined in accordance with the following sentence) of the Participant's ROIC Performance Units shall be earned under paragraph 8 above as of the Award Date, based on the actual level of achievement of the performance criteria set forth on **Exhibit A**, and any remaining ROIC Performance Units shall be forfeited. The pro-rata number of ROIC Performance Units earned pursuant to the preceding sentence shall be equal to 1/36th of the Units granted, for each full month of service performed by the Participant during the Measurement Period. The number of ROIC Performance Units earned shall be determined by the Committee in its sole and absolute discretion within the limits provided in the Plan and the earned ROIC Performance Units shall be fully vested as of the Award Date, and payable pursuant to paragraphs 15-17 hereof.

12. **After the Measurement Period**. Notwithstanding anything in this Notice of Award to the contrary, if after the Measurement Period ends, but prior to the Award Date, Participant experiences a Qualifying Termination Event, such Participant shall earn his ROIC Performance Units pursuant to paragraph 8 and such earned Units shall be fully vested as of the Award Date and payable pursuant to paragraphs 15-17 hereof.

13. **During the Vesting Period**. Notwithstanding anything in this Notice of Award to the contrary if, after the Award Date, but prior to the forfeiture of the ROIC Performance Units under paragraph 14, Participant experiences a Qualifying Termination Event, then all earned ROIC Performance Units that are forfeitable shall become non-forfeitable as of the date of the Qualifying Termination Event and shall be paid pursuant to paragraphs 15-17 hereof.

14. **Forfeiture.** Except as provided in paragraph 24 hereof, all ROIC Performance Units that are forfeitable shall be forfeited if Participant's employment with the Company or an Affiliate terminates for any reason except a Qualifying Termination Event.

Payment of Awards

15. **Time of Payment**. Payment of Participant's ROIC Performance Units shall be made as soon as practicable after the Units have become non-forfeitable (or the Award Date, if later), but in no event later than March 15th of the calendar year after the year in which the Units become earned and non-forfeitable.

16. **Form of Payment**. The vested ROIC Performance Units shall be paid in whole shares of the Company's Common Stock.

17. **Death of Participant**. If Participant dies prior to the payment of his earned and vested ROIC Performance Units, an amount equal to the amount of the Participant's non-forfeitable ROIC Performance Units shall be paid to his or her Beneficiary. Participant shall have the right to designate a Beneficiary in accordance with procedures established under the Plan for such purpose. If Participant fails to designate a Beneficiary, or if at the time of the Participant's death there is no surviving Beneficiary, any amounts payable will be paid to the Participant's estate.

18. **Taxes**. The Company will withhold from the Award the number of shares of Common Stock necessary to satisfy Federal tax-withholding requirements and state and local tax-withholding requirements with respect to the state and locality designated by the Participant as their place of residence in the Company's system of record at the time the Award becomes taxable, except to the extent otherwise determined to be required by the Company, subject, however, to any special rules or provisions that may apply to Participants who are non-US employees (working inside or outside of the United States) or US employees working outside of the United States. It is the Participant's responsibility to properly report all income and remit all Federal, state, and local taxes that may be due to the relevant taxing authorities as the result of receiving this Award.

General Provisions

19. **No Right to Continued Employment.** Neither this Award nor the granting, earning or vesting of ROIC Performance Units shall confer upon Participant any right with respect to continuance of employment by the Company or an Affiliate, nor shall it interfere in any way with the right of the Company or an Affiliate to terminate the Participant’s employment at any time.

20. **Change in Capital Structure.** In accordance with the terms of the Plan, the terms of this Award shall be adjusted as the Committee determines is equitable in the event the Company effects one or more stock dividends, stock split-ups, subdivisions or consolidations of shares or other similar changes in capitalization.

21. **Governing Law**. This Award shall be governed by the laws of the Commonwealth of Virginia and applicable Federal law. All disputes arising under this Award shall be adjudicated solely within the state or Federal courts located within the Commonwealth of Virginia.

22. **Conflicts**. (a) In the event of any conflict between the provisions of the Plan as in effect on the Grant Date and the provisions of this Award, the provisions of the Plan shall govern. All references herein to the Plan shall mean the Plan as in effect on the Grant Date.

(b) In the event of any conflict between the provisions of this Award and the provisions of any separate Agreement between the Company and the Participant, including, but not limited to, any Severance Compensation Agreement entered between the Participant and the Company, the provisions of this Award shall govern.

23. **Binding Effect.** Subject to the limitations stated above and in the Plan, this Award shall be binding upon and inure to the benefit of the legatees, distributees, and personal representatives of Participant and the successors of the Company.

24. **Change in Control**. The provisions of this paragraph 24 shall apply in the event of a Change in Control (as defined in the Plan) prior to the forfeiture of the ROIC Performance Units under paragraph 14.

(a) Subject to subparagraph (b) hereof, upon a Change in Control during the Measurement Period, a pro-rata number of ROIC Performance Units equal to 1/36th of the Units granted, for each full month of service performed by the Participant during the Measurement Period, will be earned based on the higher of actual performance as of the date of the Change in Control or the target performance level for 3-Year ROIC set forth on **Exhibit A**. The number of ROIC Performance Units earned shall be determined by the Committee (as it exists immediately prior to the Change in Control) in its sole and absolute discretion within the limits provided in the Plan, and the earned ROIC Performance Units shall be vested and paid pursuant to paragraph 16 hereof, no later than March 15th of the calendar year after the year in which the Change in Control occurs.

(b) Notwithstanding the provisions of subparagraph (a) hereof, if, following the Change in Control, the Company's shares continue to be traded on the New York Stock Exchange or another established securities market, subparagraph (a) of this paragraph shall not apply, and this Award shall remain in effect and continue subject to the remaining terms of this Notice of Award; *provided, however,* if the Participant is terminated by the Company other than for Cause or voluntarily resigns for Good Reason (as defined in subparagraph (c)) concurrent with or within two (2) years after the date of the Change in Control and during the Measurement Period, a pro-rata number of ROIC Performance Units equal to 1/36th of the Units granted, for each full month of service performed by the Participant during the Measurement Period, will be earned and paid (no later than March 15th of the calendar year after the year in which the termination or resignation occurs) based on the higher of actual performance as of the date of the termination of employment or the target performance level for 3-Year ROIC set forth on Exhibit A. If the Participant is terminated by the Company other than for Cause or voluntarily resigns for Good Reason after the Measurement Period but before the Award is fully vested, the earned unvested ROIC Performance Units will become immediately vested and payable pursuant to paragraph 16 hereof no later than March 15th of the calendar year after the year in which the termination or resignation occurs.

(c) For purposes of subparagraph (b), "Good Reason" shall mean:

(i) a change in the Participant's position which in the Participant's reasonable judgment does not represent a promotion of the Participant's status or position immediately prior to the Change in Control or the assignment to the Participant of any duties or responsibilities, or diminution of duties or responsibilities, which in the Participant's reasonable judgment are inconsistent with the Participant's position in effect immediately prior to the Change in Control;

(ii) a reduction by the Company in the annual rate of the Participant's base salary as in effect immediately prior to the date of a Change in Control;

(iii) the Company's requiring the Participant's office nearest to the Participant's principal residence to be located at a different place which is more than thirty-five (35) miles from where such office is located immediately prior to a Change in Control;

(iv) the failure by the Company to continue in effect compensation or benefit plans in which the Participant participates, which in the aggregate provide the Participant compensation and benefits substantially equivalent to those prior to a Change in Control; or

(v) the failure of the Company to obtain a satisfactory agreement from any applicable successor entity to assume and agree to perform under any Severance Compensation Agreement.

In order for one of the foregoing events to constitute Good Reason, (i) Participant must notify the Company in writing no later than 90 days after the relevant event stating which Good Reason event has occurred, and (ii) the Company shall not have corrected the Good Reason event within thirty (30) days after Participant's notice.

25. **<u>Qualifying Termination Event and Other Terms</u>**

(a) For purposes of this Award, Qualifying Termination Event shall mean a Participant's death, Disability, Retirement while in the employ of the Company or an Affiliate, or termination by the Company or an Affiliate other than for Cause.

(i) "Disability" shall mean a Participant's permanent and total disability within the meaning of Section 22(e)(3) of the Code.

(ii) "Retirement" shall mean termination of employment after having attained age 55 and completed at least 10 years of service with the Company or an Affiliate.

(b) If the events described in (a)(i) and (ii) or paragraph 24 occur after the date that the Participant is advised (upon recommendation by the Committee) that his employment is being, or will be, terminated for Cause, on account of performance or in circumstances that prevent him from being in good standing with the Company, accelerated vesting shall not occur and all rights under this Award shall terminate, and this Award shall expire on the date of Participant's termination of employment. The Committee shall have the authority to determine whether Participant's termination from employment is for Cause or for any reason other than Cause.

20. **Recoupment**. In addition to any other applicable provision of the Plan, this Award is subject to the terms of the separate Albemarle Corporation Recoupment Policy, as such Policy may be amended from time to time.

IN WITNESS WHEREOF, the Company has caused this Award to be signed on its behalf.

ALBEMARLE CORPORATION

By: ______________________________

EXHIBIT A

ROIC Performance Goals

Performance Level	3-Year ROIC Achieved in Measurement Period	Percentage of Target Units Earned*
Poor	Less than 9%	0%
Threshold	9%	50%
Target	10%	100%
Superior	12%	200%

* The percentage of Target Units earned for performance between the Threshold, Target and Superior Performance Levels will be determined by linear interpolation. No percentage of the Target Units will be earned for performance below the Threshold Performance Level. The number of ROIC Performance Units earned hereunder shall be rounded to the nearest whole number.

NOTICE OF OPTION GRANT

under the

ALBEMARLE CORPORATION 2017 INCENTIVE PLAN

No. of shares subject to option: **«Stock_Options_»**

This GRANT, made as of the _____ day of ___________, 2019 by Albemarle Corporation, a Virginia corporation (the "Company"), to **«First_Name» «Last_Name»** ("Participant"), is made pursuant and subject to the provisions of the Company's 2017 Incentive Plan (the "Plan"), a copy of which has been given to Participant. All terms used herein that are defined in the Plan have the same meanings given them in the Plan.

1. **Grant of Option**. Pursuant to the Plan, the Company, on ____________**, 2019** ("Grant Date"), granted to Participant, subject to the terms and conditions of the Plan and subject further to the terms and conditions herein set forth, the right and option to purchase from the Company all or any part of the aggregate of _______ shares of Common Stock at the option price of **$XX.XX** per share (the "Option Price") (this grant referred to herein as the "Option"), being not less than the Fair Market Value per share of the Common Stock on the Grant Date of the Option. Such Option will be exercisable as hereinafter provided. This Option is not intended to be treated as an incentive stock option under Code section 422.

2. **Expiration Date**. The Expiration Date of this Option is the date that is ten (10) years from the Grant Date. This Option may not be exercised on or after the Expiration Date.

3. **Vesting of Option.** Except as provided in paragraphs 7, 8, or 10, this Option shall become vested on the third anniversary of the Grant Date.

4. **Exercisability of Option**. Except as provided in paragraphs 7, 8, or 10, this Option shall become exercisable on the third anniversary of the Grant Date. Once the Option has become exercisable in accordance with the preceding sentence, it shall continue to be exercisable until the termination of Participant's rights hereunder pursuant to paragraphs 7, 8, or 10, or until the Expiration Date, if earlier. A partial exercise of this Option shall not affect Participant's right to exercise this Option with respect to the remaining shares, subject to the terms and conditions of the Plan and those set forth herein.

5. **Method of Exercising and Payment for Shares**. This Option shall be exercised through a licensed brokerage firm at Participant's expense, in conjunction with established procedures and coordinated with the Company's Human Resources and Law Departments. From time to time the procedures for exercising this Option may be subject to modification by the aforesaid departments, but in no case shall the number of shares subject to the Option or its terms for vesting be changed by the procedures for exercise or by the modification thereof. Procedures for the exercise of this Option will be provided to Participant by the Company's Human Resources Department.

6. **Nontransferability**. This Option is nontransferable except by will or the laws of descent and distribution. During Participant's lifetime, this Option may be exercised only by Participant.

7. **Upon a Qualifying Termination Event**.

(a) Notwithstanding anything in this Option to the contrary, if, prior to the forfeiture of the Option under paragraph 9, Participant experiences a Qualifying Termination Event (as defined below), the Option shall become vested as to a pro-rata portion of the Option, as determined in accordance with the following sentence. The pro-rata portion of the Option that shall vest pursuant to the preceding sentence shall be equal to 1/36th of the shares subject to the Option, for each full month of service performed by the Participant after the Grant Date and prior to the Qualifying Termination Event. The non-vested portion of the Option shall be forfeited.

(b) The vested portion of the Option may be exercised beginning on the third anniversary of the Grant Date and shall remain exercisable according to the terms provided in paragraph 4, and the Participant or Participant's beneficiary (or estate as the case may be) may exercise this Option during the remainder of the period preceding the Expiration Date. Participant shall have the right to designate his beneficiary in accordance with procedures established under the Plan for such purpose. If Participant fails to designate a beneficiary, or if at the time of his death there is no surviving beneficiary, this Option may be exercised by his estate.

8. **Exercise of Vested Option After Other Termination of Employment**. Except as provided in paragraph 7, in the event Participant ceases to be employed by the Company or an Affiliate, the rules under this paragraph 8 shall apply. If Participant ceases to be employed after the Option has vested in accordance with paragraph 3, but prior to the Expiration Date, Participant may exercise this Option with respect to the shares he is entitled to purchase pursuant to paragraphs 3 and 4 above within sixty (60) days of the date of such termination of employment (but in no event later than the Expiration Date). Any portion of the vested Option that is not exercised within the foregoing sixty (60) day period shall be immediately forfeited.

9. **Forfeiture.** Any non-vested portion of the Option that does not become vested pursuant to paragraph 3, 7(a) or 10, shall be forfeited if Participant's employment with the Company or an Affiliate terminates for any reason.

10. **Change in Control**. In the event of a Change in Control (as defined in the Plan) prior to the forfeiture of the Option under paragraph 9, the provisions of this paragraph 10 shall apply in addition to the provisions of Article 17 (and related provisions) of the Plan.

(a) Any Replacement Award made to the Participant shall provide that if the Participant is terminated by the Company other than for Cause or voluntarily resigns for Good Reason (as defined in paragraph 11) concurrent with or within two (2) years after the date of the Change in Control, the non-vested Replacement Award shall become immediately vested and shall be exercisable as provided in paragraph 7(b), beginning on the third anniversary of the Grant Date. The Committee shall have the discretion to determine the terms of any Replacement Award in compliance with the Plan and applicable law. For purposes of paragraphs 9 and 11, references to the Company or an Affiliate shall also include any successor entity.

(b) Notwithstanding the provisions of subparagraph (a) hereof, in connection with a Change in Control where the Company's shares continue to be traded on the New York Stock Exchange or another established securities market and this Option remains in effect, if the Participant is terminated by the Company other than for Cause or voluntarily resigns for Good

Reason (as defined in paragraph 11) concurrent with or within two (2) years after the date of the Change in Control, the non-vested Option shall become immediately vested and shall be exercisable as provided in paragraph 7(b) beginning on the third anniversary of the Grant Date.

11. **Qualifying Termination Event and Other Terms**.

(a) For purposes of this Option, Qualifying Termination Event shall mean a Participant's death, Disability, Retirement while in the employ of the Company or an Affiliate, or termination by the Company or an Affiliate other than for Cause.

(i) "Disability" shall mean a Participant's permanent and total disability within the meaning of Section 22(e)(3) of the Code.

(ii) "Retirement" shall mean termination of employment after having attained age 55 and completed at least 10 years of service with the Company or an Affiliate.

(b) "Good Reason" for purposes of paragraph 10 shall mean

(i) a change in the Participant's position which in the Participant's reasonable judgment does not represent a promotion of the Participant's status or position immediately prior to the Change in Control or the assignment to the Participant of any duties or responsibilities, or diminution of duties or responsibilities, which in the Participant's reasonable judgment are inconsistent with the Participant's position in effect immediately prior to the Change in Control;

(ii) a reduction by the Company in the annual rate of the Participant's base salary as in effect immediately prior to the date of a Change in Control;

(iii) the Company's requiring the Participant's office nearest to the Participant's principal residence to be located at a different place which is more than thirty-five (35) miles from where such office is located immediately prior to a Change in Control;

(iv) the failure by the Company to continue in effect compensation or benefit plans in which the Participant participates, which in the aggregate provide the Participant compensation and benefits substantially equivalent to those prior to a Change in Control; or

(v) the failure of the Company to obtain a satisfactory agreement from any applicable successor entity to assume and agree to perform under any Severance Compensation Agreement.

In order for one of the foregoing events to constitute Good Reason, (i) Participant must notify the Company in writing no later than 90 days after the relevant event stating which Good Reason event has occurred, and (ii) the Company shall not have corrected the Good Reason event within thirty (30) days after Participant's notice.

(c) If the events described in (a)(i) and (ii) or paragraph 10 occur after the date that the Participant is advised (upon recommendation by the Committee) that his employment is being, or will be, terminated for Cause, on account of performance or in circumstances that prevent him from being in good standing with the Company, accelerated vesting shall not occur and all rights under this Option shall terminate, and this Option shall expire on the date of Participant's termination of employment. The Committee shall have the authority to determine whether Participant's termination from employment is for Cause or for any reason other than Cause.

12. **Fractional Shares**. Fractional shares shall not be issuable hereunder, and when any provision hereof may entitle Participant to a fractional share such fraction shall be disregarded.

13. **No Right to Continued Employment**. This Option does not confer upon Participant any right with respect to continuance of employment by the Company or an Affiliate, nor shall it interfere in any way with the right of the Company or an Affiliate to terminate his employment at any time.

14. **Change in Capital Structure**. The terms of this Option shall be adjusted as the Committee determines is equitable in the event the Company effects one or more stock dividends, stock split-ups, subdivisions or consolidations of shares or other similar changes in capitalization.

15. **Governing Law**. This Option shall be governed by the laws of the Commonwealth of Virginia and applicable Federal law. All disputes arising under this Option shall be adjudicated solely within the state or Federal courts located within the Commonwealth of Virginia.

16. **Conflicts**.

(a) In the event of any conflict between the provisions of the Plan as in effect on the date hereof and the provisions of this Option, the provisions of the Plan shall govern. All references herein to the Plan shall mean the Plan as in effect on the date hereof.

(b) In the event of any conflict between the provisions of this Option and the provisions of any separate Agreement between the Company and the Participant, including, but not limited to, any Severance Compensation Agreement, the provisions of this Option shall govern.

17. **Binding Effect**. Subject to the limitations set forth herein and in the Plan, this Option shall be binding upon and inure to the benefit of the legatees, distributees, and personal representatives of Participant and the successors of the Company.

18. **Taxes**. Tax withholding requirements attributable to the exercise of this Option, including employment taxes, Federal income taxes, and state and local income taxes with respect to the state and locality where, according to the Company's system of records, the Participant resides at the time the Option is exercised, except as otherwise might be determined to be required by the Company, will be satisfied by the Participant as instructed in the established procedures for exercising this Option; *provided, however,* that the foregoing employment, Federal, state and local income tax withholding provision shall be subject to any special rules or provisions that may apply to Participants who are non-US employees (working inside or outside of the United States) or US employees working outside of the United States. It is the Participant's

responsibility to properly report all income and remit all Federal, state, and local taxes that may be due to the relevant taxing authorities as the result of exercising this Option.

19. **Recoupment**. In addition to any other applicable provision of the Plan, this Option is subject to the terms of the separate Albemarle Corporation Recoupment Policy, as such Policy may be amended from time to time.

IN WITNESS WHEREOF, the Company has caused this Option to be signed by a duly authorized officer.

ALBEMARLE CORPORATION

By: ______________________________

Exhibit 10.4

NOTICE OF RESTRICTED STOCK UNIT AWARD

under the

ALBEMARLE CORPORATION 2017 INCENTIVE PLAN

This AWARD, made as of the ____ day of ___________, 2019, by Albemarle Corporation, a Virginia corporation (the "Company"), to **XXXX** ("Participant"), is made pursuant to and subject to the provisions of the Company's 2017 Incentive Plan (the "Plan"). All terms that are used herein that are defined in the Plan shall have the same meanings given them in the Plan.

Contingent Restricted Stock Units

1. **Grant Date**. Pursuant to the Plan, the Company, on , 2019 (the "Grant Date"), granted Participant an incentive award ("Award") in the form of **XXXX Restricted Stock Units**, subject to the terms and conditions of the Plan and subject to the terms and conditions set forth herein.

2. **Accounts**. Restricted Stock Units granted to Participant shall be credited to an account (the "Account") established and maintained for Participant. A Participant's Account shall be the record of Restricted Stock Units granted to the Participant under the Plan, is solely for accounting purposes and shall not require a segregation of any Company assets.

3. **Terms and Conditions.** Except as otherwise provided herein, the Restricted Stock Units shall remain nonvested and subject to substantial risk of forfeiture.

Valuation of Restricted Stock Units

4. **Value of Units**. The value of each Restricted Stock Unit on any date shall be equal to the value of one share of the Company's Common Stock on such date.

5. **Value of Stock**. For purposes of this Award, the value of the Company's Common Stock is the Fair Market Value of the Stock (as defined in the Plan) on the relevant date.

Vesting of Restricted Stock Units

6. **Vesting.** Participant's interest in one half of the Restricted Stock Units shall become vested and non-forfeitable on the third anniversary of the Grant Date. The final one half of the Restricted Stock Units shall become vested and non-forfeitable as of the fourth anniversary of the Grant Date.

Termination of Employment During the Vesting Period

7.**Upon a Qualifying Termination Event**. Notwithstanding anything in this Notice of Award to the contrary, if, prior to the forfeiture of the Restricted Stock Units under paragraph 8, Participant experiences a Qualifying Termination Event (as defined below), Restricted Stock Units that are forfeitable shall become vested as to a pro-rata portion of the Award, as determined in accordance with the following sentence. The pro-rata portion of the Award that shall vest pursuant to the preceding sentence shall be equal to 1/36th of the Restricted Stock Units subject to the Award, for each full month of service performed by the Participant after the Grant Date and prior to the Qualifying Termination Event. The non-vested portion of the Award shall be forfeited.

8.**Forfeiture.** Except as provided in paragraph 18, all Restricted Stock Units that are forfeitable shall be forfeited if Participant's employment with the Company or an Affiliate terminates for any reason except a Qualifying Termination Event.

Payment of Awards

9.**Time of Payment**. Payment of Participant's Restricted Stock Units shall be made as soon as practicable after the Units have vested, but in no event later than March 15th of the calendar year after the year in which the Units vest.

10.**Form of Payment**. The vested Restricted Stock Units shall be paid in whole shares of the Company's Common Stock.

11.**Death of Participant**. If Participant dies prior to the payment of his or her non-forfeitable Restricted Stock Units, such Units shall be paid to his or her Beneficiary. Participant shall have the right to designate a Beneficiary in accordance with procedures established under the Plan for such purpose. If Participant fails to designate a Beneficiary, or if at the time of the Participant's death there is no surviving Beneficiary, any amounts payable will be paid to the Participant's estate.

12.**Taxes**. The Company will withhold from the Award the number of shares of Common Stock necessary to satisfy Federal tax-withholding requirements and state and local tax-withholding requirements with respect to the state and locality designated by the Participant as their place of residence in the Company's system of record at the time the Award becomes taxable, except to the extent otherwise determined to be required by the Company, subject, however, to any special rules or provisions that may apply to Participants who are non-US employees (working inside or outside of the United States) or US employees working outside of the United States. It is the Participant's responsibility to properly report all income and remit all Federal, state, and local taxes that may be due to the relevant taxing authorities as the result of receiving this Award.

General Provisions

13. **No Right to Continued Employment**. Neither this Award nor the granting or vesting of Restricted Stock Units shall confer upon Participant any right with respect to continuance of employment by the Company or an Affiliate, nor shall it interfere in any way with the right of the Company or an Affiliate to terminate the Participant's employment at any time.

14. **Change in Capital Structure**. In accordance with the terms of the Plan, the terms of this Award shall be adjusted as the Committee determines is equitable in the event the Company effects one or more stock dividends, stock split-ups, subdivisions or consolidations of shares or other similar changes in capitalization.

15. **Governing Law**. This Award shall be governed by the laws of the Commonwealth of Virginia and applicable Federal law. All disputes arising under this Award shall be adjudicated solely within the state or Federal courts located within the Commonwealth of Virginia.

16. **Conflicts**.

(a) In the event of any conflict between the provisions of the Plan as in effect on the Grant Date and the provisions of this Award, the provisions of the Plan shall govern. All references herein to the Plan shall mean the Plan as in effect on the Grant Date.

(b) In the event of any conflict between the provisions of this Award and the provisions of any separate Agreement between the Company and the Participant, including, but not limited to, any Severance Compensation Agreement entered between the Participant and the Company, the provisions of this Award shall govern.

17. **Binding Effect**. Subject to the limitations stated above and in the Plan, this Award shall be binding upon and inure to the benefit of the legatees, distributees, and personal representatives of Participant and the successors of the Company.

18. **Change in Control**. In the event of a Change in Control (as defined in the Plan) prior to the forfeiture of the Restricted Stock Units under paragraph 8, the provisions of this paragraph 18 shall apply in addition to the provisions of Article 17 (and related provisions) of the Plan.

(a) Any Replacement Award made to the Participant shall provide that if the Participant is terminated by the Company other than for Cause or voluntarily resigns for Good Reason (as defined in paragraph 19) concurrent with or within two (2) years after the date of the Change in Control, the unvested Replacement Award shall become immediately vested and payable at the time of the termination or resignation. The Committee shall have the discretion to determine the terms of any Replacement Award in compliance with the Plan and applicable law. For purposes of paragraphs 7 and 19, references to the Company or an Affiliate shall also include any successor entity.

(b) Notwithstanding the provisions of subparagraph (a) hereof, in connection with a Change in Control where the Company's shares continue to be traded on the New York Stock Exchange or another established securities market, and this Award remains in effect, if the Participant is terminated by the Company other than for Cause or voluntarily resigns for Good Reason (as defined in paragraph 19) concurrent with or within two (2) years after the date of the Change in Control, the unvested Award shall become immediately vested and payable at the time of the termination or resignation.

19.**Qualifying Termination Event and Other Terms**.

(a) For purposes of this Award, Qualifying Termination Event shall mean a Participant's death, Disability, Retirement while in the employ of the Company or an Affiliate, or termination by the Company or an Affiliate other than for Cause.

(i) "Disability" shall mean a Participant's permanent and total disability within the meaning of Section 22(e)(3) of the Code.

(ii) "Retirement" shall mean termination of employment after having attained age 55 and completed at least 10 years of service with the Company or an Affiliate.

(b) "Good Reason" for purposes of paragraph 18 shall mean:

(i) a change in the Participant's position which in the Participant's reasonable judgment does not represent a promotion of the Participant's status or position immediately prior to the Change in Control or the assignment to the Participant of any duties or responsibilities, or diminution of duties or responsibilities, which in the Participant's reasonable judgment are inconsistent with the Participant's position in effect immediately prior to the Change in Control;

(ii) a reduction by the Company in the annual rate of the Participant's base salary as in effect immediately prior to the date of a Change in Control;

(iii) the Company's requiring the Participant's office nearest to the Participant's principal residence to be located at a different place which is more than thirty-five (35) miles from where such office is located immediately prior to a Change in Control;

(iv) the failure by the Company to continue in effect compensation or benefit plans in which the Participant participates, which in the aggregate provide the Participant compensation and benefits substantially equivalent to those prior to a Change in Control; or

(v) the failure of the Company to obtain a satisfactory agreement from any applicable successor entity to assume and agree to perform under any Severance Compensation Agreement.

In order for one of the foregoing events to constitute Good Reason, (i) Participant must notify the Company in writing no later than 90 days after the relevant event stating which Good Reason event has occurred, and (ii) the Company shall not have corrected the Good Reason event within thirty (30) days after Participant's notice.

(c) If the events described in (a)(i) and (ii) or paragraph 18 occur after the date that the Participant is advised (upon recommendation by the Committee) that his employment is being, or will be, terminated for Cause, on account of performance or in circumstances that prevent him from being in good standing with the Company, accelerated vesting shall not occur and all rights under this Award shall terminate, and this Award shall expire on the date of Participant's termination of employment. The Committee shall have the authority to determine whether Participant's termination from employment is for Cause or for any reason other than Cause.

20. **Recoupment**. In addition to any other applicable provision of the Plan, this Award is subject to the terms of the separate Albemarle Corporation Recoupment Policy, as such Policy may be amended from time to time.

IN WITNESS WHEREOF, the Company has caused this Award to be signed on its behalf.

ALBEMARLE CORPORATION

By: ______________________________

NOTICE OF RESTRICTED STOCK UNIT AWARD

under the

ALBEMARLE CORPORATION 2017 INCENTIVE PLAN

This AWARD, made as of the ___ day of __________, 2019, by Albemarle Corporation, a Virginia corporation (the "Company"), to **XXXX** ("Participant"), is made pursuant to and subject to the provisions of the Company's 2017 Incentive Plan (the "Plan"). All terms that are used herein that are defined in the Plan shall have the same meanings given them in the Plan.

Contingent Restricted Stock Units

1. **Grant Date**. Pursuant to the Plan, the Company, on __________ ___, 2019 (the "Grant Date"), granted Participant an incentive award ("Award") in the form of **XXXX Restricted Stock Units**, subject to the terms and conditions of the Plan and subject to the terms and conditions set forth herein.

2. **Accounts**. Restricted Stock Units granted to Participant shall be credited to an account (the "Account") established and maintained for Participant. A Participant's Account shall be the record of Restricted Stock Units granted to the Participant under the Plan, is solely for accounting purposes and shall not require a segregation of any Company assets.

3. **Terms and Conditions.** Except as otherwise provided herein, the Restricted Stock Units shall remain nonvested and subject to substantial risk of forfeiture.

Valuation of Restricted Stock Units

4. **Value of Units**. The value of each Restricted Stock Unit on any date shall be equal to the value of one share of the Company's Common Stock on such date.

5. **Value of Stock**. For purposes of this Award, the value of the Company's Common Stock is the Fair Market Value of the Stock (as defined in the Plan) on the relevant date.

Vesting of Restricted Stock Units

6. **Vesting.** Participant's interest in the Restricted Stock Units shall become vested and non-forfeitable on the third anniversary of the Grant Date.

Termination of Employment During the Vesting Period

7. **Upon a Qualifying Termination Event**. Notwithstanding anything in this Notice of Award to the contrary, if, prior to the forfeiture of Restricted Stock Units under paragraph 8, Participant experiences a Qualifying Termination Event (as defined below), Restricted Stock Units that are forfeitable shall become non-forfeitable as of the date of the Qualifying Termination Event.

8.**Forfeiture.** All Restricted Stock Units that are forfeitable shall be forfeited if Participant's employment with the Company or an Affiliate terminates for any reason except the Participant's death or Disability or as provided in paragraph 18.

Payment of Awards

9.**Time of Payment**. Payment of Participant's Restricted Stock Units shall be made as soon as practicable after the Units have become vested, but in no event later than March 15^{th} of the calendar year after the year in which the Units vest.

10.**Form of Payment**. The vested Restricted Stock Units shall be paid in whole shares of the Company's Common Stock.

11.**Death of Participant**. If Participant dies prior to the payment of his or her non-forfeitable Restricted Stock Units, such Units shall be paid to his or her Beneficiary. Participant shall have the right to designate a Beneficiary in accordance with procedures established under the Plan for such purpose. If Participant fails to designate a Beneficiary, or if at the time of the Participant's death there is no surviving Beneficiary, any amounts payable will be paid to the Participant's estate.

12.**Taxes**. The Company will withhold from the Award the number of shares of Common Stock necessary to satisfy Federal tax-withholding requirements and state and local tax-withholding requirements with respect to the state and locality designated by the Participant as their place of residence in the Company's system of record at the time the Award becomes taxable, except to the extent otherwise determined to be required by the Company, subject, however, to any special rules or provisions that may apply to Participants who are non-US employees (working inside or outside of the United States) or US employees working outside of the United States. It is the Participant's responsibility to properly report all income and remit all Federal, state, and local taxes that may be due to the relevant taxing authorities as the result of receiving this Award.

General Provisions

13.**No Right to Continued Employment**. Neither this Award nor the granting or vesting of Restricted Stock Units shall confer upon Participant any right with respect to continuance of employment by the Company or an Affiliate, nor shall it interfere in any way with the right of the Company or an Affiliate to terminate the Participant's employment at any time.

14.**Change in Capital Structure**. In accordance with the terms of the Plan, the terms of this Award shall be adjusted as the Committee determines is equitable in the event the Company effects one or more stock dividends, stock split-ups, subdivisions or consolidations of shares or other similar changes in capitalization.

15.**Governing Law**. This Award shall be governed by the laws of the Commonwealth of Virginia and applicable Federal law. All disputes arising under this Award shall be adjudicated solely within the state or Federal courts located within the Commonwealth of Virginia.

16. **Conflicts**. (a) In the event of any conflict between the provisions of the Plan as in effect on the Grant Date and the provisions of this Award, the provisions of the Plan shall govern. All references herein to the Plan shall mean the Plan as in effect on the Grant Date.

(b) In the event of any conflict between the provisions of this Award and the provisions of any separate Agreement between the Company and the Participant, including, but not limited to, any Severance Compensation Agreement entered between the Participant and the Company, the provisions of this Award shall govern.

17. **Binding Effect.** Subject to the limitations stated above and in the Plan, this Award shall be binding upon and inure to the benefit of the legatees, distributees, and personal representatives of Participant and the successors of the Company.

18. **Change in Control**. In the event of a Change in Control (as defined in the Plan) prior to the forfeiture of the Restricted Stock Units under paragraph 8, the provisions of this paragraph 18 shall apply in addition to the provisions of Article 17 (and related provisions) of the Plan.

(a) Any Replacement Award made to the Participant shall provide that if the Participant is terminated by the Company other than for Cause or voluntarily resigns for Good Reason (as defined in paragraph 19) concurrent with or within two (2) years after the date of the Change in Control, the unvested Replacement Award shall become immediately vested and payable at the time of the termination or resignation. The Committee shall have the discretion to determine the terms of any Replacement Award in compliance with the Plan and applicable law. For purposes of paragraphs 7 and 19, references to the Company or an Affiliate shall also include any successor entity.

(b) Notwithstanding the provisions of subparagraph (a) hereof, in connection with a Change in Control where the Company's Shares continue to be traded on the New York Stock Exchange or another established securities market, and this Award remains in effect, if the Participant is terminated by the Company other than for Cause or voluntarily resigns for Good Reason (as defined in paragraph 19) concurrent with or within two (2) years after the date of the Change in Control, the unvested Award shall become immediately vested and payable at the time of the termination or resignation.

19. **Qualifying Termination Event and Other Terms**.

(a) For purposes of this Award, Qualifying Termination Event shall mean a Participant's death or Disability.

(i) "Disability" shall mean a Participant's permanent and total disability within the meaning of Section 22(e)(3) of the Code.

(b) "Good Reason" for purposes of paragraph 18 shall mean:

(i) a change in the Participant's position which in the Participant's reasonable judgment does not represent a promotion of the Participant's status or position immediately prior to the Change in Control or the assignment to the

Participant of any duties or responsibilities, or diminution of duties or responsibilities, which in the Participant's reasonable judgment are inconsistent with the Participant's position in effect immediately prior to the Change in Control;

(ii) a reduction by the Company in the annual rate of the Participant's base salary as in effect immediately prior to the date of a Change in Control;

(iii) the Company's requiring the Participant's office nearest to the Participant's principal residence to be located at a different place which is more than thirty-five (35) miles from where such office is located immediately prior to a Change in Control;

(iv) the failure by the Company to continue in effect compensation or benefit plans in which the Participant participates, which in the aggregate provide the Participant compensation and benefits substantially equivalent to those prior to a Change in Control; or

(v) the failure of the Company to obtain a satisfactory agreement from any applicable successor entity to assume and agree to perform under any Severance Compensation Agreement.

In order for one of the foregoing events to constitute Good Reason, (i) Participant must notify the Company in writing no later than 90 days after the relevant event stating which Good Reason event has occurred, and (ii) the Company shall not have corrected the Good Reason event within thirty (30) days after Participant's notice.

(c) If the events described in (a)(i) or paragraph 18 occur after the date that the Participant is advised (upon recommendation by the Committee) that his employment is being, or will be, terminated for Cause, on account of performance or in circumstances that prevent him from being in good standing with the Company, accelerated vesting shall not occur and all rights under this Award shall terminate, and this Award shall expire on the date of Participant's termination of employment. The Committee shall have the authority to determine whether Participant's termination from employment is for Cause or for any reason other than Cause.

20. **Recoupment**. In addition to any other applicable provision of the Plan, this Award is subject to the terms of the separate Albemarle Corporation Recoupment Policy, as such Policy may be amended from time to time.

IN WITNESS WHEREOF, the Company has caused this Award to be signed on its behalf.

ALBEMARLE CORPORATION

By: ______________________________

EXHIBIT 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER

I, Luther C. Kissam IV, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Albemarle Corporation for the period ended March 31, 2019;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 8, 2019

/s/ LUTHER C. KISSAM IV

Luther C. Kissam IV

Chairman, President and Chief Executive Officer

EXHIBIT 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER

I, Scott A. Tozier, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Albemarle Corporation for the period ended March 31, 2019;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    (c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    (d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

    (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

    (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: May 8, 2019

/s/ SCOTT A. TOZIER

Scott A. Tozier
Executive Vice President and Chief Financial Officer

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 Albemarle Corporation (the “Company”) for the period ended March 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Luther C. Kissam IV, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; 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/ LUTHER C. KISSAM IV

Luther C. Kissam IV
Chairman, President and Chief Executive Officer
May 8, 2019

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 Albemarle Corporation (the “Company”) for the period ended March 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Scott A. Tozier, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; 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/ SCOTT A. TOZIER

Scott A. Tozier
Executive Vice President and Chief Financial Officer
May 8, 2019