AIR PRODUCTS & CHEMICALS INC /DE/
Form 10-Q
January 27, 2017

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

FORM 10-Q
(Mark One)
x QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended 31 December 2016
OR
¨ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to
Commission file number 1-4534
AIR PRODUCTS AND CHEMICALS, INC.
(Exact Name of Registrant as Specified in Its Charter)

Delaware	23-1274455
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)
7201 Hamilton Boulevard, Allentown, Pennsylvania	18195-1501
(Address of Principal Executive Offices)	(Zip Code)

610-481-4911
(Registrant's Telephone Number, Including Area Code)
Not Applicable
(Former Name, Former Address and Former Fiscal Year, if Changed Since Last Report)

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

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

Large accelerated filer x	Accelerated filer ¨	Non-accelerated filer ¨	Smaller reporting company ¨
	(Do not check if a smaller reporting company)		

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

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

Class	Outstanding at 31 December 2016
Common Stock, $1 par value	217,589,952

AIR PRODUCTS AND CHEMICALS, INC. and Subsidiaries
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PART I. FINANCIAL INFORMATION
Item 1. Financial Statements
AIR PRODUCTS AND CHEMICALS, INC. and Subsidiaries
CONSOLIDATED INCOME STATEMENTS
(Unaudited)

	Three Months Ended 31 December	
(Millions of dollars, except for share data)	2016	2015
Sales	$ 1,882.5	$ 1,866.3
Cost of sales	1,318.1	1,295.9
Selling and administrative	165.7	173.9
Research and development	15.1	16.9
Business separation costs	30.2	12.0
Cost reduction and asset actions	50.0	—
Other income (expense), net	24.7	4.9
Operating Income	328.1	372.5
Equity affiliates' income	38.0	33.3
Interest expense	29.5	22.2
Income From Continuing Operations Before Taxes	336.6	383.6
Income tax provision	78.4	96.4
Income from Continuing Operations	258.2	287.2
Income From Discontinued Operations, net of tax	48.2	84.8
Net Income	306.4	372.0
Net Income Attributable to Noncontrolling Interests of Continuing Operations	6.6	6.3
Net Income Attributable to Noncontrolling Interests of Discontinued Operations	—	2.1
Net Income Attributable to Air Products	$ 299.8	$ 363.6
Net Income Attributable to Air Products		
Income from continuing operations	$ 251.6	$ 280.9
Income from discontinued operations	48.2	82.7
Net Income Attributable to Air Products	$ 299.8	$ 363.6
Basic Earnings Per Common Share Attributable to Air Products		
Income from continuing operations	$ 1.16	$ 1.30
Income from discontinued operations	.22	.38
Net Income Attributable to Air Products	$ 1.38	$ 1.68
Diluted Earnings Per Common Share Attributable to Air Products		
Income from continuing operations	$ 1.15	$ 1.29
Income from discontinued operations	.22	.38
Net Income Attributable to Air Products	$ 1.37	$ 1.67
Weighted Average Common Shares – Basic (in millions)	217.7	215.8
Weighted Average Common Shares – Diluted (in millions)	219.7	217.6
Dividends Declared Per Common Share – Cash	$ .86	$ .81

The accompanying notes are an integral part of these statements.

AIR PRODUCTS AND CHEMICALS, INC. and Subsidiaries
CONSOLIDATED COMPREHENSIVE INCOME STATEMENTS
(Unaudited)

	Three Months Ended 31 December	
(Millions of dollars)	2016	2015
Net Income	$ 306.4	$ 372.0
Other Comprehensive Loss, net of tax:		
Translation adjustments, net of tax of $32.3 and ($6.7)	(281.2)	(102.9)
Net gain (loss) on derivatives, net of tax of ($10.7) and $4.8	(9.8)	16.0
Reclassification adjustments:		
Currency translation adjustment	—	2.4
Derivatives, net of tax of $10.6 and ($8.0)	25.6	(19.3)
Pension and postretirement benefits, net of tax of $12.9 and $10.1	27.4	21.1
Total Other Comprehensive Loss	(238.0)	(82.7)
Comprehensive Income	68.4	289.3
Net Income Attributable to Noncontrolling Interests	6.6	8.4
Other Comprehensive Loss Attributable to Noncontrolling Interests	(3.1)	—
Comprehensive Income Attributable to Air Products	$ 64.9	$ 280.9

The accompanying notes are an integral part of these statements.

AIR PRODUCTS AND CHEMICALS, INC. and Subsidiaries
CONSOLIDATED BALANCE SHEETS
(Unaudited)

(Millions of dollars, except for share data)	31 December 2016	30 September 2016
Assets		
Current Assets		
Cash and cash items	$655.5	$1,293.2
Trade receivables, net	1,063.3	1,146.2
Inventories	330.7	255.0
Contracts in progress, less progress billings	84.6	64.6
Prepaid expenses	68.6	93.9
Other receivables and current assets	485.9	538.2
Current assets of discontinued operations	860.2	926.2
Total Current Assets	3,548.8	4,317.3
Investment in net assets of and advances to equity affiliates	1,254.7	1,283.6
Plant and equipment, at cost	18,273.8	18,660.2
Less: accumulated depreciation	10,243.5	10,400.5
Plant and equipment, net	8,030.3	8,259.7
Goodwill, net	811.1	845.1
Intangible assets, net	376.7	387.9
Noncurrent capital lease receivables	1,162.6	1,221.7
Other noncurrent assets	772.0	671.0
Noncurrent assets of discontinued operations	—	1,042.3
Total Noncurrent Assets	12,407.4	13,711.3
Total Assets	$15,956.2	$18,028.6
Liabilities and Equity		
Current Liabilities		
Payables and accrued liabilities	$1,677.5	$1,652.2
Accrued income taxes	133.7	117.9
Short-term borrowings	156.1	935.8
Current portion of long-term debt	873.3	365.4
Current liabilities of discontinued operations	89.2	211.8
Total Current Liabilities	2,929.8	3,283.1
Long-term debt	3,289.0	3,909.7
Other noncurrent liabilities	1,797.3	1,816.5
Deferred income taxes	679.0	710.4
Noncurrent liabilities of discontinued operations	—	1,095.5
Total Noncurrent Liabilities	5,765.3	7,532.1
Total Liabilities	8,695.1	10,815.2
Commitments and Contingencies – See Note 11		
Air Products Shareholders' Equity		
Common stock (par value $1 per share; issued 2017 and 2016 - 249,455,584 shares)	249.4	249.4
Capital in excess of par value	967.5	970.0
Retained earnings	10,771.7	10,475.5
Accumulated other comprehensive loss	(2,611.7)	(2,388.3)
Treasury stock, at cost (2017 - 31,865,632 shares; 2016 - 32,104,759 shares)	(2,215.4)	(2,227.0)
Total Air Products Shareholders' Equity	7,161.5	7,079.6

Noncontrolling Interests	99.6	133.8
Total Equity	7,261.1	7,213.4
Total Liabilities and Equity	$15,956.2	$18,028.6

The accompanying notes are an integral part of these statements.

AIR PRODUCTS AND CHEMICALS, INC. and Subsidiaries
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

	Three Months Ended 31 December	
(Millions of dollars)	2016	2015
Operating Activities		
Net income	$306.4	$372.0
Less: Net income attributable to noncontrolling interests of continuing operations	6.6	6.3
Less: Net income attributable to noncontrolling interests of discontinued operations	—	2.1
Net income attributable to Air Products	299.8	363.6
Income from discontinued operations	(48.2)	(82.7)
Income from continuing operations attributable to Air Products	251.6	280.9
Adjustments to reconcile income to cash provided by operating activities:		
Depreciation and amortization	206.1	214.7
Deferred income taxes	(23.6)	31.7
Undistributed earnings of unconsolidated affiliates	(6.9)	7.0
Gain on sale of assets and investments	(5.0)	(.9)
Share-based compensation	9.0	8.3
Noncurrent capital lease receivables	22.3	12.2
Write-down of long-lived assets associated with restructuring	45.7	—
Other adjustments	10.7	(66.2)
Working capital changes that provided (used) cash, excluding effects of acquisitions and divestitures:		
Trade receivables	42.3	83.7
Inventories	9.9	(19.0)
Contracts in progress, less progress billings	(22.6)	(20.3)
Other receivables	(7.2)	(25.3)
Payables and accrued liabilities	10.4	(100.7)
Other working capital	31.6	(8.9)
Cash Provided by Operating Activities	574.3	397.2
Investing Activities		
Additions to plant and equipment	(239.2)	(248.4)
Investment in and advances to unconsolidated affiliates	(8.8)	1.3
Proceeds from sale of assets and investments	11.4	30.8
Other investing activities	(1.5)	.6
Cash Used for Investing Activities	(238.1)	(215.7)
Financing Activities		
Long-term debt proceeds	1.2	—
Payments on long-term debt	(14.4)	(65.5)
Net (decrease) increase in commercial paper and short-term borrowings	(772.2)	46.0
Dividends paid to shareholders	(186.9)	(174.4)
Proceeds from stock option exercises	10.7	10.3
Other financing activities	(12.9)	(16.6)
Cash Used for Financing Activities	(974.5)	(200.2)
Discontinued Operations		
Cash (used for) provided by operating activities	(59.6)	176.9
Cash used for investing activities	(19.4)	(86.3)

Cash provided by financing activities	69.5	2.1
Cash (Used for) Provided by Discontinued Operations	(9.5)	92.7
Effect of Exchange Rate Changes on Cash	(16.2)	(1.3)
(Decrease) Increase in Cash and Cash Items	(664.0)	72.7
Cash and Cash Items – Beginning of Year	1,330.8	206.4
Cash and Cash Items – End of Period	$666.8	$279.1
Less: Cash and Cash Items – Discontinued Operations	11.3	46.7
Cash and Cash Items – Continuing Operations	$655.5	$232.4

The accompanying notes are an integral part of these statements.

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AIR PRODUCTS AND CHEMICALS, INC. and Subsidiaries
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Millions of dollars unless otherwise indicated, except for share data)

1. BASIS OF PRESENTATION AND MAJOR ACCOUNTING POLICIES

Refer to our 2016 Form 10-K for a description of major accounting policies. There have been no significant changes to these accounting policies during the first three months of fiscal year 2017 other than those detailed in Note 2, New Accounting Guidance. Certain prior year information has been reclassified to conform to the fiscal year 2017 presentation.

The results of our previous Material Technologies segment, which contained the Electronic Materials Division (EMD) and Performance Materials Division (PMD), and the former Energy-from-Waste segment have been presented as discontinued operations. Refer to Note 3, Discontinued Operations, for additional details. The results of operations and cash flows of these businesses have been removed from the results of continuing operations and segment results for all periods presented. The assets and liabilities of the discontinued operations have been reclassified and are segregated in the consolidated balance sheets. The comprehensive income related to these businesses has not been segregated and is included in the Consolidated Comprehensive Income Statement for all periods presented. The Notes to the interim Consolidated Financial Statements, unless otherwise indicated, are on a continuing operations basis.
The consolidated financial statements of Air Products and Chemicals, Inc. and its subsidiaries ("we," "our," "us," the "Company," "Air Products," or "registrant") included herein have been prepared by us, without audit, pursuant to the rules and regulations of the Securities and Exchange Commission (SEC). Certain information and footnote disclosures normally included in financial statements prepared in accordance with U.S. generally accepted accounting principles (GAAP) have been condensed or omitted pursuant to such rules and regulations. In our opinion, the accompanying statements reflect adjustments necessary to present fairly the financial position, results of operations, and cash flows for those periods indicated, and contain adequate disclosure to make the information presented not misleading. Adjustments included herein are of a normal, recurring nature unless otherwise disclosed in the Notes. The interim results for the periods indicated herein, however, do not reflect certain adjustments, such as the valuation of inventories on the last-in, first-out (LIFO) cost basis, which are only finally determined on an annual basis. The consolidated financial statements and related Notes included herein should be read in conjunction with the financial statements and Notes thereto included in our latest Form 10-K in order to fully understand the basis of presentation. Results of operations for interim periods are not necessarily indicative of the results of operations for a full year.

2. NEW ACCOUNTING GUIDANCE

Accounting Guidance Implemented in 2017

Consolidation Analysis

In February 2015, the Financial Accounting Standards Board (FASB) issued an update to amend current consolidation guidance. The guidance impacts the analysis an entity must perform in determining if it should consolidate certain legal entities such as limited partnerships, limited liability corporations, and securitization structures. We adopted this guidance in the first quarter of fiscal year 2017. This guidance did not have a significant impact on our consolidated financial statements upon adoption.

Debt Issuance Costs

In April 2015, the FASB issued guidance requiring that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of the debt instead of as a separate deferred asset. In addition, guidance was issued to allow for a policy election on the presentation of debt issuance costs associated with a line-of-credit arrangement, regardless of whether there are any outstanding borrowings. We adopted the guidance during the first quarter of fiscal year 2017 on a retrospective basis. The guidance resulted in a reclassification adjustment that decreased other noncurrent assets by $17.0 with a corresponding decrease to long-term debt as of 30 September 2016. We will continue to present debt issuance costs associated with a line-of-credit arrangement as a deferred asset, regardless of whether there are any outstanding borrowings.

Adoption of this guidance also impacted the presentation of debt issuance costs related to our discontinued operations. As of 30 September 2016, other noncurrent assets and long-term debt balances of discontinued operations were both reduced by $9.6.

Share-Based Compensation

In March 2016, the FASB issued an update to simplify the accounting for employee share-based payments, including the income tax impacts, the classification on the statement of cash flows, and forfeitures. We elected to early adopt this guidance in the first quarter of fiscal year 2017. The new guidance requires excess tax benefits and deficiencies to be recognized in the income statement rather than in additional paid-in capital on the balance sheet. As a result of applying this change prospectively, we recognized $7.0 of excess tax benefits in our provision for income taxes during the first quarter of fiscal year 2017. In addition, adoption of the new guidance resulted in a $8.8 cumulative-effect adjustment to retained earnings as of 1 October 2016 to recognize deferred taxes for U.S. state net operating loss and other carryforwards attributable to excess tax benefits. We retroactively applied the guidance which requires presentation of excess tax benefits as an operating activity on the statement of cash flows rather than as a financing activity. Cash paid on employees' behalf related to shares withheld for tax purposes continues to be classified as a financing activity. Forfeitures have not been significant historically. We have elected to account for forfeitures as they occur, rather than to estimate them.

Definition of a Business

In January 2017, the FASB issued guidance that clarifies the definition of a business in order to assist in determining whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. Under the new guidance, fewer transactions are expected to be accounted for as business combinations. We elected to early adopt this guidance prospectively beginning in the first quarter of fiscal year 2017. This guidance did not have a significant impact on our consolidated financial statements upon adoption.

New Accounting Guidance to be Implemented

Revenue Recognition

In May 2014, the FASB issued guidance based on the principle that revenue is recognized in an amount expected to be collected and to which the entity expects to be entitled in exchange for the transfer of goods or services. We have the option to adopt the standard in either fiscal year 2018 or 2019 either retrospectively or as a cumulative-effect adjustment as of the date of adoption. We intend to adopt this guidance in fiscal year 2019. We are currently evaluating the adoption alternatives allowed by the new standard and the impact the standard is expected to have on our consolidated financial statements. As the new standard will supersede substantially all existing revenue guidance affecting us under GAAP, it could impact the timing of revenue and cost recognition across all of our business segments, in addition to our business processes and information technology systems. As a result, our evaluation of the effect of the new standard will extend over future periods.

Leases

In February 2016, the FASB issued guidance which requires lessees to recognize a right-of-use asset and lease liability on the balance sheet for all leases, including operating leases, with a term in excess of 12 months. The guidance also expands the quantitative and qualitative disclosure requirements. The guidance is effective in fiscal year 2020, with early adoption permitted, and must be applied using a modified retrospective approach. We are currently evaluating the impact of adopting this new guidance on the consolidated financial statements, and we have started the assessment process by evaluating the population of leases under the revised definition of what qualifies as a leased asset. The Company is the lessee under various agreements for real estate, distribution equipment, aircraft, and vehicles that are currently accounted for as operating leases. The new guidance will require the Company to record operating leases on the balance sheet with a right-of-use asset and corresponding liability for future payment obligations.

Derivative Contract Novations

In March 2016, the FASB issued guidance to clarify that a change in the counterparty to a derivative instrument that has been designated as a hedging instrument does not, in and of itself, require re-designation of that hedging relationship provided that all other hedge accounting criteria continue to be met. This guidance is effective in fiscal year 2018, with early adoption permitted. We do not expect adoption of this guidance to have a significant impact on our consolidated financial statements.

Credit Losses on Financial Instruments

In June 2016, the FASB issued an update on the measurement of credit losses, which requires measurement and recognition of expected credit losses for financial assets, including trade receivables and capital lease receivables, held at the reporting date based on historical experience, current conditions, and reasonable and supportable forecasts. The method to determine a loss is different from the existing guidance, which requires a credit loss to be recognized when it is probable. The guidance is effective beginning fiscal year 2021, with early adoption permitted beginning fiscal year 2020. We are currently evaluating the impact this update will have on our consolidated financial statements.

Cash Flow Statement Classification

In August 2016, the FASB issued guidance to reduce diversity in practice on how certain cash receipts and cash payments are classified in the statement of cash flows. The guidance is effective beginning fiscal year 2019, with early adoption permitted, and should be applied retrospectively. We are currently evaluating the impact of adopting this new guidance on the consolidated financial statements.

Intra-Entity Asset Transfers

In October 2016, the FASB issued guidance on the accounting for the income tax effects of intra-entity transfers of assets other than inventory. Current GAAP prohibits the recognition of current and deferred income taxes for an intra-entity asset transfer until the asset has been sold to an outside party. Under the new guidance, the income tax consequences of an intra-entity asset transfer are recognized when the transfer occurs. The guidance is effective beginning in fiscal year 2019, with early adoption permitted as of the beginning of an annual reporting period. The guidance must be applied on a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings as of the date of adoption. We are currently evaluating the impact this guidance will have on our consolidated financial statements and plan to adopt the guidance in fiscal year 2019.

3. DISCONTINUED OPERATIONS

Materials Technologies

On 16 September 2015, we announced plans to separate our Materials Technologies business, which contained two divisions, Electronic Materials Division (EMD) and Performance Materials Division (PMD). As further discussed below, we completed the separation of EMD through the spin-off of Versum on 1 October 2016. In addition, we completed the sale of PMD to Evonik Industries AG on 3 January 2017. As a result, these divisions are reflected in our consolidated financial statements as discontinued operations for all periods presented.

Spin-off of Electronic Materials

On 1 October 2016 (the distribution date), Air Products completed the spin-off of Versum into a separate and independent public company by way of a distribution to the Air Products' stockholders of all of the then issued and outstanding shares of common stock of Versum on the basis of one share of Versum common stock for every two shares of Air Products' common stock held as of the close of business on 21 September 2016 (the record date for the distribution). Fractional shares of Versum common stock were not distributed to Air Products common stockholders. Air Products' stockholders received cash in lieu of fractional shares. As a result of the distribution, Versum Materials, Inc. is now an independent public company and its common stock is listed under the symbol "VSM" on the New York Stock Exchange.

In connection with the spin-off, we entered into various agreements necessary to effect the spin-off and to govern the ongoing relationships between Air Products and Versum after the separation, including a transition services agreement by which we provide certain transition services to Versum, generally for no longer than 12 to 24 months. Balances due to/from Versum as of 31 December 2016 primarily related to the transition services agreement and were immaterial. In addition, Seifi Ghasemi, chairman, president and chief executive officer of Air Products, is serving as non-executive chairman of the Versum Board of Directors.

Sale of Performance Materials (Subsequent Event)

On 3 January 2017, we completed the sale of PMD to Evonik Industries AG for $3.8 billion in cash subject to customary post-closing adjustments, including working capital.

Energy-from-Waste

On 29 March 2016, the Board of Directors approved the Company's exit of its Energy-from-Waste (EfW) business. As a result, efforts to start up and operate the two EfW projects located in Tees Valley, United Kingdom, were discontinued. The decision to exit the business and stop development of the projects was based on continued difficulties encountered and the Company's conclusion, based on testing and analysis completed during the second quarter of fiscal year 2016, that significant additional time and resources would be required to make the projects operational. Since that time, the EfW segment has been presented as a discontinued operation. During the second quarter of fiscal year 2016, a loss of $945.7 ($846.6 after-tax) was recorded to write down plant assets to their estimated net realizable value and record a liability for plant disposition and other costs. Income tax benefits related

only to one of the projects, as the other did not qualify for a local tax deduction.
During the first quarter of fiscal year 2017, we determined that it is unlikely for a buyer to assume the remaining assets and contract obligations, including the related land lease. As a result, we recorded an additional loss of $59.3 ($47.1 after-tax), of which $53.0 was recorded primarily for land lease obligations and $6.3 was recorded to update our estimate of the net

realizable value of the plant assets as of 31 December 2016. We may incur additional exit costs in future periods related to other outstanding commitments.

The following table summarizes the carrying amount of the accrual for our actions to dispose of the EfW business at 31 December 2016:

	Asset Actions	Contract Actions/Other	Total
Loss on disposal of business	$913.5	$ 32.2	$945.7
Noncash expenses	(913.5)	—	(913.5)
Cash expenditures	—	(18.6)	(18.6)
Currency translation adjustment	—	(1.4)	(1.4)
30 September 2016	$—	$ 12.2	$12.2
Loss on disposal of business	6.3	53.0	59.3
Noncash expenses	(6.3)	—	(6.3)
31 December 2016	$—	$ 65.2	$65.2

The loss on disposal was recorded as a component of discontinued operations. Of the remaining accrual, approximately $60 is included in other noncurrent liabilities of continuing operations and primarily relates to land leases and $5 is included in current liabilities of discontinued operations.

The following table details the businesses and major line items that comprise income from discontinued operations, net of tax, on the consolidated income statements for the three months ended 31 December 2016:

	Three Months Ended 31 December 2016		
	Performance Materials	Energy-from-Waste(A)	Total Discontinued Operations
Sales	$254.8	$ —	$ 254.8
Cost of sales	179.0	—	179.0
Selling and administrative	20.4	—	20.4
Research and development	5.1	—	5.1
Other income (expense), net	(.4)	(6.5)	(6.9)
Operating Income (Loss)	49.9	(6.5)	43.4
Equity affiliates' income	.3	—	.3
Income (Loss) Before Taxes	50.2	(6.5)	43.7
Income tax provision(B)	(50.5)	(1.1)	(51.6)
Income (Loss) From Operations of Discontinued Operations, net of tax	100.7	(5.4)	95.3
Loss on Disposal, net of tax	—	(47.1)	(47.1)
Income (Loss) from Discontinued Operations, net of tax	$100.7	$ (52.5)	$ 48.2

(A) The loss from operations of discontinued operations for EfW primarily relates to land leases, administrative costs, and costs incurred for ongoing project exit activities.

(B) As a result of the expected gain on sale of PMD that closed in the second quarter of 2017, we released valuation allowances related to capital loss and net operating loss carryforwards that favorably impacted our income tax provision within discontinued operations by approximately $66 during the first quarter of 2017.

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The following table details the businesses and major line items that comprise income from discontinued operations, net of tax on the consolidated income statements for the three months ended 31 December 2015:

	Three Months Ended 31 December 2015			
	Electronic Materials	Performance Materials	Energy-from-Waste[A]	Total Discontinued Operations
Sales	$242.6	$ 246.9	$ —	$ 489.5
Cost of sales	127.3	172.6	—	299.9
Selling and administrative	18.4	19.0	—	37.4
Research and development	10.1	5.0	—	15.1
Other income (expense), net	2.2	(1.2)	(17.6)	(16.6)
Operating Income (Loss)	89.0	49.1	(17.6)	120.5
Equity affiliates' income	.2	.2	—	.4
Income (Loss) Before Taxes[B]	89.2	49.3	(17.6)	120.9
Income tax provision	24.9	14.5	(3.3)	36.1
Income (Loss) from Operations of Discontinued Operations, net of tax	64.3	34.8	(14.3)	84.8
Net Income Attributable to Noncontrolling Interests of Discontinued Operations	2.1	—	—	2.1
Net Income (Loss) From Discontinued Operations, net of tax	$62.2	$ 34.8	$ (14.3)	$ 82.7

(A) The loss from operations of discontinued operations for EfW primarily relates to project suspension costs, land leases, and administrative costs.

(B) For the three months ended 31 December 2015, income before taxes from operations of discontinued operations attributable to Air Products was $118.4.

The following table details the major line items that comprise total assets and total liabilities of discontinued operations on the consolidated balance sheets as of 31 December 2016:

	31 December 2016		
	Performance Materials	Energy-from-Waste	Total Discontinued Operations
Assets			
Current Assets			
Cash and cash items	$11.3	$ —	$ 11.3
Trade receivables, net	149.5	—	149.5
Inventories	222.2	—	222.2
Plant and equipment, net	306.8	11.0	317.8
Goodwill, net	122.4	—	122.4
Intangible assets, net	23.1	—	23.1
Other receivables and current assets	12.5	1.4	13.9
Total Current Assets	847.8	12.4	860.2
Total Assets	$847.8	$ 12.4	$ 860.2
Liabilities			
Current Liabilities			
Payables and accrued liabilities	$59.3	$ 10.9	$ 70.2
Accrued income taxes	11.2	—	11.2
Other current liabilities	7.8	—	7.8
Total Current Liabilities	78.3	10.9	89.2
Total Liabilities	$78.3	$ 10.9	$ 89.2

The following table details the major line items that comprise total assets and total liabilities of discontinued operations on the consolidated balance sheets as of 30 September 2016:

	30 September 2016			
	Electronic Materials	Performance Materials	Energy-from-Waste	Total Discontinued Operations
Assets				
Current Assets				
Cash and cash items	$170.6	$ 37.5	$ —	$ 208.1
Trade receivables, net	134.7	159.0	—	293.7
Inventories	138.1	226.8	—	364.9
Plant and equipment, net	—	—	18.2	18.2
Other receivables and current assets	34.5	5.6	1.2	41.3
Total Current Assets	477.9	428.9	19.4	926.2
Plant and equipment, net	296.5	296.5	—	593.0
Goodwill, net	180.0	125.0	—	305.0
Intangible assets, net	75.1	25.0	—	100.1
Other noncurrent assets	37.5	6.7	—	44.2
Total Noncurrent Assets	589.1	453.2	—	1,042.3
Total Assets	$1,067.0	$ 882.1	$ 19.4	$ 1,968.5
Liabilities				
Current Liabilities				
Payables and accrued liabilities	$85.8	$ 72.5	$ 19.0	$ 177.3
Accrued income taxes	22.7	6.0	—	28.7
Current portion of long-term debt	5.8	—	—	5.8
Total Current Liabilities	114.3	78.5	19.0	211.8
Long-term debt	981.8	—	—	981.8
Deferred income taxes	50.3	6.4	—	56.7
Other noncurrent liabilities	47.4	9.6	—	57.0
Total Noncurrent Liabilities	1,079.5	16.0	—	1,095.5
Total Liabilities	$1,193.8	$ 94.5	$ 19.0	$ 1,307.3

4. BUSINESS SEPARATION COSTS

In connection with the disposition of the two divisions comprising the former Materials Technologies segment, we incurred separation costs of $30.2 and $12.0 for the three months ended 31 December 2016 and 2015, respectively. These costs are reflected on the consolidated income statements as "Business separation costs" and include legal, advisory, and pension related costs. Refer to Note 3, Discontinued Operations, for additional information regarding the dispositions.

5. COST REDUCTION AND ASSET ACTIONS

The charges we record for cost reduction and asset actions have been excluded from segment operating income.
In the first quarter of fiscal year 2017, we recognized a net expense of $50.0 ($41.2 after-tax, or $.19 per share). The net expense included a charge of $53.4 for actions taken during the first quarter of fiscal year 2017, partially offset by the favorable settlement of the remaining $3.4 accrued balance associated with business restructuring actions taken in 2015.
Asset actions taken in the first quarter of 2017 of $45.7 resulted from the write-down of an air separation unit in the Industrial Gases – EMEA segment that was constructed mainly to provide oxygen to one of the Energy-from-Waste plants. Severance and other benefits totaled $7.7 and related to the elimination of approximately 50 positions primarily in the Corporate and other and Industrial Gases – EMEA segments.

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During fiscal year 2016, we incurred an expense of $34.5 for severance and other benefits related to the elimination of approximately 610 positions. No expense was recognized in the first quarter of fiscal year 2016. The fiscal year 2016 expenses primarily related to the Industrial Gases – Americas and the Industrial Gases – EMEA segments.

The following table summarizes the carrying amount of the accrual for cost reduction and asset actions at 31 December 2016:

	Severance and Other Benefits	Asset Actions/Other	Total
2016 Charge	$ 34.5	$ —	$ 34.5
Amount reflected in pension liability	(.9)	—	(.9)
Cash expenditures	(21.6)	—	(21.6)
Currency translation adjustment	.3	—	.3
30 September 2016	$ 12.3	$ —	$ 12.3
2017 Charge	7.7	45.7	53.4
Noncash expenses	—	(45.7)	(45.7)
Amount reflected in pension liability	(.3)	—	(.3)
Cash expenditures	(7.6)	—	(7.6)
Currency translation adjustment	(.6)	—	(.6)
31 December 2016	$ 11.5	$ —	$ 11.5

6. INVENTORIES

The components of inventories are as follows:

	31 December 2016	30 September 2016
Finished goods	$ 126.5	$ 131.3
Work in process	17.3	18.3
Raw materials, supplies and other	202.0	117.1
	$ 345.8	$ 266.7
Less: Excess of FIFO cost over LIFO cost	(15.1)	(11.7)
Inventories	$ 330.7	$ 255.0

First-in, first-out (FIFO) cost approximates replacement cost.

7. GOODWILL

Changes to the carrying amount of consolidated goodwill by segment for the three months ended 31 December 2016 are as follows:

	Industrial Gases– Americas	Industrial Gases– EMEA	Industrial Gases– Asia	Industrial Gases– Global	Total
Goodwill, net at 30 September 2016	$ 309.1	$ 380.6	$ 135.2	$ 20.2	$ 845.1
Currency translation	(4.0)	(26.9)	(2.7)	(.4)	(34.0)
Goodwill, net at 31 December 2016	$ 305.1	$ 353.7	$ 132.5	$ 19.8	$ 811.1

	31 December 2016	30 September 2016
Goodwill, gross	$1,064.6	$ 1,103.7
Accumulated impairment losses(A)	(253.5)	(258.6)
Goodwill, net	$811.1	$ 845.1

(A) Amount is attributable to the Industrial Gases – Americas segment and includes currency translation of $51.7 and $46.6 as of 31 December 2016 and 30 September 2016, respectively.

We conduct goodwill impairment testing in the fourth quarter of each fiscal year and whenever events and changes in circumstances indicate that the carrying value of goodwill might not be recoverable.

8. FINANCIAL INSTRUMENTS

Currency Price Risk Management

Our earnings, cash flows, and financial position are exposed to foreign currency risk from foreign currency-denominated transactions and net investments in foreign operations. It is our policy to minimize our cash flow volatility from changes in currency exchange rates. This is accomplished by identifying and evaluating the risk that our cash flows will change in value due to changes in exchange rates and by executing the appropriate strategies necessary to manage such exposures. Our objective is to maintain economically balanced currency risk management strategies that provide adequate downside protection.

Forward Exchange Contracts

We enter into forward exchange contracts to reduce the cash flow exposure to foreign currency fluctuations associated with highly anticipated cash flows and certain firm commitments, such as the purchase of plant and equipment. We also enter into forward exchange contracts to hedge the cash flow exposure on intercompany loans. This portfolio of forward exchange contracts consists primarily of Euros and U.S. dollars. The maximum remaining term of any forward exchange contract currently outstanding and designated as a cash flow hedge at 31 December 2016 is 2.5 years.

Forward exchange contracts are also used to hedge the value of investments in certain foreign subsidiaries and affiliates by creating a liability in a currency in which we have a net equity position. The primary currency pairs in this portfolio of forward exchange contracts are Euros and U.S. dollars and British Pound Sterling and U.S. dollars.

In addition to the forward exchange contracts that are designated as hedges, we utilize forward exchange contracts that are not designated as hedges. These contracts are used to economically hedge foreign currency-denominated monetary assets and liabilities, primarily working capital. The primary objective of these forward exchange contracts is to protect the value of foreign currency-denominated monetary assets and liabilities from the effects of volatility in foreign exchange rates that might occur prior to their receipt or settlement. This portfolio of forward exchange contracts comprises many different foreign currency pairs, with a profile that changes from time to time depending on business activity and sourcing decisions.

The table below summarizes our outstanding currency price risk management instruments:

	31 December 2016		30 September 2016	
	US$ Notional	Years Average Maturity	US$ Notional	Years Average Maturity
Forward Exchange Contracts:				
Cash flow hedges	$4,148.1	.4	$4,130.3	.5
Net investment hedges	833.3	2.7	968.2	2.7
Not designated	2,405.1	.2	2,648.3	.4
Total Forward Exchange Contracts	$7,386.5	.6	$7,746.8	.7

The notional value of forward exchange contracts not designated in the table above includes forward contracts which were hedging intercompany loans that were repaid prior to their original maturity dates in anticipation of the spin-off of Versum. The forward exchange contracts no longer qualified as cash flow hedges due to the early repayment of the loans. We entered into additional forward exchange contracts to offset these outstanding positions to eliminate any future earnings impact.

In addition to the above, we use foreign currency-denominated debt to hedge the foreign currency exposures of our net investment in certain foreign subsidiaries. The designated foreign currency-denominated debt and related accrued interest included €910.9 million ($958.0) at 31 December 2016 and €920.7 million ($1,034.4) at 30 September 2016. The designated foreign currency-denominated debt is located on the balance sheet in the long-term debt and current portion of long-term debt line items.

Debt Portfolio Management

It is our policy to identify on a continuing basis the need for debt capital and evaluate the financial risks inherent in funding the Company with debt capital. Reflecting the result of this ongoing review, the debt portfolio and hedging program are managed with the objectives and intent to (1) reduce funding risk with respect to borrowings made by us to preserve our access to debt capital and provide debt capital as required for funding and liquidity purposes, and (2) manage the aggregate interest rate risk and the debt portfolio in accordance with certain debt management parameters.

Interest Rate Management Contracts

We enter into interest rate swaps to change the fixed/variable interest rate mix of our debt portfolio in order to maintain the percentage of fixed- and variable-rate debt within the parameters set by management. In accordance with these parameters, the agreements are used to manage interest rate risks and costs inherent in our debt portfolio. Our interest rate management portfolio generally consists of fixed-to-floating interest rate swaps (which are designated as fair value hedges), pre-issuance interest rate swaps and treasury locks (which hedge the interest rate risk associated with anticipated fixed-rate debt issuances and are designated as cash flow hedges), and floating-to-fixed interest rate swaps (which are designated as cash flow hedges). At 31 December 2016, the outstanding interest rate swaps were denominated in U.S. dollars. The notional amount of the interest rate swap agreements is equal to or less than the designated debt being hedged. When interest rate swaps are used to hedge variable-rate debt, the indices of the swaps and the debt to which they are designated are the same. It is our policy not to enter into any interest rate management contracts which lever a move in interest rates on a greater than one-to-one basis.

Cross Currency Interest Rate Swap Contracts

We enter into cross currency interest rate swap contracts when our risk management function deems necessary. These contracts may entail both the exchange of fixed- and floating-rate interest payments periodically over the life of the agreement and the exchange of one currency for another currency at inception and at a specified future date. The contracts are used to hedge either certain net investments in foreign operations or non-functional currency cash flows related to intercompany loans. The current cross currency interest rate swap portfolio consists of fixed-to-fixed swaps primarily between U.S. dollars and offshore Chinese Renminbi, U.S. dollars and Chilean Pesos, and U.S. dollars and British Pound Sterling.

The following table summarizes our outstanding interest rate management contracts and cross currency interest rate swaps:

	31 December 2016				30 September 2016			
	US$ Notional	Average Pay %	Average Receive %	Years Average Maturity	US$ Notional	Average Pay %	Average Receive %	Years Average Maturity
Interest rate swaps (fair value hedge)	$600.0	LIBOR	2.28 %	2.0	$600.0	LIBOR	2.28 %	2.3
Cross currency interest rate swaps (net investment hedge)	$522.0	3.24 %	2.41 %	2.3	$517.7	3.24 %	2.43 %	2.6
Cross currency interest rate swaps (cash flow hedge)	$1,088.9	4.77 %	2.72 %	3.0	$1,088.9	4.77 %	2.72 %	3.3
Cross currency interest rate swaps (not designated)	$23.1	3.62 %	.81 %	1.6	$27.4	3.62 %	.81 %	1.8

The table below summarizes the fair value and balance sheet location of our outstanding derivatives:

	Balance Sheet Location	31 December 2016	30 September 2016	Balance Sheet Location	31 December 2016	30 September 2016
Derivatives Designated as Hedging Instruments:						
Forward exchange contracts	Other receivables	$ 62.4	$ 72.3	Accrued liabilities	$ 144.2	$ 44.0
Interest rate management contracts	Other receivables	32.3	19.9	Accrued liabilities	—	—
Forward exchange contracts	Other noncurrent assets	73.6	44.4	Other noncurrent liabilities	1.9	9.1
Interest rate management contracts	Other noncurrent					