

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

FORM 10-Q

(Mark One)

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

For the quarterly period ended 31 March 2012

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
(State or Other Jurisdiction of Incorporation or Organization)

23-1274455
(I.R.S. Employer Identification No.)

7201 Hamilton Boulevard, Allentown, Pennsylvania
(Address of Principal Executive Offices)

18195-1501
(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 No

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer 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 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

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 March 2012
Common Stock, \$1 par value	211,431,991

[Table of Contents](#)

AIR PRODUCTS AND CHEMICALS, INC. and Subsidiaries
INDEX

	<u>Page No.</u>
PART I.	
FINANCIAL INFORMATION	
Item 1.	
Financial Statements	
Consolidated Balance Sheets – 31 March 2012 and 30 September 2011	3
Consolidated Income Statements – Three and Six Months Ended 31 March 2012 and 2011	4
Consolidated Comprehensive Income Statements – Three and Six Months Ended 31 March 2012 and 2011	5
Consolidated Statements of Cash Flows – Six Months Ended 31 March 2012 and 2011	6
Notes to Consolidated Financial Statements	7
Item 2.	
Management’s Discussion and Analysis of Financial Condition and Results of Operations	25
Item 3.	
Quantitative and Qualitative Disclosures About Market Risk	42
Item 4.	
Controls and Procedures	42
PART II.	
OTHER INFORMATION	
Item 2.	
Unregistered Sales of Equity Securities and Use of Proceeds	42
Item 6.	
Exhibits	43
Signatures	44
Exhibit Index	45

PART I. FINANCIAL INFORMATION**Item 1. Financial Statements**

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

(Millions of dollars, except for share data)	31 March 2012	30 September 2011
Assets		
Current Assets		
Cash and cash items	\$ 319.5	\$ 421.4
Trade receivables, net	1,381.8	1,361.6
Inventories	696.0	670.2
Contracts in progress, less progress billings	149.8	146.7
Prepaid expenses	105.2	77.5
Other receivables and current assets	373.3	269.2
Current assets of discontinued operations	317.3	243.2
Total Current Assets	3,342.9	3,189.8
Investment in net assets of and advances to equity affiliates	1,051.5	1,011.6
Plant and equipment, at cost	17,658.1	16,858.8
Less: accumulated depreciation	10,013.2	9,636.1
Plant and equipment, net	7,644.9	7,222.7
Goodwill	831.8	796.2
Intangible assets, net	276.0	260.5
Noncurrent capital lease receivables	1,166.5	1,042.8
Other noncurrent assets	367.2	478.2
Noncurrent assets of discontinued operations	275.0	288.9
Total Noncurrent Assets	11,612.9	11,100.9
Total Assets	\$14,955.8	\$14,290.7
Liabilities and Equity		
Current Liabilities		
Payables and accrued liabilities	\$ 1,587.7	\$ 1,599.7
Accrued income taxes	39.6	65.0
Short-term borrowings	353.0	561.8
Current portion of long-term debt	506.6	72.2
Current liabilities of discontinued operations	52.5	43.3
Total Current Liabilities	2,539.4	2,342.0
Long-term debt	3,879.8	3,927.5
Other noncurrent liabilities	1,453.7	1,500.0
Deferred income taxes	651.5	558.2
Noncurrent liabilities of discontinued operations	24.0	24.3
Total Noncurrent Liabilities	6,009.0	6,010.0
Total Liabilities	8,548.4	8,352.0
Commitments and Contingencies – See Note 12		
Air Products Shareholders' Equity		
Common stock (par value \$1 per share; issued 2012 and 2011 – 249,455,584 shares)	249.4	249.4
Capital in excess of par value	800.2	805.6
Retained earnings	8,882.6	8,599.5
Accumulated other comprehensive loss	(1,128.1)	(1,253.4)
Treasury stock, at cost (2012 – 38,023,593 shares; 2011 – 39,270,328 shares)	(2,541.4)	(2,605.3)
Total Air Products Shareholders' Equity	6,262.7	5,795.8
Noncontrolling Interests	144.7	142.9
Total Equity	6,407.4	5,938.7
Total Liabilities and Equity	\$14,955.8	\$14,290.7

The accompanying notes are an integral part of these statements.

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

(Millions of dollars, except for share data)	Three Months Ended 31 March		Six Months Ended 31 March	
	2012	2011	2012	2011
Sales	\$2,344.3	\$2,403.0	\$4,665.8	\$4,695.5
Cost of sales	1,715.8	1,748.2	3,438.1	3,417.8
Selling and administrative	237.3	242.0	468.4	468.5
Research and development	29.8	27.9	57.8	57.1
Cost reduction plan	86.8	—	86.8	—
Net loss on Airgas transaction	—	5.0	—	48.5
Other income, net	13.3	13.9	27.0	21.4
Operating Income	287.9	393.8	641.7	725.0
Equity affiliates' income	35.5	31.7	72.6	59.5
Interest expense	29.4	29.4	58.8	60.4
Income from Continuing Operations before Taxes	294.0	396.1	655.5	724.1
Income tax provision	8.8	103.2	136.2	176.5
Income from Continuing Operations	285.2	292.9	519.3	547.6
Income from Discontinued Operations, net of tax	17.0	18.6	39.2	39.8
Net Income	302.2	311.5	558.5	587.4
Less: Net Income Attributable to Noncontrolling Interests	6.2	7.2	14.4	14.5
Net Income Attributable to Air Products	\$ 296.0	\$ 304.3	\$ 544.1	\$ 572.9
Net Income Attributable to Air Products				
Income from continuing operations	\$ 279.0	\$ 285.7	\$ 504.9	\$ 533.1
Income from discontinued operations	17.0	18.6	39.2	39.8
Net Income Attributable to Air Products	\$ 296.0	\$ 304.3	\$ 544.1	\$ 572.9
Basic Earnings Per Common Share Attributable to Air Products				
Income from continuing operations	\$ 1.32	\$ 1.34	\$ 2.39	\$ 2.49
Income from discontinued operations	.08	.08	.19	.19
Net Income Attributable to Air Products	\$ 1.40	\$ 1.42	\$ 2.58	\$ 2.68
Diluted Earnings Per Common Share Attributable to Air Products				
Income from continuing operations	\$ 1.30	\$ 1.31	\$ 2.36	\$ 2.44
Income from discontinued operations	.08	.08	.18	.18
Net Income Attributable to Air Products	\$ 1.38	\$ 1.39	\$ 2.54	\$ 2.62
Weighted Average of Common Shares Outstanding (in millions)	211.1	213.8	210.7	214.0
Weighted Average of Common Shares Outstanding Assuming Dilution (in millions)	215.0	218.8	214.5	219.0
Dividends Declared Per Common Share – Cash	\$.64	\$.58	\$ 1.22	\$ 1.07

The accompanying notes are an integral part of these statements.

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

(Millions of dollars)	Three Months Ended 31 March	
	2012	2011
Net Income	\$302.2	\$311.5
Other Comprehensive Income, net of tax:		
Translation adjustments, net of tax of (\$18.0) and (\$34.1)	133.9	116.4
Net gain (loss) on derivatives, net of tax of \$1.1 and \$5.3	(1.1)	8.6
Unrealized holding gain (loss) on available-for-sale securities, net of tax of (\$.1)	—	.6
Reclassification adjustments:		
Derivatives, net of tax of \$.3 and (\$1.2)	2.1	(1.6)
Available-for-sale securities, net of tax of (\$9.2)	—	(15.9)
Pension and postretirement benefits, net of tax of \$8.9 and \$8.8	16.0	17.1
Total Other Comprehensive Income	150.9	125.2
Comprehensive Income	453.1	436.7
Comprehensive Income Attributable to Noncontrolling Interests	9.6	7.3
Comprehensive Income Attributable to Air Products	\$443.5	\$429.4

(Millions of dollars)	Six Months Ended 31 March	
	2012	2011
Net Income	\$558.5	\$587.4
Other Comprehensive Income, net of tax:		
Translation adjustments, net of tax of (\$4.0) and (\$20.1)	95.7	164.4
Net gain (loss) on derivatives, net of tax of (\$2.3) and \$1.3	(10.4)	2.4
Unrealized holding gain (loss) on available-for-sale securities, net of tax of (\$3.3)	—	(4.6)
Reclassification adjustments:		
Derivatives, net of tax of \$4.4 and \$3.0	12.0	5.4
Available-for-sale securities, net of tax of (\$9.3)	—	(16.1)
Pension and postretirement benefits, net of tax of \$17.8 and \$17.4	32.1	33.6
Total Other Comprehensive Income	129.4	185.1
Comprehensive Income	687.9	772.5
Comprehensive Income Attributable to Noncontrolling Interests	18.5	22.4
Comprehensive Income Attributable to Air Products	\$669.4	\$750.1

The accompanying notes are an integral part of these statements.

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

(Millions of dollars)	Six Months Ended 31 March	
	2012	2011
Operating Activities		
Net Income	\$ 558.5	\$ 587.4
Less: Net income attributable to noncontrolling interests	14.4	14.5
Net income attributable to Air Products	544.1	572.9
Income from discontinued operations	(39.2)	(39.8)
Income from continuing operations attributable to Air Products	504.9	533.1
Adjustments to reconcile income to cash provided by operating activities:		
Depreciation and amortization	408.3	415.3
Deferred income taxes	53.1	63.0
Benefit from Spanish tax ruling	(58.3)	—
Undistributed earnings of unconsolidated affiliates	(25.0)	(7.7)
Gain on sale of assets and investments	(5.1)	(6.6)
Share-based compensation	27.4	21.9
Noncurrent capital lease receivables	(109.9)	(98.4)
Net loss on Airgas transaction	—	48.5
Payment of acquisition-related costs	—	(153.8)
Other adjustments	48.1	50.5
Working capital changes that provided (used) cash, excluding effects of acquisitions and divestitures:		
Trade receivables	(13.9)	(75.1)
Inventories	(19.9)	(18.8)
Contracts in progress, less progress billings	(1.9)	42.6
Other receivables	14.2	11.3
Payables and accrued liabilities	5.9	(227.6)
Other working capital	(96.7)	8.5
Cash Provided by Operating Activities	731.2	606.7
Investing Activities		
Additions to plant and equipment	(734.9)	(592.0)
Acquisitions, less cash acquired	(26.4)	—
Investment in and advances to unconsolidated affiliates	(21.2)	(24.2)
Proceeds from sale of Airgas stock	—	94.7
Proceeds from sale of assets and investments	12.5	51.3
Change in restricted cash	6.4	10.4
Cash Used for Investing Activities	(763.6)	(459.8)
Financing Activities		
Long-term debt proceeds	400.1	43.0
Payments on long-term debt	(8.6)	(172.0)
Net (decrease) increase in commercial paper and short-term borrowings	(190.2)	340.9
Dividends paid to shareholders	(244.1)	(210.1)
Purchase of treasury shares	(53.1)	(350.0)
Proceeds from stock option exercises	75.9	72.6
Excess tax benefit from share-based compensation	18.5	18.6
Payment for subsidiary shares from noncontrolling interests	(58.4)	—
Other financing activities	(13.2)	.8
Cash Used for Financing Activities	(73.1)	(256.2)
Discontinued Operations		
Cash provided by operating activities	20.0	20.0
Cash used for investing activities	(7.7)	(20.7)
Cash provided by financing activities	—	.3
Cash Provided by (Used for) Discontinued Operations	12.3	(.4)
Effect of Exchange Rate Changes on Cash	3.7	5.7
Decrease in Cash and Cash Items	(89.5)	(104.0)
Cash and Cash Items – Beginning of Year	422.5	374.3
Cash and Cash Items – End of Period	333.0	270.3
Less: Cash and Cash Items – Discontinued Operations	13.5	.3
Cash and Cash Items – Continuing Operations	\$ 319.5	\$ 270.0

The accompanying notes are an integral part of these statements.

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 2011 Form 10-K for a description of major accounting policies. There have been no material changes to these accounting policies during the first six months of 2012.

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 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 LIFO cost basis, which can only be 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

Fair Value Measurements

In May 2011, the FASB issued authoritative guidance that amends previous guidance for fair value measurement and disclosure requirements. The revised guidance changes certain fair value measurement principles, clarifies the application of existing fair value measurements and expands the disclosure requirements, particularly for Level 3 fair value measurements which utilize inputs that are based on our own internal assumptions. This standard was effective for us beginning in the second quarter of fiscal year 2012. The adoption of this guidance did not have a material impact on our consolidated financial statements.

New Accounting Guidance to be Implemented

Goodwill Impairment

In September 2011, the FASB issued authoritative guidance that amends previous guidance related to the manner in which entities test goodwill for impairment. The new guidance provides an entity the option to first perform a qualitative assessment to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If it is determined to be more likely than not that the fair value of a reporting unit is less than its carrying amount, entities must perform the quantitative analysis of the goodwill impairment test. Otherwise, the quantitative test is optional. This guidance will be effective for us for annual and interim goodwill impairment tests performed after 30 September 2012. The implementation of this guidance does not impact our consolidated financial statements.

Multiemployer Pension

In September 2011, the FASB issued authoritative guidance that amends previous guidance related to the disclosure requirements for employers participating in multiemployer pension plans. The purpose of the new disclosures is to provide financial statement users with information about an employer’s level of participation in and the financial health of significant plans. Current recognition and measurement guidance for an employer’s participation in a multiemployer plan is not affected. This guidance will be effective for our fiscal year 2012 annual disclosures. Based on our level of participation in multiemployer plans, the impact of adopting this guidance should not be material to our consolidated financial statements.

Statement of Comprehensive Income

In June 2011, the FASB issued authoritative guidance that amends previous guidance for the presentation of comprehensive income. It eliminates the current option to present other comprehensive income in the statement of changes in equity. Under this revised guidance, an entity will have the option to present the components of net income and other comprehensive income in either a single continuous statement of comprehensive income or in two separate but consecutive financial statements. The standard is effective for us beginning in the first quarter of fiscal year 2013. We are currently evaluating the presentation alternatives for adopting the guidance, but we do not anticipate a material impact on our consolidated financial statements upon adoption.

3. DISCONTINUED OPERATIONS

In January 2012, the Board of Directors authorized the sale of our Homecare business, which had previously been reported as part of the Merchant Gases operating segment.

On 8 January 2012, we reached agreements for The Linde Group to purchase our Homecare business in Belgium, Germany, France, Portugal and Spain. This business represents approximately 80% of our total Homecare business revenues. We expect to sell the remaining portion of Homecare, which is primarily in the United Kingdom, within the next year.

The transaction with Linde received regulatory approval on 18 April 2012 and is expected to close on 30 April 2012. Total sale proceeds of €590 million (approximately \$785) will be received in cash at closing. This amount includes contingent proceeds of €110 million (approximately \$146) related to future business activity in Spain and Portugal. The gain related to the contingent proceeds will be deferred until the contingency period ends and the final proceeds are realized per the terms of the agreement. We will also be entitled to receive up to €32 million (approximately \$43) of additional cash proceeds based upon collection of accounts receivable. We anticipate an after-tax gain in the range of €105-€130 million (approximately \$140-\$170) on the sale of this business in the third quarter of fiscal year 2012.

The Homecare business is being accounted for as discontinued operations. The results of operations and cash flows of this business have been removed from the results of continuing operations for all periods presented. The assets and liabilities of discontinued operations have been reclassified and are segregated in the consolidated balance sheets. The operating results are summarized below:

	Three Months Ended 31 March		Six Months Ended 31 March	
	2012	2011	2012	2011
Sales	\$95.5	\$98.3	\$ 197.0	\$ 197.5
Income before taxes	25.2	25.7	56.1	55.1
Income tax provision	8.2	7.1	16.9	15.3
Income from Discontinued Operations, net of tax	\$17.0	\$18.6	\$ 39.2	\$ 39.8

[Table of Contents](#)

Assets and liabilities of discontinued operations consist of the following:

	31 March 2012	30 September 2011
Cash and cash items	\$ 13.5	\$ 1.1
Trade receivables, net	272.6	213.4
Inventories	11.1	11.2
Other current assets	20.1	17.5
Total Current Assets	\$317.3	\$243.2
Plant and equipment, net	\$177.5	\$189.3
Goodwill	96.6	96.2
Other noncurrent assets	.9	3.4
Total Noncurrent Assets	\$275.0	\$288.9
Payables and accrued liabilities	\$ 41.6	\$ 42.1
Accrued income taxes	10.9	.5
Short-term borrowings	—	.7
Total Current Liabilities	\$ 52.5	\$ 43.3
Other noncurrent liabilities	\$ 12.4	\$ 12.4
Deferred income taxes	11.6	11.9
Total Noncurrent Liabilities	\$ 24.0	\$ 24.3

4. COST REDUCTION PLAN

During the second quarter ended 31 March 2012, we initiated a cost reduction plan. The results from continuing operations includes a charge of \$86.8 (\$60.6 after-tax, or \$.28 per share) for this plan. This charge represents the ongoing actions we are taking to improve our cost structure, particularly in Europe. It includes removing the stranded costs resulting from our decision to exit the Homecare business, the reorganization of the Merchant business and the actions we are taking to right-size our European business cost structure in light of the challenging economic outlook.

This charge includes \$80.8 for severance and other costs associated with the elimination of approximately 600 positions from our workforce. The remainder of the charge, \$6.0, is related to the write-down of certain assets. For additional information regarding these assets, see Note 10, Fair Value Measurements. The planned actions are expected to be completed within the next twelve months.

The charge for the cost reduction plan is excluded from segment operating profit. The table below displays how this charge relates to the businesses at the segment level:

	Severance and Other Benefits	Asset Impairments	Total
Merchant Gases	\$71.3	\$ 6.0	\$77.3
Tonnage Gases	3.8	—	3.8
Electronics and Performance Materials	5.7	—	5.7
Total 2012 Charge	\$80.8	\$ 6.0	\$86.8

[Table of Contents](#)

The following table summarizes the carrying amount of the accrual for the cost reduction plan at 31 March 2012:

	Severance and Other Benefits	Asset Impairments	Total
2012 Charge	\$80.8	\$ 6.0	\$86.8
Noncash expenses	(.4)	(6.0)	(6.4)
Amount reflected in pension liability	(6.8)	—	(6.8)
Cash expenditures	(7.8)	—	(7.8)
Currency translation adjustment	.6	—	.6
Accrued balance	\$66.4	\$ —	\$66.4

5. SUBSEQUENT EVENT- BUSINESS COMBINATION

On 29 February 2012, we entered into a definitive agreement with E.I. DuPont de Nemours and Co., Inc. to acquire their 50% interest in our joint venture, DuPont Air Products NanoMaterials LLC (DA NanoMaterials). DA NanoMaterials' revenues for calendar year 2011 were approximately \$90.

The acquisition closed on 2 April 2012 for approximately \$150, subject to working capital adjustments, and was accounted for as a business combination. We will consolidate DA NanoMaterials results beginning in the third quarter of 2012 within our Electronics and Performance Materials business segment. Prior to the acquisition date, we accounted for our 50% interest in DA NanoMaterials as an equity-method investment. An after-tax gain in the range of \$45-\$55 is expected to be recognized in the third quarter as a result of revaluing our previously held equity interest before the business combination.

6. AIRGAS TRANSACTION

In February 2010, we commenced a tender offer to acquire all the outstanding common stock of Airgas, Inc. (Airgas), including the associated preferred stock purchase rights. Based on a decision by the Delaware Chancery Court to uphold the decision of Airgas' Board of Directors to retain the preferred stock purchase rights, we withdrew our offer on 15 February 2011.

The three and six months ended 31 March 2011 included a net loss of \$5.0 (\$4.4 after-tax, or \$.02 per share) and \$48.5 (\$31.6 after-tax, or \$.14 per share), respectively, which was reflected separately on the consolidated income statements as "Net loss on Airgas transaction." This net loss included amortization of the fees related to the term loan credit facility, the gain on the sale of Airgas stock, and other acquisition-related costs. The six months ended 31 March 2011 included cash payments for acquisition-related costs of \$153.8, which was classified as an operating activity on the consolidated statements of cash flows. For additional details on this transaction, refer to Note 3, Airgas Transaction, in our 2011 Form 10-K.

7. INVENTORIES

The components of inventories are as follows:

	31 March 2012	30 September 2011
Inventories at FIFO Cost		
Finished goods	\$523.6	\$477.3
Work in process	34.8	29.9
Raw materials, supplies and other	237.0	258.8
	795.4	766.0
Less: Excess of FIFO cost over LIFO cost	(99.4)	(95.8)
	\$696.0	\$670.2

FIFO cost approximates replacement cost. Our inventories have a high turnover, and as a result, there is little difference between the original cost of an item and its current replacement cost.

8. GOODWILL

Changes to the carrying amount of consolidated goodwill by segment for the six months ended 31 March 2012 are as follows:

	30 September 2011	Acquisitions and Adjustments	Currency Translation	31 March 2012
Merchant Gases	\$479.2	\$ 9.2	\$10.6	\$499.0
Tonnage Gases	14.1	—	.8	14.9
Electronics and Performance Materials	302.9	11.0	4.0	317.9
	\$796.2	\$20.2	\$15.4	\$831.8

Goodwill is subject to impairment testing at least annually. In addition, goodwill is tested more frequently if a change in circumstances or the occurrence of events indicates that potential impairment exists.

9. 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 to 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. The maximum remaining term of any forward exchange contract currently outstanding and designated as a cash flow hedge at 31 March 2012 is 2.4 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 pair in this portfolio of forward exchange contracts is the Euro/U.S. dollar.

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 March 2012		30 September 2011	
	US\$ Notional	Years Average Maturity	US\$ Notional	Years Average Maturity
Forward exchange contracts:				
Cash flow hedges	\$1,456.1	.5	\$1,512.1	.4
Net investment hedges	928.7	1.0	635.8	2.0
Not designated	298.7	.1	226.3	.1
Total Forward Exchange Contracts	\$2,683.5	.6	\$2,374.2	.8

In addition to the above, we use foreign currency-denominated debt and qualifying intercompany loans that are related to an outstanding borrowing from a third party to hedge the foreign currency exposures of our net investment in certain foreign subsidiaries. The designated foreign currency denominated debt at 31 March 2012 included €738.4 million and 30 September 2011 included €742.1 million. The designated intercompany loans were €437.0 million at 31 March 2012 and 30 September 2011.

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 Swap Contracts

We enter into interest rate swap contracts 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 optimize interest rate risks and costs inherent in our debt portfolio. Our interest rate swap portfolio will generally consist of fixed to floating swaps which are designated as fair value hedges and pre-issuance interest rate swap agreements to hedge the interest rate on anticipated fixed-rate debt issuance which are designated as cash flow hedges. At 31 March 2012, outstanding interest rate swaps were denominated in U.S. dollars and Euros. The maximum remaining hedged term of any interest rate swap designated as a cash flow hedge is .8 years. The notional amount of the interest rate swap agreements are equal to or less than the designated debt instrument being hedged. When interest rate swaps are used, the indices of the swap instruments and the debt to which they are designated are the same. It is our policy not to enter into any interest rate swap 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. These contracts effectively convert the currency denomination of a debt instrument into another currency in which we have a net equity position while changing the interest rate characteristics of the instrument. The contracts are used to hedge certain net investments in foreign operations. The current cross currency swap portfolio consists of a single fixed-to-fixed swap between U.S. dollars and British Pound Sterling.

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

	31 March 2012				30 September 2011			
	US\$ Notional	Pay %	Average Receive %	Years Average Maturity	US\$ Notional	Pay %	Average Receive %	Years Average Maturity
Interest rate swaps (fair value hedge)	\$583.4	LIBOR	3.38%	4.0	\$583.9	LIBOR	3.38%	4.5
Cross currency interest rate swaps (net investment hedge)	\$ 32.2	5.54%	5.48%	1.9	\$ 32.2	5.54%	5.48%	2.5
Interest rate swaps (cash flow hedge)	\$100.0	2.30%	LIBOR	.8	\$300.0	2.33%	LIBOR	.4

[Table of Contents](#)

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

		31 March 2012	30 September 2011		31 March 2012	30 September 2011
	Balance Sheet Location	Fair Value	Fair Value	Balance Sheet Location	Fair Value	Fair Value
Derivatives Designated as Hedging Instruments:						
Forward exchange contracts	Other receivables	\$ 11.7	\$22.0	Accrued liabilities	\$49.8	\$33.0
Interest rate swap contracts	Other receivables	11.8	5.8	Accrued liabilities	1.4	3.8
Forward exchange contracts	Other noncurrent assets	40.6	45.0	Other noncurrent liabilities	1.1	1.0
Interest rate swap contracts	Other noncurrent assets	36.2	42.4	Other noncurrent liabilities	2.9	2.2
Total Derivatives Designated as Hedging Instruments		\$100.3	\$115.2		\$55.2	\$40.0
Derivatives Not Designated as Hedging Instruments:						
Forward exchange contracts	Other receivables	\$ 1.3	\$ 3.0	Accrued liabilities	\$ 1.3	\$ 3.8
Total Derivatives		\$101.6	\$118.2		\$56.5	\$43.8

Refer to Note 10, Fair Value Measurements, which defines fair value, describes the method for measuring fair value, and provides additional disclosures regarding fair value measurements.

[Table of Contents](#)

The table below summarizes the gain or loss related to our cash flow hedges, fair value hedges, net investment hedges, and derivatives not designated as hedging instruments.

	Three Months Ended 31 March							
	Forward Exchange Contracts		Foreign Currency Debt		Other ^(A)		Total	
	2012	2011	2012	2011	2012	2011	2012	2011
Cash Flow Hedges, net of tax:								
Net gain (loss) recognized in OCI (effective portion)	\$ (2.5)	\$ 8.6	\$ —	\$ —	\$ 1.4	\$ —	\$ (1.1)	\$ 8.6
Net (gain) loss reclassified from OCI to sales/cost of sales (effective portion)	.2	6.3	—	—	—	—	.2	6.3
Net (gain) loss reclassified from OCI to other income, net (effective portion)	1.8	(8.1)	—	—	—	—	1.8	(8.1)
Net (gain) loss reclassified from OCI to interest expense (effective portion)	(.3)	—	—	—	.3	.3	—	.3
Net (gain) loss reclassified from OCI to other income, net (ineffective portion)	.1	(.1)	—	—	—	—	.1	(.1)
Fair Value Hedges:								
Net gain (loss) recognized in interest expense ^(B)	\$ —	\$ —	\$ —	\$ —	\$(4.0)	\$(4.8)	\$ (4.0)	\$ (4.8)
Net Investment Hedges, net of tax:								
Net gain (loss) recognized in OCI	\$(16.1)	\$(18.3)	\$(34.3)	\$(71.2)	\$ (.7)	\$ (.5)	\$(51.1)	\$(90.0)
Derivatives Not Designated as Hedging Instruments:								
Net gain (loss) recognized in other income, net ^(C)	\$.9	\$ (.9)	\$ —	\$ —	\$ —	\$ —	\$.9	\$ (.9)

	Six Months Ended 31 March							
	Forward Exchange Contracts		Foreign Currency Debt		Other ^(A)		Total	
	2012	2011	2012	2011	2012	2011	2012	2011
Cash Flow Hedges, net of tax:								
Net gain (loss) recognized in OCI (effective portion)	\$(15.3)	\$ 2.4	\$ —	\$ —	\$ 4.9	\$ —	\$(10.4)	\$ 2.4
Net (gain) loss reclassified from OCI to sales/cost of sales (effective portion)	.5	5.5	—	—	—	—	.5	5.5
Net (gain) loss reclassified from OCI to other income, net (effective portion)	10.3	(.8)	—	—	—	—	10.3	(.8)
Net (gain) loss reclassified from OCI to interest expense (effective portion)	.4	—	—	—	.6	.6	1.0	.6
Net (gain) loss reclassified from OCI to other income, net (ineffective portion)	.2	.1	—	—	—	—	.2	.1
Fair Value Hedges:								
Net gain (loss) recognized in interest expense ^(B)	\$ —	\$ —	\$ —	\$ —	\$(4.9)	\$(21.2)	\$ (4.9)	\$(21.2)
Net Investment Hedges, net of tax:								
Net gain (loss) recognized in OCI	\$ (7.0)	\$(14.3)	\$ 3.0	\$(54.1)	\$ (.5)	\$ (.3)	\$ (4.5)	\$(68.7)
Derivatives Not Designated as Hedging Instruments:								
Net gain (loss) recognized in other income, net ^(C)	\$ (1.2)	\$ (.7)	\$ —	\$ —	\$ —	\$ —	\$ (1.2)	\$ (.7)

^(A) Other includes the impact on other comprehensive income (OCI) and earnings primarily related to interest rate swaps.

^(B) The impact of fair value hedges noted above was largely offset by gains and losses resulting from the impact of changes in related interest rates on recognized outstanding debt.

^(C) The impact of the non-designated hedges noted above was largely offset by gains and losses, respectively, resulting from the impact of changes in exchange rates on recognized assets and liabilities denominated in nonfunctional currencies.

[Table of Contents](#)

The amount of cash flow hedges' unrealized gains and losses at 31 March 2012 that are expected to be reclassified to earnings in the next twelve months are not material.

The cash flows related to all derivative contracts are reported in the operating activities section of the consolidated statements of cash flows.

Credit Risk-Related Contingent Features

Certain derivative instruments are executed under agreements that require us to maintain a minimum credit rating with both Standard & Poor's and Moody's. If our credit rating falls below this threshold, the counterparty to the derivative instruments has the right to request full collateralization on the derivatives' net liability position. The net liability position of derivatives with credit risk-related contingent features was \$15.7 as of 31 March 2012 and \$10.5 as of 30 September 2011. Because our current credit rating is above the various pre-established thresholds, no collateral has been posted on these liability positions.

Counterparty Credit Risk Management

We execute all financial derivative transactions with counterparties that are highly rated financial institutions, all of which are investment grade at this time. Some of our underlying derivative agreements give us the right to require the institution to post collateral if its credit rating falls below the pre-established thresholds with Standard & Poor's or Moody's. These are the same agreements referenced in Credit Risk-Related Contingent Features above. The collateral that the counterparties would be required to post was \$62.1 as of 31 March 2012 and \$66.1 as of 30 September 2011. No financial institution is required to post collateral at this time, as all have credit ratings at or above the threshold.

10. FAIR VALUE MEASUREMENTS

Fair value is defined as an exit price (i.e., 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). The methods and assumptions used to measure the fair value of financial instruments are as follows:

Derivatives

The fair value of our interest rate swap agreements and forward exchange contracts are quantified using the income approach and are based on estimates using standard pricing models. These models take into account the value of future cash flows as of the balance sheet date, discounted to a present value using discount factors that match both the time to maturity and currency of the underlying instruments. The computation of the fair values of these instruments is generally performed by the Company. These standard pricing models utilize inputs which are derived from or corroborated by observable market data such as interest rate yield curves and currency spot and forward rates. In addition, on an ongoing basis, we randomly test a subset of our valuations against valuations received from the transaction's counterparty to validate the accuracy of our standard pricing models. Counterparties to these derivative contracts are highly rated financial institutions.

Refer to Note 9, Financial Instruments, for a description of derivative instruments, including details on the balance sheet line classifications.

Long-term Debt

The fair value of our debt is based on estimates using standard pricing models that take into account the value of future cash flows as of the balance sheet date, discounted to a present value using discount factors that match both the time to maturity and currency of the underlying instruments. These standard valuation models utilize observable market data such as interest rate yield curves and currency spot rates. Therefore, the fair value of our debt is classified as a level 2 measurement. We generally perform the computation of the fair value of these instruments.

Other Liabilities

As of 30 September 2011, other liabilities included the obligation to purchase 25% of the remaining shares of CryoService Limited (CSL). CSL is not publicly traded and therefore, no observable market existed for the shares. The fair value of the outstanding liability was determined using an internally developed valuation model that was based on a multiple of earnings formula. On 30 November 2011, payment was remitted for this obligation and 100% of the shares are now owned. Refer to Note 15, Noncontrolling Interests, for additional information.

[Table of Contents](#)

The carrying values and fair values of financial instruments were as follows:

	31 March 2012		30 September 2011	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Assets				
Derivatives				
Forward exchange contracts	\$ 53.6	\$ 53.6	\$ 70.0	\$ 70.0
Interest rate swap contracts	48.0	48.0	48.2	48.2
Liabilities				
Derivatives				
Forward exchange contracts	\$ 52.2	\$ 52.2	\$ 37.8	\$ 37.8
Interest rate swap contracts	4.3	4.3	6.0	6.0
Long-term debt, including current portion	4,386.4	4,673.4	3,999.7	4,284.5
Other liabilities	—	—	51.0	51.0

The carrying amounts reported in the balance sheet for cash and cash items, trade receivables, payables and accrued liabilities, accrued income taxes, and short-term borrowings approximate fair value due to the short-term nature of these instruments. Accordingly, these items have been excluded from the above table.

The fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value into three broad levels as follows:

Level 1 — Quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 — Inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the asset or liability.

Level 3 — Inputs that are unobservable for the asset or liability based on our own assumptions (about the assumptions market participants would use in pricing the asset or liability).

The following table summarizes assets and liabilities measured at fair value on a recurring basis in the consolidated balance sheets:

	31 March 2012				30 September 2011			
	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3
Assets at Fair Value								
Derivatives								
Forward exchange contracts	\$ 53.6	\$—	\$ 53.6	\$—	\$ 70.0	\$—	\$ 70.0	\$—
Interest rate swap contracts	48.0	—	48.0	—	48.2	—	48.2	—
Total Assets at Fair Value	\$101.6	\$—	\$101.6	\$—	\$118.2	\$—	\$118.2	\$—
Liabilities at Fair Value								
Derivatives								
Forward exchange contracts	\$ 52.2	\$—	\$ 52.2	\$—	\$ 37.8	\$—	\$ 37.8	\$—
Interest rate swap contracts	4.3	—	4.3	—	6.0	—	6.0	—
Other liabilities	—	—	—	—	51.0	—	—	51.0
Total Liabilities at Fair Value	\$ 56.5	\$—	\$ 56.5	\$—	\$ 94.8	\$—	\$ 43.8	\$51.0

Refer to Note 1, Major Accounting Policies, in our 2011 Form 10-K and Note 9, Financial Instruments, in this quarterly filing for additional information on our accounting and reporting of the fair value of financial instruments.

[Table of Contents](#)

Changes in the fair value of other liabilities, valued using significant unobservable inputs (Level 3), are presented below:

Balance at 30 September 2011	\$ 51.0
Expense included in interest expense	.8
Payment to settle liability	(52.1)
Currency translation adjustment	.3
Balance at 31 March 2012	\$ —

The following is a tabular presentation of the nonrecurring fair value measurement along with the level within the fair value hierarchy in which the fair value measurement in its entirety falls:

	31 March 2012				Net Loss
	Total	Level 1	Level 2	Level 3	
Long-lived assets held for sale	\$2.2	\$—	\$—	\$2.2	\$6.0

Long-lived assets held for sale with a carrying value of \$8.2 were written down to fair value of \$2.2, resulting in a loss of \$6.0, which was included in the cost reduction plan charge. For additional information regarding this plan, see Note 4, Cost Reduction Plan, in this quarterly filing. We quantified the fair value of assets held for sale using a market approach, based on prices for other market transactions involving comparable assets and our assessment of value considering our knowledge of the markets.

11. RETIREMENT BENEFITS

The components of net pension cost for the defined benefit pension plans and other postretirement benefit cost for the three and six months ended 31 March 2012 and 2011 were as follows:

	Pension Benefits				Other Benefits	
	2012		2011		2012	2011
	U.S.	International	U.S.	International		
Three Months Ended 31 March						
Service cost	\$ 11.2	\$ 6.1	\$ 10.9	\$ 7.3	\$ 1.1	\$ 1.4
Interest cost	31.0	15.5	30.7	16.0	1.0	.8
Expected return on plan assets	(44.5)	(16.5)	(44.9)	(17.0)	—	—
Prior service cost amortization	.6	.1	.6	.2	—	—
Actuarial loss amortization	19.7	3.8	16.0	8.2	.7	1.0
Special termination benefits	4.6	2.2	—	—	—	—
Other	—	.7	—	.5	—	—
Net periodic benefit cost	\$ 22.6	\$ 11.9	\$ 13.3	\$ 15.2	\$ 2.8	\$ 3.2

	Pension Benefits				Other Benefits	
	2012		2011		2012	2011
	U.S.	International	U.S.	International		
Six Months Ended 31 March						
Service cost	\$ 22.5	\$ 12.1	\$ 21.8	\$ 14.5	\$ 2.2	\$ 2.8
Interest cost	62.1	31.2	61.5	31.7	2.0	1.6
Expected return on plan assets	(89.0)	(33.3)	(89.8)	(33.6)	—	—
Prior service cost amortization	1.3	.2	1.2	.4	—	—
Actuarial loss amortization	39.3	7.7	32.0	15.6	1.4	2.0
Special termination benefits	4.6	2.2	—	—	—	—
Other	—	1.3	—	.9	—	—
Net periodic benefit cost	\$ 40.8	\$ 21.4	\$ 26.7	\$ 29.5	\$ 5.6	\$ 6.4

[Table of Contents](#)

Special termination benefits for the three and six months ended 31 March 2012 are related to the cost reduction plan initiated in the second quarter. For additional information regarding this plan, see Note 4, Cost Reduction Plan.

For the six months ended 31 March 2012 and 2011, our cash contributions to funded plans and benefit payments under unfunded plans were \$23.4 and \$221.4, respectively. Total contributions for fiscal 2012 are expected to be approximately \$40 to \$60. During fiscal 2011, total contributions were \$241.

12. COMMITMENTS AND CONTINGENCIES

Litigation

We are involved in various legal proceedings, including competition, environmental, health, safety, product liability, and insurance matters. In September 2010, the Brazilian Administrative Council for Economic Defense (CADE) issued a decision against our Brazilian subsidiary, Air Products Brasil Ltda., and several other Brazilian industrial gas companies for alleged anticompetitive activities. CADE imposed a civil fine of R\$179.2 million (approximately \$98 at 31 March 2012) on Air Products Brasil Ltda. This fine was based on a recommendation by a unit of the Brazilian Ministry of Justice whose investigation began in 2003 alleging violation of competition laws with respect to the sale of industrial and medical gases. The fines are based on a percentage of our total revenue in Brazil in 2003.

We have denied the allegations made by the authorities and filed an appeal in October 2010 with the Brazilian courts. Certain of our defenses, if successful, could result in the matter being dismissed with no fine against us. We, with advice of our outside legal counsel, have assessed the status of this matter and have concluded that although an adverse final judgment after exhausting all appeals is reasonably possible, such a judgment is not probable. As a result, no provision has been made in the consolidated financial statements. We estimate the maximum possible loss to be the full amount of the fine of R\$179.2 million (approximately \$98 at 31 March 2012) plus interest accrued thereon until final disposition of the proceedings.

We are required to provide security for the payment of the fine (and interest) in order to suspend execution of the judgment during the appeal process, during which time interest will accrue on the fine. The security is only collectible by the court in the event we are not successful in our appeal and do not timely pay the fine. The security could be in the form of a bank guarantee or in other forms which the courts deem acceptable. The form of security to be provided by us has not been finally determined.

While we do not expect that any sums we may have to pay in connection with this or any other legal proceeding would have a materially adverse effect on our consolidated financial position or net cash flows, a future charge for regulatory fines or damage awards could have a significant impact on our net income in the period in which it is recorded.

Environmental

In the normal course of business, we are involved in legal proceedings under the Comprehensive Environmental Response, Compensation, and Liability Act (the federal Superfund law), similar state environmental laws, and the Resource Conservation and Recovery Act (RCRA) relating to the designation of certain sites for investigation or remediation. Presently, there are approximately 36 sites on which a final settlement has not been reached where we, along with others, have been designated a potentially responsible party by the Environmental Protection Agency or are otherwise engaged in investigation or remediation, including cleanup activity at certain of our current and former manufacturing sites. We continually monitor these sites for which we have environmental exposure.

Accruals for environmental loss contingencies are recorded when it is probable that a liability has been incurred and the amount of loss can be reasonably estimated consistent with the policy set forth in Note 1, Major Accounting Policies, to the consolidated financial statements in our 2011 Form 10-K. The consolidated balance sheets at 31 March 2012 and 30 September 2011 included an accrual of \$80.2 and \$82.3, respectively, primarily as part of other noncurrent liabilities. The environmental liabilities will be paid over a period of up to 30 years. We estimate the exposure for environmental loss contingencies to range from \$80 to a reasonably possible upper exposure of \$94 as of 31 March 2012.

Actual costs to be incurred at identified sites in future periods may vary from the estimates, given inherent uncertainties in evaluating environmental exposures. Using reasonably possible alternative assumptions of the exposure level could result in an increase to the environmental accrual. Due to the inherent uncertainties related to environmental exposures, a significant increase to the reasonably possible upper exposure level could occur if a new site is designated, the scope of remediation is increased, a different remediation alternative is identified, or a significant increase in our proportionate share occurs. We do not expect that any sum we may have to pay in connection with environmental matters in excess of the amounts recorded or disclosed above would have a material adverse impact on our financial position or results of operations in any one year.

[Table of Contents](#)

PACE

At 31 March 2012, \$34.6 of the environmental accrual was related to the Pace facility.

In 2006, we sold our Amines business, which included operations at Pace, Florida and recognized a liability for retained environmental obligations associated with remediation activities at Pace. We are required by the Florida Department of Environmental Protection (FDEP) and the United States Environmental Protection Agency (USEPA) to continue our remediation efforts. We estimated that it would take about 20 years to complete the groundwater remediation, and the costs through completion were estimated to range from \$42 to \$52. As no amount within the range was a better estimate than another, we recognized a pretax expense in fiscal 2006 of \$42.0 as a component of income from discontinued operations and recorded an environmental accrual of \$42.0 in continuing operations on the consolidated balance sheets. There has been no change to the estimated exposure range related to the Pace facility.

We have implemented many of the remedial corrective measures at the Pace, Florida facility required under 1995 Consent Orders issued by the FDEP and the USEPA. Contaminated soils have been bioremediated, and the treated soils have been secured in a lined on-site disposal cell. Several groundwater recovery systems have been installed to contain and remove contamination from groundwater. We completed an extensive assessment of the site to determine how well existing measures are working, what additional corrective measures may be needed, and whether newer remediation technologies that were not available in the 1990s might be suitable to more quickly and effectively remove groundwater contaminants. Based on assessment results, we completed a focused feasibility study that appears to have identified new and alternative approaches which should more effectively remove contaminants and achieve the targeted remediation goals. We continue to review the new approaches with the FDEP.

PIEDMONT

At 31 March 2012, \$20.7 of the environmental accrual was related to the Piedmont site.

On 30 June 2008, we sold our Elkton, Maryland and Piedmont, South Carolina production facilities and the related North American atmospheric emulsions and global pressure sensitive adhesives businesses. In connection with the sale, we recognized a liability for retained environmental obligations associated with remediation activities at the Piedmont site. This site is under active remediation for contamination caused by an insolvent prior owner. The sale of the site triggered expense recognition. Prior to the sale, remediation costs had been capitalized since they improved the property as compared to its condition when originally acquired. We are required by the South Carolina Department of Health and Environmental Control to address both contaminated soil and groundwater. Numerous areas of soil contamination have been addressed, and contaminated groundwater is being recovered and treated. We estimated that it would take until 2015 to complete source area remediation and another 15 years thereafter to complete groundwater recovery, with costs through completion estimated to be \$24. We recognized a pretax expense in 2008 of \$24.0 as a component of income from discontinued operations and recorded an environmental liability of \$24.0 in continuing operations on the consolidated balance sheets. There has been no change to the estimated exposure.

PAULSBORO

At 31 March 2012, \$8.0 of the environmental accrual was related to the Paulsboro site.

During the first quarter of 2009, management committed to a plan to sell the production facility in Paulsboro, New Jersey and recognized a \$16.0 environmental liability associated with this site. The change in the liability balance since it was established is a result of spending and changes in the estimated exposure. In December 2009, we completed the sale of this facility. We are required by the New Jersey state law to investigate and, if contaminated, remediate a site upon its sale. We estimate that it will take several years to complete the investigation/remediation efforts at this site.

Agreement to Purchase Shares in Equity Affiliate

In September 2011, we entered into an agreement to acquire 25% of the outstanding shares of Abdullah Hashim Industrial Gases & Equipment Co. Ltd. (AHG). The transaction is subject to regulatory approval and customary local closing conditions. The closing date is expected to occur in the third quarter of fiscal year 2012. AHG is a company of the privately-owned Abdullah Hashim Group, based in the Kingdom of Saudi Arabia. AHG is the largest private industrial gases company in Saudi Arabia. It is comprised of three businesses, including industrial gases, equipment and consumables and refrigerants. The transaction will be recorded as an investment in net assets of and advances to equity affiliates in the Merchant Gases segment.

13. SHARE-BASED COMPENSATION

We have various share-based compensation programs, which include stock options, deferred stock units, and restricted shares. During the six months ended 31 March 2012, we granted 1,079,860 stock options at a weighted-average exercise price of \$82.64 and an estimated fair value of \$21.43 per option. The fair value of these options was estimated using a Black Scholes option valuation model that used the following assumptions: expected volatility of 29.0%-30.4%; expected dividend yield of 2.3%; expected life in years of 7.3-9.0; and a risk-free interest rate of 1.7%-2.1%. In addition, we granted 247,063 deferred stock units at a weighted-average grant-date fair value of \$83.17 and 34,595 restricted shares at a weighted-average grant-date fair value of \$82.64. Refer to Note 18, Share-Based Compensation, in our 2011 Form 10-K for information on the valuation and accounting for these programs.

Share-based compensation cost charged against income in the three and six months ended 31 March 2012 was \$15.6 (\$9.8 after-tax) and \$27.4 (\$17.5 after-tax), respectively. Of the share-based compensation cost recognized for the six months ended 31 March 2012, \$23.6 was a component of selling and administrative expense, \$2.6 a component of cost of sales, \$.8 a component of research and development, and \$.4 a component of the cost reduction plan. Share-based compensation cost charged against income in the three and six months ended 31 March 2011 was \$11.7 (\$7.1 after-tax) and \$21.9 (\$13.5 after-tax), respectively. The amount of share-based compensation cost capitalized in 2012 and 2011 was not material.

14. EQUITY

The following is a summary of the changes in total equity for the three and six months ended 31 March:

	Three Months Ended 31 March					
	2012			2011		
	Air Products	Non- controlling Interests	Total Equity	Air Products	Non- controlling Interests	Total Equity
Balance at 31 December	\$5,909.0	\$ 148.1	\$6,057.1	\$5,810.0	\$ 167.2	\$5,977.2
Net Income	296.0	6.2	302.2	304.3	7.2	311.5
Components of Other Comprehensive Income, net of tax						
Translation adjustments	130.4	3.5	133.9	116.3	.1	116.4
Net gain (loss) on derivatives	(1.0)	(.1)	(1.1)	8.6	—	8.6
Unrealized holding gain on available-for-sale securities	—	—	—	.6	—	.6
Reclassification adjustments:						
Derivatives	2.1	—	2.1	(1.6)	—	(1.6)
Available-for-sale securities	—	—	—	(15.9)	—	(15.9)
Pension and postretirement benefits	16.0	—	16.0	17.1	—	17.1
Total Other Comprehensive Income	147.5	3.4	150.9	125.1	.1	125.2
Comprehensive Income	443.5	9.6	453.1	429.4	7.3	436.7
Dividends on common stock (per share \$.64, \$.58)	(135.3)	—	(135.3)	(122.9)	—	(122.9)
Dividends to noncontrolling interests	—	(13.0)	(13.0)	—	(.5)	(.5)
Share-based compensation expense	15.2	—	15.2	11.7	—	11.7
Purchase of treasury shares	(53.1)	—	(53.1)	(350.0)	—	(350.0)
Issuance of treasury shares for stock option and award plans	64.1	—	64.1	33.4	—	33.4
Tax benefit of stock option and award plans	21.2	—	21.2	14.5	—	14.5
Other equity transactions	(1.9)	—	(1.9)	(.9)	—	(.9)
Balance at 31 March	\$6,262.7	\$ 144.7	\$6,407.4	\$5,825.2	\$ 174.0	\$5,999.2

	Six Months Ended 31 March					
	2012			2011		
	Air Products	Non-controlling Interests	Total Equity	Air Products	Non-controlling Interests	Total Equity
Balance at 30 September	\$5,795.8	\$ 142.9	\$5,938.7	\$5,546.9	\$ 150.7	\$5,697.6
Net Income	544.1	14.4	558.5	572.9	14.5	587.4
Components of Other Comprehensive Income, net of tax						
Translation adjustments	91.4	4.3	95.7	156.4	8.0	164.4
Net gain (loss) on derivatives	(10.2)	(.2)	(10.4)	2.5	(.1)	2.4
Unrealized holding loss on available-for-sale securities	—	—	—	(4.6)	—	(4.6)
Reclassification adjustments:						
Derivatives	12.0	—	12.0	5.4	—	5.4
Available-for-sale securities	—	—	—	(16.1)	—	(16.1)
Pension and postretirement benefits	32.1	—	32.1	33.6	—	33.6
Total Other Comprehensive Income	125.3	4.1	129.4	177.2	7.9	185.1
Comprehensive Income	669.4	18.5	687.9	750.1	22.4	772.5
Dividends on common stock (per share \$1.22, \$1.07)	(257.5)	—	(257.5)	(228.2)	—	(228.2)
Dividends to noncontrolling interests	—	(13.0)	(13.0)	—	(.5)	(.5)
Share-based compensation expense	27.0	—	27.0	21.9	—	21.9
Purchase of treasury shares	(53.1)	—	(53.1)	(350.0)	—	(350.0)
Issuance of treasury shares for stock option and award plans	61.8	—	61.8	65.0	—	65.0
Tax benefits of stock option and award plans	25.4	—	25.4	27.8	—	27.8
Purchase of noncontrolling interests	(4.4)	(1.9)	(6.3)	(6.1)	—	(6.1)
Contribution from noncontrolling interests	—	—	—	—	1.4	1.4
Other equity transactions	(1.7)	(1.8)	(3.5)	(2.2)	—	(2.2)
Balance at 31 March	\$6,262.7	\$ 144.7	\$6,407.4	\$5,825.2	\$ 174.0	\$5,999.2

15. NONCONTROLLING INTERESTS

In June 2010, we entered into agreements to increase our ownership percentage from 72% to 97% of CryoService Limited (CSL), a cryogenic and specialty gases company in the U.K. At 30 September 2011, the liability to purchase the additional 25%, based on a multiple of earnings formula, was reported in payables and accrued liabilities on the consolidated balance sheet. On 30 November 2011, we remitted consideration of £33.2 million (\$52.1) to fulfill this obligation. Refer to Note 10, Fair Value Measurements, for a rollforward of the liability balance. For additional information, refer to Note 19 in our 2011 Form 10-K.

In the first quarter of 2012, we entered into an agreement to purchase the remaining 3% of CSL, increasing our ownership percentage to 100%. On 30 November 2011, we remitted consideration of £4.0 million (\$6.3) to purchase the remaining 3% of CSL.

The following table presents the effect of changes in ownership interests in subsidiaries on Air Products shareholders' equity:

	Three Months Ended 31 March		Six Months Ended 31 March	
	2012	2011	2012	2011
Net Income Attributable to Air Products	\$296.0	\$304.3	\$544.1	\$572.9
Transfers to noncontrolling interests:				
Decrease in Air Products capital in excess of par value for purchase of noncontrolling interests	—	—	(4.4)	(6.1)
Changes from net income attributable to Air Products and transfers to noncontrolling interests	\$296.0	\$304.3	\$539.7	\$566.8

16. EARNINGS PER SHARE

The following table sets forth the computation of basic and diluted earnings per share (EPS):

	Three Months Ended 31 March		Six Months Ended 31 March	
	2012	2011	2012	2011
NUMERATOR				
Income from continuing operations	\$ 279.0	\$ 285.7	\$ 504.9	\$ 533.1
Income from discontinued operations	17.0	18.6	39.2	39.8
Net Income Attributable to Air Products	\$ 296.0	\$ 304.3	\$ 544.1	\$ 572.9
DENOMINATOR (in millions)				
Weighted average number of common shares outstanding	211.1	213.8	210.7	214.0
Effect of dilutive securities				
Employee stock options	3.0	4.1	2.9	4.1
Other award plans	.9	.9	.9	.9
	3.9	5.0	3.8	5.0
Weighted average number of common shares outstanding assuming dilution	215.0	218.8	214.5	219.0
BASIC EPS ATTRIBUTABLE TO AIR PRODUCTS				
Income from continuing operations	\$ 1.32	\$ 1.34	\$ 2.39	\$ 2.49
Income from discontinued operations	.08	.08	.19	.19
Net Income Attributable to Air Products	\$ 1.40	\$ 1.42	\$ 2.58	\$ 2.68
DILUTED EPS ATTRIBUTABLE TO AIR PRODUCTS				
Income from continuing operations	\$ 1.30	\$ 1.31	\$ 2.36	\$ 2.44
Income from discontinued operations	.08	.08	.18	.18
Net Income Attributable to Air Products	\$ 1.38	\$ 1.39	\$ 2.54	\$ 2.62

Options on 2.2 million and 3.2 million shares were antidilutive and therefore excluded from the computation of diluted earnings per share for the three and six months ended 31 March 2012, respectively. Options on 2.1 million shares were antidilutive and therefore excluded from the computation of diluted earnings per share for the three and six months ended 31 March 2011.

17. INCOME TAXES

Q1 Spanish Tax Settlement

We were challenged by the Spanish tax authorities over income tax deductions taken by certain of our Spanish subsidiaries during fiscal years 2005-2011. Although we continue to believe that all positions taken were compliant with applicable laws, in November 2011 we reached a settlement with the Spanish tax authorities for €41.3 million (approximately \$56) in resolution of all tax issues under examination. Of this settlement, \$43.8 (\$.20 per share) increased our income tax expense and had a 6.7% impact in our effective tax rate for the six months ended 31 March 2012. The cash payment for the settlement was principally paid in January 2012.

Q2 Spanish Tax Ruling

As of 30 September 2011, our unrecognized tax benefits included an amount related to certain transactions of a Spanish subsidiary for years 1991 and 1992, a period before we controlled this subsidiary. In March 2009, the Spanish appeals court (Audiencia Nacional) ruled in favor of our Spanish subsidiary. The Spanish government appealed this court decision to the Spanish Supreme Court, and as a result, we did not reverse the liability accrued for these unrecognized tax benefits. On 25 January 2012, the Spanish Supreme Court released its decision affirming the decision of the Audiencia Nacional in favor of our Spanish subsidiary. As a result, in the second quarter we recorded a reduction in income tax expense of \$58.3 (\$.27 per share), including interest and penalties, and a reduction in unrecognized tax benefits. This reduction in income tax expense had a 19.8% and 8.9% impact on our effective tax rate for the three and six months ended 31 March 2012, respectively.

18. SUPPLEMENTAL INFORMATION

Debt Issuance

On 3 November 2011, we issued a \$400.0 senior fixed-rate 3.0% note that matures 3 November 2021.

Share Repurchase Program

On 15 September 2011, the Board of Directors authorized the repurchase of up to \$1,000 of our outstanding common stock. We repurchase shares pursuant to Rules 10b5-1 and 10b-18 under the Securities Exchange Act of 1934, as amended, through repurchase agreements established with several brokers. During the first six months of fiscal year 2012, we repurchased .6 million of our outstanding shares at a cost of \$53.1. At 31 March 2012, \$946.9 in share repurchase authorization remains.

19. BUSINESS SEGMENT AND GEOGRAPHIC INFORMATION

Our segments are organized based on differences in product and/or type of customer. We have four business segments consisting of Merchant Gases, Tonnage Gases, Electronics and Performance Materials, and Equipment and Energy.

Business Segment Information

	Three Months Ended 31 March		Six Months Ended 31 March	
	2012	2011	2012	2011
Sales to External Customers				
Merchant Gases	\$ 883.6	\$ 914.4	\$1,771.3	\$1,803.0
Tonnage Gases	783.5	799.2	1,593.3	1,565.2
Electronics and Performance Materials	567.0	575.9	1,102.2	1,101.9
Equipment and Energy	110.2	113.5	199.0	225.4
Segment and Consolidated Totals	\$2,344.3	\$2,403.0	\$4,665.8	\$4,695.5
Operating Income				
Merchant Gases	\$ 152.5	\$ 165.1	\$ 318.8	\$ 341.4
Tonnage Gases	125.4	120.9	236.8	236.5
Electronics and Performance Materials	85.5	91.6	163.6	160.6
Equipment and Energy	9.8	22.5	17.1	42.7
Segment Total	\$ 373.2	\$ 400.1	\$ 736.3	\$ 781.2
Cost reduction plan	(86.8)	—	(86.8)	—
Net loss on Airgas transaction	—	(5.0)	—	(48.5)
Other ^(A)	1.5	(1.3)	(7.8)	(7.7)
Consolidated Total	\$ 287.9	\$ 393.8	\$ 641.7	\$ 725.0

^(A) Includes stranded costs resulting from discontinued operations.

	31 March 2012	30 September 2011
Identifiable Assets ^(B)		
Merchant Gases	\$ 4,759.3	\$ 4,579.6
Tonnage Gases	4,793.4	4,464.3
Electronics and Performance Materials	2,634.9	2,488.9
Equipment and Energy	288.4	335.6
Segment total	\$12,476.0	\$11,868.4
Other	836.0	878.6
Discontinued operations	592.3	532.1
Consolidated Total	\$13,904.3	\$13,279.1

^(B) Identifiable assets are equal to total assets less investment in net assets of and advances to equity affiliates.

Geographic Information

	Three Months Ended 31 March		Six Months Ended 31 March	
	2012	2011	2012	2011
Sales to External Customers				
North America	\$1,117.6	\$1,194.1	\$2,215.8	\$2,320.0
Europe	626.8	645.3	1,230.0	1,277.6
Asia	547.4	498.3	1,120.7	979.7
Latin America/Other	52.5	65.3	99.3	118.2
Consolidated Total	\$2,344.3	\$2,403.0	\$4,665.8	\$4,695.5

Geographic information is based on country of origin. The Europe region operates principally in Belgium, France, Germany, the Netherlands, Poland, the U.K. and Spain. The Asia region operates principally in China, Korea, and Taiwan.

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

(Millions of dollars, except for share data)

The disclosures in this quarterly report are complementary to those made in our 2011 Form 10-K. An analysis of results for the second quarter and first six months of 2012 is provided in the Management's Discussion and Analysis to follow.

All comparisons in the discussion are to the corresponding prior year unless otherwise stated. All amounts presented are in accordance with U.S. generally accepted accounting principles (GAAP), except as noted.

Captions such as income from continuing operations attributable to Air Products, net income attributable to Air Products, and diluted earnings per share attributable to Air Products are simply referred to as "income from continuing operations," "net income," and "diluted earnings per share" throughout this Management's Discussion and Analysis, unless otherwise stated.

The discussion of second quarter and year to date results that follows includes comparisons to non-GAAP financial measures. These non-GAAP measures exclude the cost reduction plan charge, the Spanish tax settlement, and the Spanish tax ruling in 2012. For 2011, the non-GAAP measures exclude the net loss on Airgas transaction. The presentation of non-GAAP measures is intended to enhance the usefulness of financial information by providing measures that our management uses internally to evaluate our baseline performance on a comparable basis. The reconciliation of reported GAAP results to non-GAAP measures is presented on pages 37-38.

SECOND QUARTER 2012 VS. SECOND QUARTER 2011**SECOND QUARTER 2012 IN SUMMARY**

- Sales of \$2,344.3 decreased 2%, or \$58.7. Underlying sales increased 2%, primarily due to higher volumes in Tonnage Gases and higher pricing in our Merchant Gases segment. Lower natural gas prices resulted in lower energy and raw material contractual cost pass-through to customers, reducing sales by 3%.
- Operating income of \$287.9 decreased 27%, or \$105.9, and operating margin of 12.3% decreased 410 basis points (bp). On a non-GAAP basis, operating income decreased 6%, or \$24.1, and operating margin decreased 60 bp, primarily from lower volumes in our Merchant Gases segment and an unfavorable volume mix in our Equipment business.
- Income from continuing operations of \$279.0 decreased 2%, or \$6.7, and diluted earnings per share from continuing operations of \$1.30 decreased 1%, or \$.01. On a non-GAAP basis, income from continuing operations decreased 3%, or \$8.8, and diluted earnings per share from continuing operations decreased 2%, or \$.02. A summary table of changes in diluted earnings per share is presented below.
- We purchased .6 million of our outstanding shares at a cost of \$53.1 under the \$1,000 share repurchase program announced in the fourth quarter of 2011. At 31 March 2012, \$946.9 in share repurchase authorization remains.
- We increased our quarterly dividend from \$.58 to \$.64 per share. This represents the 30th consecutive year that we have increased our dividend payment.

[Table of Contents](#)
Changes in Diluted Earnings per Share Attributable to Air Products

	Three Months Ended 31 March		Increase (Decrease)
	2012	2011	
Diluted Earnings per Share			
Net Income	\$ 1.38	\$ 1.39	\$ (.01)
Income from Discontinued Operations	.08	.08	—
Income from Continuing Operations – GAAP Basis	\$ 1.30	\$ 1.31	\$ (.01)
Cost reduction plan	.28	—	.28
Q2 Spanish tax ruling	(.27)	—	(.27)
Net loss on Airgas transaction	—	.02	(.02)
Income from Continuing Operations – Non-GAAP Basis	\$ 1.31	\$ 1.33	\$ (.02)
Operating Income (after-tax)			
Underlying business			
Volume			\$ (.09)
Price/raw materials			.02
Costs			(.01)
Operating Income			(.08)
Other (after-tax)			
Income tax rate			.02
Average shares outstanding			.02
Equity affiliates' income			.01
Other			.01
Other			.06
Total Change in Diluted Earnings per Share from Continuing Operations – Non-GAAP Basis			\$ (.02)

RESULTS OF OPERATIONS
Discussion of Consolidated Results

	Three Months Ended 31 March		\$ Change	Change
	2012	2011		
Sales	\$2,344.3	\$2,403.0	\$ (58.7)	(2)%
Operating income – GAAP Basis	287.9	393.8	(105.9)	(27)%
Operating income – Non-GAAP Basis	374.7	398.8	(24.1)	(6)%
Operating margin – GAAP Basis	12.3%	16.4%	—	(410bp)
Operating margin – Non-GAAP Basis	16.0%	16.6%	—	(60bp)
Equity affiliates' income	35.5	31.7	3.8	12%

[Table of Contents](#)

Sales

	% Change from Prior Year
Underlying business	
Volume	1%
Price	1%
Currency	(1)%
Energy and raw material cost pass-through	(3)%
Total Consolidated Change	(2)%

Underlying sales increased 2% with both volumes and pricing up 1%. Volume increases in Tonnage Gases were partially offset by lower volumes in our Merchant Gases and Electronics businesses. The increase in pricing was driven by our Merchant Gases segment. Lower natural gas prices resulted in lower energy and raw material contractual cost pass-through to customers, reducing sales by 3%. Currency unfavorably impacted sales by 1%.

Operating Income

Operating income of \$287.9 decreased 27%, or \$105.9. On a non-GAAP basis, operating income of \$374.7 decreased 6%, or \$24.1. Underlying business decreased by \$24, primarily due to an unfavorable volume mix of \$23 and higher costs of \$4, partially offset by higher recovery of raw material costs in pricing of \$3. On a GAAP basis, current year operating income includes a charge of \$86.8 for the cost reduction plan and prior year operating income includes a \$5.0 net loss related to the Airgas transaction.

Equity Affiliates' Income

Income from equity affiliates of \$35.5 increased \$3.8, primarily due to higher pricing and volumes, partially offset by unfavorable currency.

Selling and Administrative Expense (S&A)

S&A expense of \$237.3 decreased \$4.7, primarily due to lower incentive compensation costs, partially offset by inflation. S&A, as a percent of sales, was 10.1% in both 2012 and 2011.

Research and Development (R&D)

R&D expense of \$29.8 increased \$1.9. R&D, as a percent of sales, increased from 1.2% to 1.3%.

Net loss on Airgas Transaction

In the second quarter of 2011, \$5.0 (\$4.4 after-tax, or \$.02 per share) in net loss was recognized related to the Airgas transaction. Refer to Note 6, Airgas Transaction, to the consolidated financial statements for additional details.

Cost Reduction Plan

During the second quarter ended 31 March 2012, we initiated a cost reduction plan. The results from continuing operations include a charge of \$86.8 (\$60.6 after-tax, or \$.28 per share) for this plan. This charge represents the ongoing actions we are taking to improve our cost structure, particularly in Europe. It includes removing the stranded costs resulting from our decision to exit the Homecare business, the reorganization of the Merchant business, and the actions we are taking to right-size our European business cost structure in light of the challenging economic outlook.

This charge includes \$80.8 for severance and other costs associated with the elimination of approximately 600 positions from our workforce. The remainder of the charge, \$6.0, is related to the write-down of certain assets. For additional information regarding these assets, see Note 10, Fair Value Measurements, to the consolidated financial statements. The planned actions are expected to be completed within the next twelve months. The charge for the cost reduction plan is excluded from segment operating profit. The charge relates to the businesses at the segment level as follows: \$77.3 in Merchant Gases, \$3.8 in Tonnage Gases, and \$5.7 in Electronics and Performance Materials.

In the fourth quarter of 2012, we expect that these severance actions, together with other related cost reductions, will generate savings that will offset the \$6 of stranded costs generated by the Homecare divestiture. By the end of 2013, we expect the cost reduction plan to provide \$60 of annual savings.

[Table of Contents](#)

Other Income, Net

Items recorded to other income arise from transactions and events not directly related to our principal income earning activities.

Other income of \$13.3 decreased \$.6, primarily due to net gains on asset sales in the prior year, partially offset by favorable foreign exchange in the current year. Otherwise, no individual items were significant in comparison to the prior year.

Interest Expense

	Three Months Ended 31 March	
	2012	2011
Interest incurred	\$36.8	\$35.2
Less: capitalized interest	7.4	5.8
Interest expense	\$29.4	\$29.4

Interest incurred increased \$1.6. The increase was driven primarily by a higher average debt balance, partially offset by a lower average interest rate on the debt portfolio. The change in capitalized interest is driven by an increase in project spending which qualified for capitalization.

Effective Tax Rate

The effective tax rate equals the income tax provision divided by income from continuing operations before taxes. On a GAAP basis, the effective tax rate was 3.0% and 26.1% in the second quarter of 2012 and 2011, respectively. The current quarter effective tax rate includes reductions in income tax expense of \$58.3 related to the second quarter Spanish tax ruling and \$26.2 related to the cost reduction plan. Refer to Note 17, Income Taxes, and Note 4, Cost Reduction Plan, to the consolidated financial statements for details on these transactions. On a non-GAAP basis, the effective tax rate was 24.5% and 25.9% in the second quarter of 2012 and 2011, respectively. The decrease in the effective tax rate was primarily due to the geographic mix and amount of taxable income.

Discontinued Operations

In January 2012, the Board of Directors authorized the sale of our Homecare business, which had previously been reported as part of the Merchant Gases operating segment.

On 8 January 2012, we reached agreements for The Linde Group to purchase our Homecare business in Belgium, Germany, France, Portugal, and Spain. This business represents approximately 80% of our total Homecare business revenues. We expect to sell the remaining portion of Homecare, which is primarily in the United Kingdom, within the next year.

The transaction with Linde received regulatory approval on 18 April 2012 and is expected to close on 30 April 2012. Total sale proceeds of €590 million (approximately \$785) will be received in cash at closing. We anticipate an after-tax gain in the range of €105-€130 million (approximately \$140-\$170) on the sale of this business in the third quarter of fiscal year 2012.

The Homecare business is being accounted for as discontinued operations. The results of operations and cash flows of this business have been removed from the results of continuing operations for all periods presented. Refer to Note 3, Discontinued Operations, to the consolidated financial statements for further details.

Net Income

Net income was \$296.0 compared to \$304.3 and diluted earnings per share was \$1.38 compared to \$1.39. On a non-GAAP basis, net income was \$298.3 compared to \$308.7 and diluted earnings per share was \$1.39 compared to \$1.41. A summary table of changes in earnings per share is presented on page 26.

[Table of Contents](#)**Segment Analysis****Merchant Gases**

	Three Months Ended 31 March		\$ Change	Change
	2012	2011		
Sales	\$883.6	\$914.4	\$(30.8)	(3)%
Operating income	152.5	165.1	(12.6)	(8)%
Operating margin	17.3%	18.1%	—	(80bp)
Equity affiliates' income	31.2	29.1	2.1	7%

Merchant Gases Sales

	% Change from Prior Year
Underlying business	
Volume	(3)%
Price	2%
Currency	(2)%
Total Merchant Gases Sales Change	(3)%

Underlying sales decreased 1% as the impact of lower volumes of 3% was partially offset by higher pricing of 2%. Currency unfavorably impacted sales 2%.

In the U.S./Canada, sales were flat, with price up 2% and volumes down 2%. Pricing increased due to improvement across most product lines as we took actions to recover higher costs. Volumes declined due to weakness in medical, electronics, and liquid hydrogen demand. In Europe, sales decreased 5%, with an unfavorable currency impact of 4% and volumes down 2%, partially offset by higher price of 1%. Volumes were down primarily due to weaker end market demand. Pricing was higher in both liquid/bulk and packaged gases. In Asia, sales increased 1%, with increased pricing of 1% and a favorable currency impact of 1%, partially offset by lower volumes of 1%.

Merchant Gases Operating Income and Margin

Operating income was lower primarily due to lower volumes of \$16 and an unfavorable currency impact of \$2, partially offset by higher recovery of raw material costs in pricing of \$7. The decrease in volumes was across most businesses. Operating margin decreased 80 bp from prior year, primarily due to lower volumes.

Merchant Gases Equity Affiliates' Income

Merchant Gases equity affiliates' income increased primarily as a result of improved performance in our Mexican equity affiliate.

Tonnage Gases

	Three Months Ended 31 March		\$ Change	Change
	2012	2011		
Sales	\$783.5	\$799.2	\$(15.7)	(2)%
Operating income	125.4	120.9	4.5	4%
Operating margin	16.0%	15.1%	—	90bp

[Table of Contents](#)**Tonnage Gases Sales**

	% Change from Prior Year
Underlying business	
Volume	7%
Energy and raw material cost pass-through	(8)%
Currency	(1)%
Total Tonnage Gases Sales Change	(2)%

Sales decreased 2%, or \$15.7. Volumes increased 7% from existing customer loadings and new projects. Lower energy and raw material contractual cost pass-through to customers decreased sales by 8% and currency unfavorably impacted sales by 1%.

Tonnage Gases Operating Income and Margin

Operating income was higher by 4% due to higher volumes of \$8, partially offset by higher operating costs of \$3 and an unfavorable currency impact of \$1. Operating margin increased 90 bp from prior year, primarily due to lower energy and raw material contractual pass-through.

Electronics and Performance Materials

	Three Months Ended 31 March		\$ Change	Change
	2012	2011		
Sales	\$567.0	\$575.9	\$(8.9)	(2)%
Operating income	85.5	91.6	(6.1)	(7)%
Operating margin	15.1%	15.9%	—	(80bp)

Electronics and Performance Materials Sales

	% Change from Prior Year
Underlying business	
Volume	(2)%
Price	— %
Currency	— %
Total Electronics and Performance Materials Sales Change	(2)%

Sales decreased due to lower volumes and business mix of 2%, primarily driven by weaker electronics demand. Electronics sales decreased 4%, reflecting lower end market demand. Performance Materials sales increased 2%, due to higher volumes and price.

Electronics and Performance Materials Operating Income and Margin

Operating income decreased due to lower recovery of raw material costs in pricing of \$4, lower volumes of \$3, and unfavorable currency of \$1, partially offset by lower operating costs of \$2. Operating margin decreased 80 bp primarily due to lower volumes and higher raw material costs in Electronics.

Equipment and Energy

	Three Months Ended 31 March		\$ Change	Change
	2012	2011		
Sales	\$110.2	\$113.5	\$ (3.3)	(3)%
Operating income	9.8	22.5	(12.7)	(56)%

Equipment and Energy Sales and Operating Income

Sales of \$110.2 and operating income of \$9.8 decreased due to lower LNG heat exchanger activity.

The sales backlog for the Equipment business at 31 March 2012 was \$312, compared to \$334 at 30 September 2011.

Other

Other operating income (loss) primarily includes other expense and income that cannot be directly associated with the business segments, including foreign exchange gains and losses. Also included are LIFO inventory adjustments, as the business segments use FIFO and the LIFO pool adjustments are not allocated to the business segments. Corporate general and administrative costs and research and development costs are fully allocated to the business segments. Other also included stranded costs resulting from discontinued operations, as these costs were not reallocated to the businesses.

Other operating income was \$1.5 versus a loss of \$1.3 in the prior year. The increase was due to favorable foreign exchange partially offset by gains on asset sales in the prior year. Otherwise, no individual items were significant in comparison to the prior year.

FIRST SIX MONTHS 2012 VS. FIRST SIX MONTHS 2011

FIRST SIX MONTHS 2012 IN SUMMARY

- Sales of \$4,665.8 decreased 1%, or \$29.7. Underlying sales increased 1%, primarily due to higher pricing in the Merchant Gases and Electronics and Performance Materials segments. Overall volumes were flat as higher volumes from new plants in Tonnage Gases were offset by lower volumes in our Merchant Gases, Electronics and Performance Materials, and Equipment and Energy segments.
- Operating income of \$641.7 decreased 11%, or \$83.3, and operating margin of 13.8% decreased 160 bp. On a non-GAAP basis, operating income decreased 6%, or \$45.0 and operating margin decreased 90 bp, primarily from lower Merchant Gases and Equipment volumes and unfavorable mix due to lower LNG plant sales.
- Income from continuing operations of \$504.9 decreased 5%, or \$28.2, and diluted earnings per share from continuing operations of \$2.36 decreased 3%, or \$.08. On a non-GAAP basis, income from continuing operations decreased 2%, or \$13.7, and diluted earnings per share from continuing operations decreased \$.01. A summary table of changes in diluted earnings per share is presented below.
- We purchased .6 million of our outstanding shares at a cost of \$53.1 under the \$1,000 share repurchase program announced in the fourth quarter of 2011. At 31 March 2012, \$946.9 in share repurchase authorization remains.
- We increased our quarterly dividend from \$.58 to \$.64 per share. This represents the 30th consecutive year that we have increased our dividend payment.

[Table of Contents](#)
Changes in Diluted Earnings per Share Attributable to Air Products

	Six Months Ended 31 March		Increase (Decrease)
	2012	2011	
Diluted Earnings per Share			
Net Income	\$2.54	\$2.62	\$(.08)
Income from Discontinued Operations	.18	.18	—
Income from Continuing Operations – GAAP Basis	\$2.36	\$2.44	\$(.08)
Cost reduction plan	.28	—	.28
Q1 Spanish tax settlement	.20	—	.20
Q2 Spanish tax ruling	(.27)	—	(.27)
Net loss on Airgas transaction	—	.14	(.14)
Income from Continuing Operations – Non-GAAP Basis	\$2.57	\$2.58	\$(.01)
Operating Income (after-tax)			
Underlying business			
Volume			(.15)
Price/raw materials			.02
Costs			(.01)
Currency			(.02)
Operating Income			(.16)
Other (after-tax)			
Equity affiliates' income			.05
Interest expense			.01
Income tax rate			.04
Average shares outstanding			.05
Other			.15
Total Change in Diluted Earnings per Share from Continuing Operations – Non-GAAP Basis			\$(.01)

RESULTS OF OPERATIONS
Discussion of Consolidated Results

	Six Months Ended 31 March		\$ Change	Change
	2012	2011		
Sales	\$4,665.8	\$4,695.5	\$(29.7)	(1)%
Operating income – GAAP Basis	641.7	725.0	(83.3)	(11)%
Operating income – Non-GAAP Basis	728.5	773.5	(45.0)	(6)%
Operating margin – GAAP Basis	13.8%	15.4%	—	(160bp)
Operating margin – Non-GAAP Basis	15.6%	16.5%	—	(90bp)
Equity affiliates' income	72.6	59.5	13.1	22%

[Table of Contents](#)

Sales

	% Change from Prior Year
Underlying business	
Volume	— %
Price	1%
Currency	(1)%
Energy and raw material cost pass-through	(1)%
Total Consolidated Change	(1)%

Underlying business increased 1%, primarily due to higher pricing of 1% driven by the Merchant Gases and Electronics and Performance Materials segments. Volumes were flat as higher volumes in Tonnage Gases were offset by lower volumes in the Merchant Gases, Electronics and Performance Materials, and Equipment and Energy segments. Currency and energy and raw material contractual cost pass-through to customers both decreased sales by 1%.

Operating Income

Operating income of \$641.7 decreased 11%, or \$83.3. On a non-GAAP basis, operating income of \$728.5 decreased 6%, or \$45.0. Underlying business decreased by \$39, primarily due to unfavorable volume mix of \$39 and higher costs of \$3, partially offset by lower recovery of raw material costs in pricing of \$3. The decrease in volumes was from lower Merchant Gases and Equipment volumes and unfavorable mix due to lower LNG plant sales. Unfavorable currency translation and foreign exchange impacts decreased operating income by \$6. On a GAAP basis, current year operating income includes a charge of \$86.8 for the cost reduction plan and prior year operating income includes a \$48.5 net loss related to the Airgas transaction.

Equity Affiliates' Income

Income from equity affiliates of \$72.6 increased \$13.1, primarily due to a prior year charge for the anticipated sale of a plant in one of our affiliates in Asia.

Selling and Administrative Expense (S&A)

S&A expense of \$468.4 decreased \$.1 due to lower incentive compensation costs, primarily offset by inflation. S&A, as a percent of sales, was 10.0% for both 2012 and 2011.

Research and Development (R&D)

R&D expense of \$57.8 increased \$.7. R&D, as a percent of sales, remained flat at 1.2%.

Cost Reduction Plan

During the second quarter ended 31 March 2012, we initiated a cost reduction plan. The results from continuing operations include a charge of \$86.8 (\$60.6 after-tax, or \$.28 per share) for this plan. This charge represents the ongoing actions we are taking to improve our cost structure, particularly in Europe. It includes removing the stranded costs resulting from our decision to exit the Homecare business, the reorganization of the Merchant business and the actions we are taking to right-size our European business cost structure in light of the challenging economic outlook.

This charge includes \$80.8 for severance and other costs associated with the elimination of approximately 600 positions from our workforce. The remainder of the charge, \$6.0, is related to the write-down of certain assets. For additional information regarding these assets, see Note 10, Fair Value Measurements, to the consolidated financial statements. The planned actions are expected to be completed within the next twelve months. The charge for the cost reduction plan is excluded from segment operating profit. The charge relates to the businesses at the segment level as follows: \$77.3 in Merchant Gases, \$3.8 in Tonnage Gases, and \$5.7 in Electronics and Performance Materials.

In the fourth quarter of 2012, we expect that these severance actions, together with other related cost reductions, will generate savings that will offset the \$6 of stranded costs generated by the Homecare divestiture. By the end of 2013, we expect the cost reduction plan to provide \$60 of annual savings.

Net Loss on Airgas Transaction

For the six months ended 31 March 2011, \$48.5 (\$31.6 after-tax, or \$.14 per share) in net loss was recognized related to the Airgas transaction. Refer to Note 6, Airgas Transaction, to the consolidated financial statements for additional details.

[Table of Contents](#)

Other Income, Net

Items recorded to other income arise from transactions and events not directly related to our principal income earning activities.

Other income of \$27.0 increased \$5.6, primarily due to an increase in net gains on asset sales. Otherwise, no individual items were significant in comparison to the prior year.

Interest Expense

	Six Months Ended 31 March	
	2012	2011
Interest incurred	\$74.1	\$69.9
Less: capitalized interest	15.3	9.5
Interest expense	\$58.8	\$60.4

Interest incurred increased \$4.2. The increase was driven primarily by a higher average debt balance, partially offset by a lower average interest rate on the debt portfolio. The change in capitalized interest was driven by an increase in project spending which qualified for capitalization.

Effective Tax Rate

The effective tax rate equals the income tax provision divided by income from continuing operations before taxes. On a GAAP basis, the effective tax rate was 20.8% and 24.4% in 2012 and 2011, respectively. The current year rate includes reductions in income tax expense of \$58.3 related to the second quarter Spanish tax ruling and \$26.2 related to the cost reduction plan, offset by an increase to income tax expense of \$43.8 related to the first quarter Spanish tax settlement. Refer to Note 17, Income Taxes, and Note 4, Cost Reduction Plan, to the consolidated financial statements for details on these transactions. On a non-GAAP basis, the effective tax rate was 23.8% and 25.0% in 2012 and 2011, respectively. The decrease in the effective tax rate was primarily due to the geographic mix and amount of taxable income.

Discontinued Operations

In January 2012, the Board of Directors authorized the sale of our Homecare business, which had previously been reported as part of the Merchant Gases operating segment.

On 8 January 2012, we reached agreements for The Linde Group to purchase our Homecare business in Belgium, Germany, France, Portugal, and Spain. This business represents approximately 80% of our total Homecare business revenues. We expect to sell the remaining portion of Homecare, which is primarily in the United Kingdom, within the next year.

The transaction with Linde received regulatory approval on 18 April 2012 and is expected to close on 30 April 2012. Total sale proceeds of €590 million (approximately \$785) will be received in cash at closing. We anticipate an after-tax gain in the range of €105-€130 million (approximately \$140-\$170) on the sale of this business in the third quarter of fiscal year 2012.

The Homecare business is being accounted for as discontinued operations. The results of operations and cash flows of this business have been removed from the results of continuing operations for all periods presented. Refer to Note 3, Discontinued Operations, to the consolidated financial statements for further details.

Net Income

Net income was \$544.1 compared to \$572.9 and diluted earnings per share was \$2.54 compared to \$2.62. On a non-GAAP basis, net income was \$590.2 compared to \$604.5 and diluted earnings per share was \$2.75 compared to \$2.76. A summary table of changes in earnings per share is presented on page 32.

[Table of Contents](#)**Segment Analysis****Merchant Gases**

	Six Months Ended 31 March		\$ Change	Change
	2012	2011		
Sales	\$1,771.3	\$1,803.0	\$(31.7)	(2)%
Operating income	318.8	341.4	(22.6)	(7)%
Operating margin	18.0%	18.9%	—	(90bp)
Equity affiliates' income	63.3	57.9	5.4	9%

Merchant Gases Sales

	% Change from Prior Year
Underlying business	
Volume	(3)%
Price	2%
Currency	(1)%
Total Merchant Gases Sales Change	(2)%

Underlying sales decreased 1% due to lower volumes of 3% and higher pricing of 2%. Volumes decreased due to lower demand in North America and Europe. Currency had an unfavorable impact on sales of 1%.

In the U.S./Canada, sales increased 1%, with price up 2% and volumes down 1%. The increase in pricing was across most product lines as we took actions to recover higher costs. In Europe, sales decreased 4%, with unfavorable currency impacts of 3% and volumes down 3%, partially offset by higher price of 2%. Volumes were down primarily due to overall economic weakness in the region. In Asia, sales increased 2%, due to a favorable currency impact of 2%. Volume and price together were flat.

Merchant Gases Operating Income and Margin

Operating income decreased 7% primarily due to lower volumes of \$27, unfavorable currency of \$3, and higher operating costs of \$3, partially offset by higher recovery of raw material costs in pricing of \$10. Operating margin decreased 90 bp from prior year, primarily due to lower volumes.

Merchant Gases Equity Affiliates' Income

Merchant Gases equity affiliates' income of \$63.3 increased \$5.4, primarily as a result of improved performance in our Mexican equity affiliate.

Tonnage Gases

	Six Months Ended 31 March		\$ Change	Change
	2012	2011		
Sales	\$1,593.3	\$1,565.2	\$28.1	2%
Operating income	236.8	236.5	.3	— %
Operating margin	14.9%	15.1%	—	(20bp)

[Table of Contents](#)

Tonnage Gases Sales

	% Change from Prior Year
Underlying business	
Volume	7%
Currency	(1)%
Energy and raw material cost pass-through	(4)%
Total Tonnage Gases Sales Change	2%

Volumes increased 7% driven by improvement in existing customer loadings and new plants. Lower natural gas prices resulted in lower energy and raw material contractual cost pass-through to customers, decreasing sales by 4%. Currency unfavorably impacted sales 1%.

Tonnage Gases Operating Income and Margin

Operating income was flat as higher volumes of \$14 were offset by higher costs of \$10 and unfavorable currency of \$4. Operating margin decreased 20 bp from prior year, primarily due to higher maintenance costs.

Electronics and Performance Materials

	Six Months Ended 31 March		\$ Change	Change
	2012	2011		
Sales	\$1,102.2	\$1,101.9	\$.3	— %
Operating income	163.6	160.6	3.0	2%
Operating margin	14.8%	14.6%	—	20bp

Electronics and Performance Materials Sales

	% Change from Prior Year
Underlying business	
Volume	(1)%
Price	1%
Currency	— %
Total Electronics and Performance Materials Sales Change	— %

Sales were flat as higher pricing of 1% was offset by lower volumes and business mix of 1%. Electronics sales were flat due to business mix. Performance Materials sales were flat as higher pricing of 2% was offset by lower volumes of 2%.

Electronics and Performance Materials Operating Income and Margin

Operating income increased 2% primarily from lower operating costs of \$15, partially offset by lower recovery of raw material costs in pricing of \$6, unfavorable currency of \$4, and lower volumes of \$2. Operating margin increased 20 bp primarily due to better cost performance.

Equipment and Energy

	Six Months Ended 31 March		\$ Change	Change
	2012	2011		
Sales	\$199.0	\$225.4	\$(26.4)	(12)%
Operating income	17.1	42.7	(25.6)	(60)%

Equipment and Energy Sales and Operating Income

Sales of \$199.0 and operating income of \$17.1 decreased reflecting lower LNG project activity.

The sales backlog for the Equipment business at 31 March 2012 was \$312, compared to \$334 at 30 September 2011.

[Table of Contents](#)

Other

Other operating income (loss) primarily includes other expense and income that cannot be directly associated with the business segments, including foreign exchange gains and losses. Also included are LIFO inventory adjustments, as the business segments use FIFO and the LIFO pool adjustments are not allocated to the business segments. Corporate general and administrative costs and research and development costs are fully allocated to the business segments. Other also included stranded costs resulting from discontinued operations, as these costs were not reallocated to the businesses.

Other operating loss was \$7.8 compared to \$7.7 in the prior year. No individual items were significant in comparison to the prior year.

RECONCILIATION OF NON-GAAP FINANCIAL MEASURES

The presentation of non-GAAP measures is intended to enhance the usefulness of financial information by providing measures which our management uses internally to evaluate our baseline performance on a comparable basis. Presented below are reconciliations of the reported GAAP results to the non-GAAP measures.

CONSOLIDATED RESULTS

	Q2	Q2	Q2	Q2	YTD	YTD	YTD	YTD
	Continuing Operations							
	Operating Income	Operating Margin ^(c)	Income	Diluted EPS	Operating Income	Operating Margin ^(c)	Income	Diluted EPS
2012 GAAP	\$ 287.9	12.3%	\$ 279.0	\$1.30	\$641.7	13.8%	\$504.9	\$2.36
2011 GAAP	393.8	16.4%	285.7	1.31	725.0	15.4%	533.1	2.44
Change GAAP	\$(105.9)	(410bp)	\$ (6.7)	\$ (.01)	\$ (83.3)	(160bp)	\$ (28.2)	\$ (.08)
% Change GAAP	(27)%		(2)%	(1)%	(11)%		(5)%	(3)%
2012 GAAP	\$ 287.9	12.3%	\$ 279.0	\$1.30	\$641.7	13.8%	\$504.9	\$2.36
Cost reduction plan (tax impact \$26.2) ^(a)	86.8	3.7%	60.6	.28	86.8	1.8%	60.6	.28
Q1 Spanish tax settlement	—	—	—	—	—	—	43.8	.20
Q2 Spanish tax ruling	—	—	(58.3)	(.27)	—	—	(58.3)	(.27)
2012 Non-GAAP Measure	\$ 374.7	16.0%	\$ 281.3	\$1.31	\$728.5	15.6%	\$551.0	\$2.57
2011 GAAP	\$ 393.8	16.4%	\$ 285.7	\$1.31	\$725.0	15.4%	\$533.1	\$2.44
Net loss on Airgas transaction (tax impact \$.6 and \$16.9) ^(b)	5.0	.2%	4.4	.02	48.5	1.1%	31.6	.14
2011 Non-GAAP Measure	\$ 398.8	16.6%	\$ 290.1	\$1.33	\$773.5	16.5%	\$564.7	\$2.58
Change Non-GAAP Measure	\$ (24.1)	(60bp)	\$ (8.8)	\$ (.02)	\$ (45.0)	(90bp)	\$ (13.7)	\$ (.01)
% Change Non-GAAP Measure	(6)%		(3)%	(2)%	(6)%		(2)%	— %

CONSOLIDATED RESULTS

	Q2	Q2	YTD	YTD
	Net	Diluted	Net	Diluted
	Income	EPS	Income	EPS
2012 GAAP	\$296.0	\$1.38	\$544.1	\$2.54
2011 GAAP	304.3	1.39	572.9	2.62
Change GAAP	\$ (8.3)	\$ (.01)	\$ (28.8)	\$ (.08)
% Change GAAP	(3)%	(1)%	(5)%	(3)%
2012 GAAP	\$296.0	\$1.38	\$544.1	\$2.54
Cost reduction plan (tax impact \$26.2) ^(a)	60.6	.28	60.6	.28
Q1 Spanish tax settlement	—	—	43.8	.20
Q2 Spanish tax ruling	(58.3)	(.27)	(58.3)	(.27)
2012 Non-GAAP Measure	\$298.3	\$1.39	\$590.2	\$2.75
2011 GAAP	\$304.3	\$1.39	\$572.9	\$2.62
Net loss on Airgas transaction (tax impact \$.6 and \$16.9) ^(b)	4.4	.02	31.6	.14
2011 Non-GAAP Measure	\$308.7	\$1.41	\$604.5	\$2.76
Change Non-GAAP Measure	\$ (10.4)	\$ (.02)	\$ (14.3)	\$ (.01)
% Change Non-GAAP Measure	(3)%	(1)%	(2)%	— %

	Effective Tax Rate			
	Q2	Q2	YTD	YTD
	2012	2011	2012	2011
Income Tax Provision — GAAP	\$ 8.8	\$103.2	\$136.2	\$176.5
Income from continuing operations before taxes — GAAP	\$294.0	\$396.1	\$655.5	\$724.1
Effective Tax Rate — GAAP	3.0%	26.1%	20.8%	24.4%
Income Tax Provision — GAAP	\$ 8.8	\$103.2	\$136.2	\$176.5
Cost reduction plan tax impact	26.2	—	26.2	—
Q1 Spanish tax settlement	—	—	(43.8)	—
Q2 Spanish tax ruling	58.3	—	58.3	—
Net loss on Airgas transaction tax impact	—	.6	—	16.9
Income Tax Provision — Non-GAAP Measure	\$ 93.3	\$103.8	\$176.9	\$193.4
Income from continuing operations before taxes — GAAP	\$294.0	\$396.1	\$655.5	\$724.1
Cost reduction plan	86.8	—	86.8	—
Net loss on Airgas transaction	—	5.0	—	48.5
Income from continuing operations before taxes — Non-GAAP Measure	\$380.8	\$401.1	\$742.3	\$772.6
Effective Tax Rate — Non-GAAP Measure	24.5%	25.9%	23.8%	25.0%

(a) Based on average statutory tax rate of 30.17%.

(b) Based on statutory tax rate of 36.57%, including impact of tax rate adjustment for 2010 and first quarter 2011 costs.

(c) Operating Margin is calculated by dividing operating income by sales.

PENSION BENEFITS

Refer to Note 11, Retirement Benefits, to the consolidated financial statements for details on pension cost and cash contributions. For additional information on our pension benefits and associated accounting policies, refer to the Pension Benefits section of Management's Discussion and Analysis and Note 15, Retirement Benefits, to the consolidated financial statements in our 2011 Form 10-K.

LIQUIDITY AND CAPITAL RESOURCES

We have maintained a strong financial position through the first six months of 2012. We continue to have consistent access to commercial paper markets and cash flow from operations and financing activities are expected to meet liquidity needs for the foreseeable future.

As of 31 March 2012, we had \$304.8 of foreign cash and cash items compared to a total amount of cash and cash items of continuing operations of \$319.5. If the foreign cash and cash items are needed for operations in the U.S. or we otherwise elect to repatriate the funds, we may be required to accrue and pay U.S. taxes on a significant portion of these amounts. However, since we have significant current investment plans outside the U.S., it is our intent to permanently reinvest the majority of our foreign cash and cash items outside the U.S. Further, our current plans do not demonstrate a need to repatriate foreign funds in order to fund U.S. operations.

The narrative below refers to the consolidated statements of cash flows included on page 6.

Operating Activities

Net cash provided by operating activities of continuing operations increased \$124.5, or 21%. The increase resulted from the favorable impact of changes in working capital of \$146.8 and adjustments to income to reconcile to cash provided by operating activities of \$5.9, partially offset by lower income from continuing operations of \$28.2.

Changes in working capital increased cash provided by operating activities by \$146.8 and primarily included:

- A \$233.5 positive cash flow variance from payables and accrued liabilities resulting primarily from higher pension contributions in the prior year and the provision for the cost reduction plan in the current year.
- A \$61.2 positive cash flow variance from trade receivables. This increase was primarily the result of higher sales in the prior year.
- A \$147.9 net negative cash flow variance in the other working capital accounts. The decrease is primarily from a change in accrued income taxes and contracts in progress, less progress billings.

Adjustments to reconcile income to cash provided by operating activities were \$5.9 and primarily included:

- A favorable adjustment from the payment of Airgas acquisition-related costs of \$153.8, partially offset by a non-cash charge of \$48.5 for the Airgas transaction in the prior year.
- An unfavorable adjustment of \$58.3 for the tax benefit recognized as a result of the second quarter Spanish tax ruling.
- An unfavorable adjustment resulting from an increase in the undistributed earnings of equity affiliates of \$17.3 due to higher dividend payments in the prior year.

Investing Activities

Cash used for investing activities increased \$303.8 and primarily included:

- Higher capital expenditures for plant and equipment of \$142.9.
- A negative cash flow variance of \$94.7 due to proceeds received from the sale of Airgas shares in the prior year.
- A \$38.8 negative cash flow variance from lower proceeds from the sale of assets and investments.

[Table of Contents](#)

Capital expenditures are detailed in the table below:

	Six Months Ended 31 March	
	2012	2011
Additions to plant and equipment	\$734.9	\$592.0
Acquisitions, less cash acquired	26.4	—
Investment in and advances to unconsolidated affiliates	21.2	24.2
Capital expenditures on a GAAP basis	\$782.5	\$616.2
Capital lease expenditures ^(A)	76.0	116.0
Purchase of noncontrolling interests ^(A)	6.3	—
Capital expenditures on a Non-GAAP basis	\$864.8	\$732.2

^(A) We utilize a non-GAAP measure in the computation of capital expenditures and include spending associated with facilities accounted for as capital leases and purchases of noncontrolling interests. Certain contracts associated with facilities that are built to provide product to a specific customer are required to be accounted for as leases, and such spending is reflected as a use of cash within cash provided by operating activities. Additionally, the purchase of noncontrolling interests in a subsidiary is accounted for as an equity transaction and will be reflected as a financing activity in the statement of cash flows. The presentation of this non-GAAP measure is intended to enhance the usefulness of information by providing a measure which our management uses internally to evaluate and manage our expenditures.

Financing Activities

Cash used for financing activities decreased \$183.1, primarily due to a reduction in the purchase of treasury shares of \$296.9, partially offset by the payment for subsidiary shares from noncontrolling interests of \$58.4, higher dividends paid to shareholders of \$34.0, the higher payment of dividends to noncontrolling interests of \$12.6, and a net decrease in borrowings of \$10.6.

Our borrowings (short- and long-term proceeds, net of repayments) were a net increase of \$201.3 as compared to a net increase of \$211.9 during 2011. Borrowings in 2012 included a \$400.0 senior fixed-rate 3.0% note issued on 3 November 2011 and repayments included \$190.2 of net commercial paper and other short-term debt repayments. Borrowings in 2011 included \$340.9 of net commercial paper and other short-term debt issuance, and repayments included \$156.0 in maturing medium-term notes.

Total debt at 31 March 2012 and 30 September 2011, expressed as a percentage of the sum of total debt and total equity, was 42.5% and 43.4%, respectively. Total debt increased from \$4,561.5 at 30 September 2011 to \$4,739.4 at 31 March 2012.

As of 30 September 2011, a 4.25% Eurobond for \$400.3 maturing in 2012 was classified as long-term debt because of our intent and ability to refinance the debt under our \$2,170.0 committed credit facility maturing in 2015 and our intent to refinance via the U.S. or European public or private placement markets. During the first quarter of 2012, we reclassified this Eurobond from long-term debt to current portion of long-term debt on the consolidated balance sheet as we no longer intended to refinance. The Eurobond was repaid on its maturity date of 10 April 2012, principally from proceeds via the issuance of commercial paper.

During fiscal year 2011, we increased our total multicurrency revolving facility to a total of \$2,170.0 maturing on 30 June 2015. Our only financial covenant is a leverage ratio (long-term debt divided by the sum of long-term debt plus equity) of no greater than 60%. As of 31 March 2012, no borrowings were outstanding under these commitments. Additional commitments totaling \$443.3 are maintained by our foreign subsidiaries, of which \$409.7 was borrowed and outstanding at 31 March 2012.

We are in compliance with all of the financial and other covenants under our debt agreements.

On 15 September 2011, the Board of Directors authorized the repurchase of up to \$1,000 of our outstanding common stock. During the first six months of fiscal year 2012, .6 million of our outstanding shares were purchased at a cost of \$53.1. At 31 March 2012, \$946.9 in share repurchase authorization remains.

Subsequent Event – Business Combination

In February 2012, we entered into a definitive agreement with E.I. DuPont de Nemours and Co., Inc. to acquire their 50% interest in our joint venture, DuPont Air Products NanoMaterials LLC (DA NanoMaterials). The acquisition closed on 2 April 2012 for approximately \$150, subject to working capital adjustments, and was accounted for as a business combination. We will consolidate DA NanoMaterials results beginning in the third quarter of 2012 within our Electronics and Performance Materials business segment.

[Table of Contents](#)

CONTRACTUAL OBLIGATIONS

We are obligated to make future payments under various contracts such as debt agreements, lease agreements, unconditional purchase obligations, and other long-term obligations. There have been no material changes to contractual obligations as reflected in the Management's Discussion and Analysis in our 2011 Form 10-K.

COMMITMENTS AND CONTINGENCIES

Refer to Note 16, Commitments and Contingencies, to the consolidated financial statements in our 2011 Form 10-K and for current updates on Litigation and Environmental matters refer to Note 12, Commitments and Contingencies, in this quarterly filing.

OFF-BALANCE SHEET ARRANGEMENTS

There have been no material changes to off-balance sheet arrangements as reflected in the Management's Discussion and Analysis in our 2011 Form 10-K. We are not a primary beneficiary in any material variable interest entity. Our off-balance sheet arrangements are not reasonably likely to have a material impact on financial condition, changes in financial condition, and results of operations or liquidity.

RELATED PARTY TRANSACTIONS

Our principal related parties are equity affiliates operating in the industrial gas business. We did not engage in any material transactions involving related parties that included terms or other aspects that differ from those which would be negotiated at arm's length with clearly independent parties.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Management's Discussion and Analysis of our financial condition and results of operations is based on the consolidated financial statements and accompanying notes that have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Our significant accounting policies are described in Note 1, Major Accounting Policies, to the consolidated financial statements and the critical accounting policies and estimates are described in the Management's Discussion and Analysis included in our 2011 Form 10-K. Information concerning our implementation and impact of new accounting standards issued by the FASB is included in Note 2, New Accounting Guidance, to the consolidated financial statements. There have been no changes in accounting policy in the current period that had a material impact on our financial condition, change in financial condition, liquidity, or results of operations.

NEW ACCOUNTING GUIDANCE

See Note 2, New Accounting Guidance, to the consolidated financial statements for information concerning our implementation and impact of new accounting guidance.

FORWARD-LOOKING STATEMENTS

This report contains "forward-looking statements" within the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are based on management's reasonable expectations and assumptions as of the date this report is filed. Actual performance and financial results may differ materially from projections and estimates expressed in the forward-looking statements because of many factors not anticipated by management, including, without limitation, slowing of global economic recovery; renewed deterioration in global or regional economic and business conditions; weakening demand for the Company's products; future financial and operating performance of major customers and industries served by the Company; unanticipated contract terminations or customer cancellations or postponement of projects and sales; the success of commercial negotiations; asset impairments due to economic conditions or specific product or customer events; the impact of competitive products and pricing; interruption in ordinary sources of supply of raw materials; the ability to recover unanticipated increased energy and raw material costs from customers; costs and outcomes of litigation or regulatory activities; successful development and market acceptance of new products and applications; the ability to attract, hire and retain qualified personnel in all regions of the world where the Company operates; the success of productivity programs; the success and impact of restructuring and cost reduction initiatives; achieving anticipated acquisition synergies; the timing, impact, and other uncertainties of future acquisitions or divestitures; significant fluctuations in interest rates and foreign currencies from that currently anticipated; the continued availability of capital

[Table of Contents](#)

funding sources in all of the Company's foreign operations; the impact of environmental, healthcare, tax or other legislation and regulations in jurisdictions in which the Company and its affiliates operate; the impact of new or changed financial accounting guidance; the impact on the effective tax rate of changes in the mix of earnings among our U.S. and international operations; and other risk factors described in the Company's Form 10-K for its fiscal year ended 30 September 2011. The Company disclaims any obligation or undertaking to disseminate any updates or revisions to any forward-looking statements contained in this document to reflect any change in the Company's assumptions, beliefs or expectations or any change in events, conditions, or circumstances upon which any such forward-looking statements are based.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Information on our utilization of financial instruments and an analysis of the sensitivity of these instruments to selected changes in market rates and prices is included in our 2011 Form 10-K.

There were no material changes to market risk sensitivities for interest rate risk on fixed debt or foreign currency exchange rate risk since 30 September 2011.

The net financial instrument position increased from a liability of \$4,261.1 at 30 September 2011 to a liability of \$4,628.3 at 31 March 2012. The increase is primarily due to the impact of a higher book value of long-term debt (excluding exchange rate impacts).

Item 4. Controls and Procedures

We maintain a comprehensive set of disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act). As of 31 March 2012 (the Evaluation Date), an evaluation of the effectiveness of our disclosure controls and procedures was carried out under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer. Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that, as of the end of the period covered by this report these disclosure controls and procedures were effective.

During the quarter that ended on the Evaluation Date, there was no change in internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

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

On 15 September 2011, the Company's Board of Directors authorized the repurchase of an additional \$1.0 billion of common stock. This program does not have a stated expiration date. There were no purchases of stock under this program until the second quarter of fiscal year 2012. Information on stock repurchases during the second quarter appears below.

Purchases of Equity Securities by the Issuer

Period	(a) Total Number of Shares (or Units) Purchased	(b) Average Price Paid per Share(or Unit)	(c) Total Number of Shares (or Units) Purchased as Part of Publicly Announced Plans or Programs	(d) Maximum Number (or Approximate Dollar Value) of Shares (or Units) that May Yet Be Purchased Under the Plans or Programs
1/1 – 1/31/2012	0	N/A	0	\$ 1,000,000,000
2/1 – 2/29/2012	216,670	\$ 89.83	216,670	\$ 980,536,473
3/1 – 3/31/2012	378,246	\$ 88.82	378,246	\$ 946,941,136
TOTAL	594,916	\$ 89.19	594,916	\$ 946,941,136

[Table of Contents](#)

Item 6.Exhibits.

Exhibits required by Item 601 of Regulation S-K

10.1	Amendment to the Amended and Restated Long-Term Incentive Plan dated 15 March 2012.
10.2	Amendment No. 3 to the Air Products and Chemicals, Inc. Retirement Savings Plan.
10.3	Amendment No. 4 to the Air Products and Chemicals, Inc. Retirement Savings Plan.
12	Computation of Ratios of Earnings to Fixed Charges.
31.1	Certification by the Principal Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification by the Principal Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32	Certification by the Principal Executive Officer and Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. †
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema
101.CAL	XBRL Taxonomy Extension Calculation Linkbase
101.LAB	XBRL Taxonomy Extension Label Linkbase
101.PRE	XBRL Taxonomy Extension Presentation Linkbase
101.DEF	XBRL Taxonomy Extension Definition Linkbase

† The certification attached as Exhibit 32 that accompanies this Quarterly Report on Form 10-Q, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Air Products and Chemicals, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Form 10-Q, irrespective of any general incorporation language contained in such filing.

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.

Air Products and Chemicals, Inc.

(Registrant)

Date: 27 April 2012

By: _____ /s/ Paul E. Huck

Paul E. Huck
Senior Vice President and Chief Financial Officer

EXHIBIT INDEX

10.1	Amendment to the Amended and Restated Long-Term Incentive Plan dated 15 March 2012.
10.2	Amendment No. 3 to the Air Products and Chemicals, Inc. Retirement Savings Plan.
10.3	Amendment No. 4 to the Air Products and Chemicals, Inc. Retirement Savings Plan.
12	Computation of Ratios of Earnings to Fixed Charges.
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RESOLUTIONS REGARDING LONG-TERM INCENTIVE PLAN

WHEREAS, Section 15 of the Air Products and Chemicals, Inc. Long-Term Incentive Plan as amended and restated 28 January 2010 (the "Plan") authorizes the Board of Directors (the "Board") of Air Products and Chemicals, Inc. (the "Company") to amend the Plan in any respect which it deems to be in the best interests of the Company; and

WHEREAS, the Management Development and Compensation Committee of the Board has recommended to the Board that the Plan be amended to provide that, if a Participant voluntarily terminates employment with the Company or a Subsidiary, other than due to Retirement, his or her Stock Options that are exercisable as of the date the employment terminates will remain exercisable for ninety days after the date of termination, after which they will be forfeited; and

WHEREAS, capitalized terms used in these Resolutions and not otherwise defined shall have the meanings set forth in the Plan or in the applicable Award Agreement thereunder.

NOW THEREFORE, BE IT RESOLVED, that, Section 6(c)(iv)(B) of the Plan is amended to read as follows:

(B) Except as provided in clause (A) of this Section 6(c)(iv), if an employee Participant's employment with the Company or Subsidiary terminates for any reason other than for cause, any of his or her outstanding Stock Options that are not exercisable as of the date employment terminates shall be forfeited, and any of such Participant's outstanding Stock Options that are exercisable as of the date employment terminates shall remain exercisable in accordance with their terms for 90 days after the date of termination. Notwithstanding the foregoing, if the Participant's termination

was an involuntary termination due to actions necessitated by business conditions, including, without limitation, job elimination, workforce reduction, divestiture or plant closing, and the termination is not a Retirement, any of the Participant's Stock Options that are exercisable on the date of termination of employment shall remain exercisable in accordance with their terms for 180 days after the date of termination;

RESOLVED FURTHER, that the proper officers of the Company be, and they each hereby are, authorized and empowered in the name and on behalf of the Company, to make, execute, and deliver such instruments, documents, and certificates and to do and perform such other acts and things as may be necessary or appropriate to carry out the intent and accomplish the purposes of these Resolutions, including without limitation, making such additional revisions, if any, to the Plan or to the Award Agreements as may be required, in their discretion and upon advice of counsel to the Company, for compliance with applicable law.

AIR PRODUCTS AND CHEMICALS, INC.
BOARD OF DIRECTORS
15 March 2012

**AMENDMENT NO. 3 TO THE
AIR PRODUCTS AND CHEMICALS, INC.
RETIREMENT SAVINGS PLAN**

WHEREAS, Air Products and Chemicals, Inc. (the “Company”) is the Plan Sponsor of the Air Products and Chemicals, Inc. Retirement Savings Plan (the “Plan”); and

WHEREAS, pursuant to Plan Section 7.01 the Plan may be amended at anytime; and

WHEREAS, the Company entered into an Agreement to purchase from E. I. du Pont de Nemours and Company (“DuPont”/or the “Seller”), DuPont’s interest in DuPont Air Products NanoMaterials L.L.C., a Delaware limited liability company; and

WHEREAS, pursuant to the terms of the Purchase and Sale Agreement (the “Agreement”), the Company agreed to offer certain Active Employees of the Seller offers of employment and with respect to those Active Employees who accepted such offers and commenced employment with the Company (hereinafter, the “Transferred Employees”) agreed to credit service with the Seller in the Plan for purposes of eligibility, vesting and the amount of Company Core Contributions; and

WHEREAS, the Company desires to amend the Plan effective April 2, 2012 to effectuate the intent of the Agreement; and

NOW, THEREFORE, the Plan is hereby amended as follows:

1. A new Section 2.58(e) is added to the end of Section 2.58 to read as follows:

“(e) An Employee who was an employee of E. I. du Pont de Nemours and Company (“DuPont”) and who was hired by the Company in connection with the purchase of DuPont Air Products NanoMaterials L.L.C. on April 2, 2012, shall be credited with a Year of Service for each 12 consecutive month period during the period beginning on the Employee’s service date with DuPont and ending on the Employee’s Severance from Service Date.”

2. A new Section 2.59(e) shall be added to the end of Section 2.59 to read as follows:

“(e) An Employee who was an employee of DuPont and who was hired by the Company in connection with the purchase of DuPont Air Products NanoMaterials L.L.C. on April 2, 2012, shall be credited with full and partial Years of Vesting Service for the period from the Employee’s service date with DuPont to the Employee’s Severance from Service Date.”

3. A new Section 3.01(a)(iv) shall be added to the end of Section 3.01(a) to read as follows:

“(iv) An Employee who was an employee of DuPont and who was hired by the Company in connection with the purchase of DuPont Air Products NanoMaterials L.L.C. on April 2, 2012, shall be eligible to participate in the Plan as soon as administratively possible upon his becoming an Employee provided he makes an affirmative election to participate in the Plan in accordance with the procedures adopted by the Plan Administrator under subsection 3.02(a), (b), or (c) or a Deemed Election pursuant to subsection 3.02(d).”

4. In all other respects the Plan shall remain in full force and effect.

IN WITNESS WHEREOF, the Company has caused its Senior Vice President- Human Resources and Communications to execute this Third Amendment to the Plan on this _____ day of March 2012.

AIR PRODUCTS AND CHEMICALS, INC.

By: _____

Senior Vice President- Human Resources
and Communications

**AMENDMENT NO. 4 TO THE
AIR PRODUCTS AND CHEMICALS, INC.
RETIREMENT SAVINGS PLAN**

WHEREAS, Air Products and Chemicals, Inc. (the "Company") is the Plan Sponsor of the Air Products and Chemicals, Inc. Retirement Savings Plan (the "Plan"); and

WHEREAS, pursuant to Plan Section 7.01 the Plan may be amended at anytime; and

WHEREAS, the Company desires to amend the Plan to update Exhibit I to include three new eligible hourly locations.

NOW, THEREFORE, the Plan is hereby amended as follows:

1. Exhibit I is amended as attached hereto to include three new locations effective as of the following dates:
 Cartersville, Georgia – March 1, 2012;
 Long Beach, California – February 1, 2012; and
 McIntosh, Alabama – April 1, 2012.
2. In all other respects the Plan shall remain in full force and effect.

IN WITNESS WHEREOF, the Company has caused its Senior Vice President- Human Resources and Communications to execute this Fourth Amendment to the Plan on this _____day of April 2012.

AIR PRODUCTS AND CHEMICALS, INC.

By: _____
Senior Vice President- Human Resources
and Communications

EXHIBIT I
ELIGIBLE NONUNION HOURLY LOCATIONS DESIGNATED
BY VICE PRESIDENT-HUMAN RESOURCES
EFFECTIVE AS OF APRIL 10, 2012:

Designated Terminal
For 125% of Base Salary

ASHLAND, KY	YES
BETHLEHEM, PA	YES
BOUNTIFUL, UT	YES
BURNS HARBOR, IN	NO
BUTLER, IN	YES
CAMDEN, SC	YES
CARTERSVILLE, GA	YES
CHANDLER, AZ	YES
CONVENT, LA	NO
CONVENT, LA (Drivers)	YES
CONYERS, GA	YES
CREIGHTON, PA	YES
DECATUR, AL	YES
DEER PARK, TX	NO
EAGAN, MN	YES
GLENMONT, NY	YES
GRAY, TN	YES
LANCASTER, PA	YES
LANCASTER, PA (Express Services)	NO
LAPORTE, TX	YES
LASALLE, IL	YES
LIBERAL, KS	YES
LONG BEACH, CA	YES
MANALAPAN, NJ	NO
MCINTOSH, AL	YES
MIDLOTHIAN, TX	YES
MOORELAND, OK	YES
NEW MARTINSVILLE, WV	YES
NIAGARA FALLS, NY	YES
OAK CREEK, WI	YES
ORLANDO, FL	YES
PACE, FL	YES
PARKERSBURG, WV	YES
PRYOR, OK	YES
PUYALLUP, WA	YES
REIDSVILLE, NC	YES
SHAKOPEE, MN	YES
SMITHVILLE, MO	NO
SPARROWS POINT, MD (Drivers)	YES

AIR PRODUCTS AND CHEMICALS, INC., AND SUBSIDIARIES
COMPUTATION OF RATIOS OF EARNINGS TO FIXED CHARGES
(Unaudited)

(Millions of dollars)	Six Months Ended 31 March 2012	Year Ended 30 September				
		2011	2010	2009	2008	2007
Earnings:						
Income from continuing operations ⁽¹⁾	\$ 519.3	\$1,171.6	\$ 967.0	\$565.3	\$1,022.0	\$ 990.2
Add (deduct):						
Provision for income taxes	142.6	390.8	321.0	159.9	343.4	268.6
Fixed charges, excluding capitalized interest	70.1	139.4	146.3	147.8	186.7	189.1
Capitalized interest amortized during the period	4.7	9.0	8.7	7.7	6.6	6.4
Undistributed earnings of less-than-fifty-percent-owned affiliates	(30.9)	(38.9)	(29.2)	(44.2)	(72.7)	(61.2)
Earnings, as adjusted	<u>\$ 705.8</u>	<u>\$1,671.9</u>	<u>\$1,413.8</u>	<u>\$836.5</u>	<u>\$1,486.0</u>	<u>\$1,393.1</u>
Fixed Charges:						
Interest on indebtedness, including capital lease obligations	\$ 56.7	\$ 113.6	\$ 121.8	\$125.1	\$ 164.4	\$ 163.7
Capitalized interest	15.9	23.4	14.5	22.2	27.3	14.6
Amortization of debt discount premium and expense	3.5	5.6	5.6	4.7	4.0	4.1
Portion of rents under operating leases representative of the interest factor	9.9	20.2	18.9	18.0	18.3	21.3
Fixed charges	<u>\$ 86.0</u>	<u>\$ 162.8</u>	<u>\$ 160.8</u>	<u>\$170.0</u>	<u>\$ 214.0</u>	<u>\$ 203.7</u>
Ratio of Earnings to Fixed Charges ⁽²⁾:	<u>8.2</u>	<u>10.3</u>	<u>8.8</u>	<u>4.9</u>	<u>6.9</u>	<u>6.8</u>

(1) During the twelve months ended 30 September 2009, income from continuing operations included a charge of \$298.2 (\$200.3 after-tax) for the global cost reduction plan.

(2) The ratio of earnings to fixed charges is determined by dividing earnings, which includes income from continuing operations before taxes, undistributed earnings of less-than-fifty-percent-owned affiliates, and fixed charges, by fixed charges. Fixed charges consist of interest on all indebtedness plus that portion of operating lease rentals representative of the interest factor (deemed to be 21% of operating lease rentals).

PRINCIPAL EXECUTIVE OFFICER'S CERTIFICATION

I, John E. McGlade, certify that:

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

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

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

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

Date: 27 April 2012

/s/ John E. McGlade

John E. McGlade
President and Chief Executive Officer

PRINCIPAL FINANCIAL OFFICER'S CERTIFICATION

I, Paul E. Huck, certify that:

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

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

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

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

Date: 27 April 2012

/s/ Paul E. Huck

Paul E. Huck
Senior Vice President and Chief Financial Officer

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 of Air Products and Chemicals, Inc. (the "Company") on Form 10-Q for the period ending 31 March 2012, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), we, John E. McGlade, Chief Executive Officer of the Company, and Paul E. Huck, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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

Dated: 27 April 2012

/s/ John E. McGlade

John E. McGlade
Chief Executive Officer

/s/ Paul E. Huck

Paul E. Huck
Chief Financial Officer