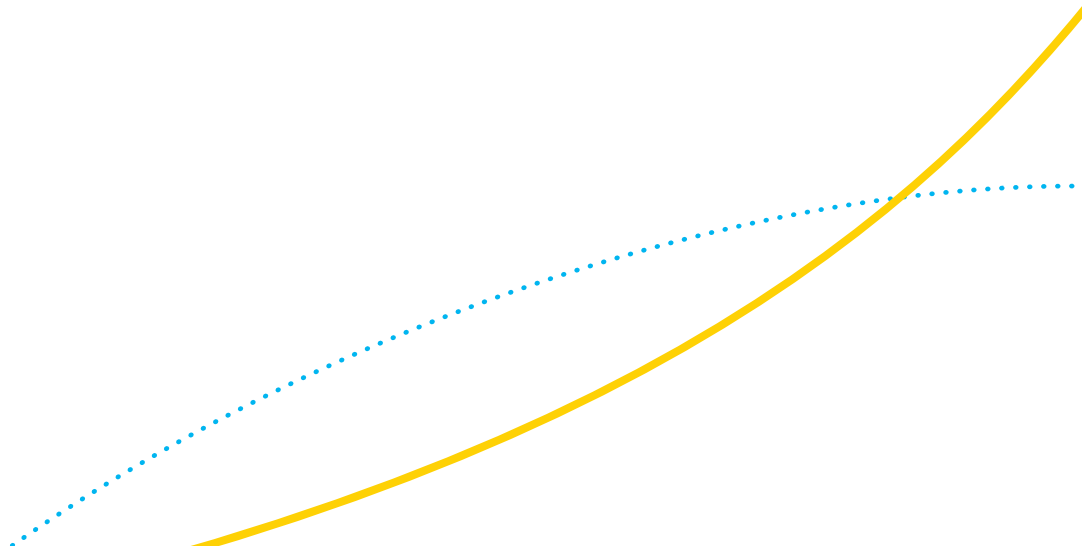
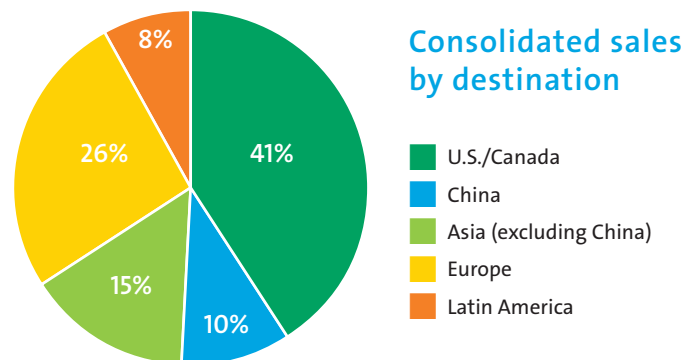
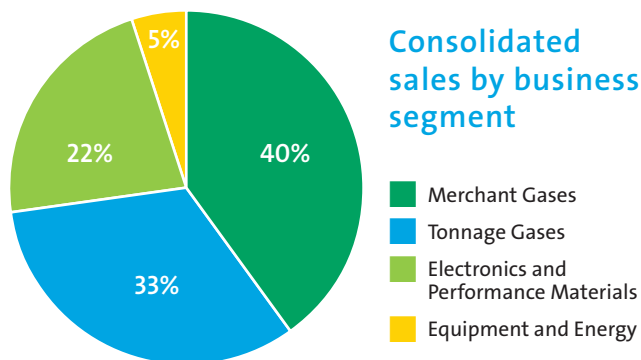




2013 ANNUAL REPORT



Financial highlights



Millions of dollars, except per share

| | 2013 | 2012 | Change |
|---|----------|---------|----------|
| FOR THE YEAR | | | |
| Sales | \$10,180 | \$9,612 | 6% |
| Operating income ^(A) | 1,566 | 1,534 | 2% |
| Net income from continuing operations attributable to Air Products ^(A) | 1,169 | 1,159 | 1% |
| Capital expenditures ^(A) | 1,997 | 2,778 | (28%) |
| Return on capital employed (ROCE) ^(A) | 10.1% | 11.5% | (140 bp) |
| Return on average Air Products shareholders' equity ^{(A) (B)} | 17.9% | 18.7% | (80 bp) |
| Operating margin ^(A) | 15.4% | 16.0% | (60 bp) |
| PER SHARE DOLLARS | | | |
| Diluted earnings ^(A) | 5.50 | 5.40 | 2% |
| Dividends | 2.77 | 2.50 | 11% |
| Book value | 33.35 | 30.48 | 9% |
| AT YEAR END | | | |
| Air Products shareholders' equity | \$ 7,042 | \$6,477 | |
| Shares outstanding (in millions) | 211 | 212 | |
| Shareholders | 7,000 | 7,500 | |
| Employees ^(C) | 21,600 | 21,300 | |

(A) Amounts are non-GAAP measures. See pages IV and V for reconciliation to GAAP results.

(B) Calculated using income from continuing operations attributable to Air Products and five-quarter average Air Products shareholders' equity.

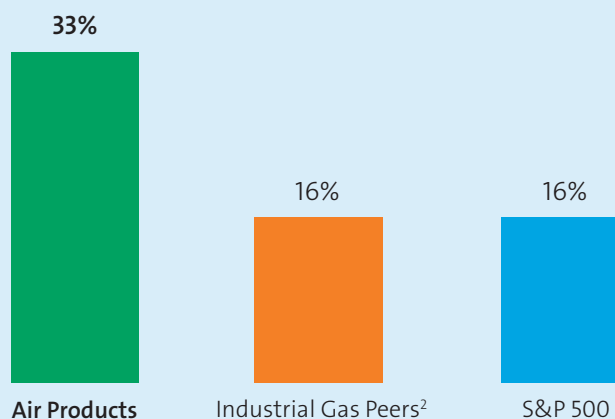
(C) Includes full- and part-time employees from continuing and discontinued operations.

On the cover



Air Products' drivers are among the safest in the industry. They make a personal commitment to go safely, "one mile at a time." Last year, they journeyed over 100 million miles serving customers around the world.

Total Shareholder Return – One Year¹



¹ Based on share price as of 9/30/2013

² Industrial gas peer average based on four key competitors

Our businesses

Merchant Gases – 2013 consolidated sales: \$4.2 billion

The Merchant Gases division supplies oxygen, nitrogen, argon, carbon dioxide, helium and hydrogen, and select medical and specialty gases to industrial and medical customers. For larger customers, Air Products' proprietary cryogenic and noncryogenic on-site gas generation devices economically meet varying purity, pressure, and flow rate requirements. Most products are delivered via bulk supply, by tanker or tube trailer, in liquid or gaseous form. For smaller volumes, Air Products offers the CryoEase® Microbulk service, where a tank is filled at the customer's site or can be supplied as packaged gases in cylinders and dewars. Air Products works closely with customers to understand their gas application needs in selecting the optimal supply solution.

Applications: glassmaking, steel, nonferrous, oil field services, pulp and paper, water systems, metal manufacturing, chemical processing, rubber and plastics, packaging, food and beverage, healthcare, research and analytical, aerospace, and electronics.



Air Products' specially designed CryoEase Microbulk trucks enable gas delivery to less accessible locations for small volume users.

Tonnage Gases, Equipment and Energy – 2013 consolidated sales: \$3.8 billion

Tonnage Gases supplies large volume or "tonnage" quantities of industrial gases, including hydrogen, synthesis gas, carbon monoxide, oxygen and nitrogen. Air Products either constructs a gas plant on-site or near a customer's facility or delivers product through a pipeline from a nearby location. Air Products has the technology, experience, and resources to design, engineer, construct, and operate a cost-effective gas supply system for specific applications. In the Equipment and Energy segment, the Company designs and manufactures cryogenic and gas processing equipment for air separation, hydrocarbon recovery and purification, and natural gas liquefaction (LNG).

Applications: petroleum refining, chemical and petrochemical manufacturing, oil and gas recovery and processing, coal gasification, iron and steel production, power generation, transportation, material handling.



An Air Products LNG heat exchanger is loaded aboard a ship for transport to a global customer. A majority of the world's LNG is produced with Air Products' technology.

Electronics and Performance Materials – 2013 consolidated sales: \$2.2 billion

Air Products' Electronics Division is a leading global supplier with over 40 years of experience, offering high-purity gases and materials, and delivery systems to power the digital world. Air Products developed a winning portfolio of high-purity, process gases (critical for core applications) and advanced materials for innovative applications. The Performance Materials Division combines and applies several areas of expertise. Knowledge in chemical synthesis, analytical technology, process engineering, and surface science offers material solutions for a broad range of industries. Expertise in surface chemistry is being put to work to develop better-performing products and eco-friendly formulations.

Applications: silicon and compound semiconductors (ICs), thin-film transistors, liquid crystal displays (TFT-LCDs), light-emitting diodes (LEDs), coatings, inks, adhesives, civil engineering, personal care, institutional and industrial cleaning, mining, oil field, and polyurethane production.



Air Products' knowledge in chemistry, materials integration, and delivery systems helps customers reach their technology and performance targets faster.

Dear Shareholder,

Fiscal 2013 was a solid year for Air Products. We focused and delivered on many of our key priorities—cost reduction, productivity improvements, disciplined project execution, and portfolio management—while at the same time navigating the economic headwinds that continue to challenge many businesses. Our volumes improved and our productivity initiatives more than offset inflation, which allowed us to reinvest in the business and return capital to our shareholders.

Delivering shareholder returns and solid results

For the year, we generated Total Shareholder Return of 33 percent—well above the S&P 500 TSR of 16 percent. We increased our quarterly dividend by 11 percent, proudly marking the 31st consecutive year of dividend increases. We also repurchased 5.7 million of our shares outstanding during the year. Combining dividends and share buybacks, Air Products returned over \$1 billion to shareholders in 2013.

We also increased revenues by six percent, with underlying volumes up one percent. Operating income and earnings per share grew two percent. The management team remained focused on what we could control and on making structural improvements and taking portfolio actions that position Air Products well for long-term earnings growth as the economy rebounds.

Executing on our robust backlog

We continued to win profitable new business and are proud to have built a best-in-class investment backlog of \$3.5 billion, which will continue to support our growth long into the future. Implementation of these projects remains second to none, and we continue to execute against safety, on time, on budget, and at returns that are well above our cost of capital.

In 2013, we brought onstream more than a dozen major new projects, including hydrogen plants and air separation plants in the United States, Europe, and China. These investments are backed by long-term, take-or-pay contracts that will drive consistent cash flow and earnings growth in the future. And we successfully integrated the Indura acquisition in South America, strengthening our position in this attractive market.

Notable developments that illustrate our innovation include:

- **Second-largest ASU on-site order ever awarded to Air Products:** In February, we announced that we will supply Shanxi Lu'An Mining's coal gasification facility in Shanxi Province, China. We will build, own, and operate four ASUs producing oxygen, nitrogen, compressed air, and steam. We are excited about the growth prospects in the coal gasification market.
- **Expanding in India:** Our proven on-site model will be seen in India for the first time, as we announced that we will build, own, and operate our first hydrogen and steam production facility for Bharat Petroleum.
- **Liquefaction technology:** In April, we announced an order in North America for our liquefaction technology, for Dominion's Cove Point liquefied natural gas (LNG) import facility in Lusby, Maryland. We have shipped more than 100 LNG heat exchangers worldwide, utilizing our proprietary LNG process technology and equipment.
- **Tees Valley in the United Kingdom:** Our spirit of innovation, coupled with our proven expertise in operating complex process plants, will drive our investment in a second energy-from-waste facility adjacent to our existing project. The first plant is on schedule to begin commissioning in late 2014. Once up and running, the plants will offer clean power, divert up to 700,000 metric tons of nonrecyclable waste from landfills annually, and power up to 100,000 homes. Just as importantly, they are set to generate good, consistent returns for our shareholders.

Taking disciplined actions to improve our portfolio and productivity

We continue to make significant progress with our portfolio and productivity actions and expect to reduce costs by a further \$75 million through product exits, asset rationalizations, and organizational improvements. These actions are focused on strengthening our Electronics business and our global operations function while further optimizing our European cost structure.

Meanwhile, we remain on track to exit our Polyurethane Intermediates business in 2014.

Meeting our financial commitments in 2014

Our key business units remain strong and well positioned for the future. In 2014, Merchant Gases will continue its primary focus of loading our existing assets with profitable new business. Tonnage Gases will continue to bring new projects onstream, on time and on budget, while optimizing our plant performance. In Electronics and Performance Materials, the focus remains on serving our customers, providing profitable offerings, and taking advantage of asset and portfolio streamlining actions that drive efficiency and boost productivity.

Overall, we will focus on maximizing pricing to recover cost increases, delivering the benefits from cost reduction and restructuring actions that we are taking and looking at every opportunity to drive down operating costs and improve productivity.

Looking forward

This will be my last time writing to you before I retire in 2014. One of the most gratifying things for me is to know that I will be handing over to a new CEO a company that has established leadership positions in excellent growth markets. Our strategy of focusing on energy, environment, and emerging markets is serving us incredibly well. Our ability to deliver on these with confidence is founded on our experienced senior leadership team.

The appointment of three new board members will also provide additional perspective and benefit for the future direction of the Company. I would like to personally thank our retiring directors for their unwavering support of Air Products and its shareholders.



Chairman and CEO John McGlade.

Having spent 38 years with Air Products, what I can say with the utmost confidence is that while individuals may come and go, the values that drive an organization can and do remain deep-rooted. Those values define who we are and distinguish us from other organizations.

I cannot speak highly enough of the employees at our company. I am immensely proud to be part of this great group of people. They know what needs to be done, and I am confident that they will continue to work hard to deliver for you, our shareholders, for many years to come.

Very truly yours,

A handwritten signature in black ink that reads "John E. McGlade". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

John E. McGlade
Chairman, President and Chief Executive Officer

Non-GAAP measures

(Millions of dollars, except per share)

The Financial Highlights and Letter to Shareholders contain non-GAAP measures. These measures adjust results to exclude the effect of several items that are detailed in the Notes to the consolidated financial statements. 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 non-GAAP measures.

Consolidated results

| | Continuing Operations | | | |
|---|-----------------------|------------------|------------------|----------------|
| | Operating Income | Operating Margin | Income | Diluted EPS |
| 2013 GAAP | \$1,324.4 | 13.0% | \$1,004.2 | \$ 4.73 |
| 2012 GAAP | 1,282.4 | 13.3% | 999.2 | 4.66 |
| Change GAAP | 3% | (30 bp) | 1% | 2% |
| 2013 GAAP | \$1,324.4 | 13.0% | \$1,004.2 | \$ 4.73 |
| Business restructuring and cost reduction plans | 231.6 | 2.3% | 157.9 | .74 |
| Advisory costs | 10.1 | .1% | 6.4 | .03 |
| 2013 Non-GAAP Measure | \$1,566.1 | 15.4% | \$1,168.5 | \$ 5.50 |
| 2012 GAAP | \$1,282.4 | 13.3% | \$ 999.2 | \$ 4.66 |
| Business restructuring and cost reduction plans | 327.4 | 3.5% | 222.4 | 1.03 |
| Customer bankruptcy | 9.8 | .1% | 6.1 | .03 |
| Gain on previously held equity interest | (85.9) | (.9)% | (54.6) | (.25) |
| Q1 Spanish tax settlement | — | — | 43.8 | .20 |
| Q2 Spanish tax ruling | — | — | (58.3) | (.27) |
| 2012 Non-GAAP Measure | \$1,533.7 | 16.0% | \$1,158.6 | \$ 5.40 |
| Change Non-GAAP Measure | 2% | (60 bp) | 1% | 2% |

Return on Air Products shareholders' equity

Return on Air Products shareholders' equity is calculated as net income divided by five-quarter average Air Products shareholders'

equity. On a non-GAAP basis, net income has been adjusted for the impact of the disclosed items detailed below.

| | 2013 | 2012 | 2011 |
|---|------------------|-----------|-----------|
| Five-quarter average Air Products shareholders' equity | \$6,545.0 | \$6,191.7 | \$5,842.0 |
| Income from continuing operations – GAAP | 1,004.2 | 999.2 | 1,134.3 |
| Business restructuring and cost reductions plans | 157.9 | 222.4 | |
| Customer bankruptcy | | 6.1 | |
| Gain on previously held equity interest | | (54.6) | |
| Q1 Spanish tax settlement | | 43.8 | |
| Q2 Spanish tax ruling | | 58.3 | |
| Net loss on Airgas transaction | | | 31.6 |
| Advisory costs | 6.4 | | |
| Income from Continuing Operations – Non-GAAP | \$1,168.5 | \$1,158.6 | \$1,165.9 |
| Return on Air Products Shareholders' Equity – GAAP | 15.3% | 16.1% | 19.4% |
| Return on Air Products Shareholders' Equity – Non-GAAP | 17.9% | 18.7% | 20.0% |

Return on capital employed (ROCE)

ROCE is calculated as earnings after-tax divided by five-quarter average total capital. Earnings after-tax is defined as operating income and equity affiliates' income, after tax, at our quarterly effective tax rate. On a non-GAAP basis, operating income and taxes have been adjusted for the impact of the disclosed items detailed below. Total capital consists of total debt and total equity.

| | 2013 | 2012 |
|--|-------------------|-------------------|
| Earnings before-tax GAAP | \$ 1,492.2 | \$ 1,436.2 |
| Business restructuring and cost reduction plan | 231.6 | 327.4 |
| Customer bankruptcy | | 9.8 |
| Gain on previously held equity interest | | (85.9) |
| Advisory costs | 10.1 | |
| Earnings Before-Tax Non-GAAP | \$ 1,733.9 | \$ 1,687.5 |
| Non-GAAP tax adjustment | 419.7 | 408.9 |
| Earnings After-Tax Non-GAAP | \$ 1,314.2 | \$ 1,278.6 |

| | 2013 | 2012 | Basis Point Change |
|------------------------------------|-------------|--------------|--------------------|
| Earnings after-tax GAAP | \$ 1,153.4 | \$ 1,126.7 | |
| Five-quarter average total capital | 13,024.9 | 11,098.1 | |
| ROCE GAAP | 8.9% | 10.2% | (130) |

| | 2013 | 2012 | Basis Point Change |
|------------------------------------|--------------|--------------|--------------------|
| Earnings after-tax non-GAAP | \$ 1,314.2 | \$ 1,278.6 | |
| Five-quarter average total capital | 13,024.9 | \$11,098.1 | |
| ROCE Non-GAAP | 10.1% | 11.5% | (140) |

Capital expenditures

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 consolidated statement of cash flows.

| | 2013 | 2012 | Change |
|--|------------------|------------------|--------------|
| Capital expenditures – GAAP measure | \$ 1,747.8 | \$2,559.8 | (32)% |
| Capital lease expenditures | 234.9 | 212.2 | |
| Noncurrent liability related to purchase of shares from noncontrolling interests | 14.0 | 6.3 | |
| Capital Expenditures – Non-GAAP Measure | \$1,996.7 | \$2,778.3 | (28)% |

| | 2014 Forecast |
|---------------------------------------|-----------------|
| Capital expenditures – GAAP measure | \$1,800–\$1,900 |
| Capital lease expenditures | 100–200 |
| Capital Expenditures – non-GAAP basis | \$1,900–\$2,100 |
| Change GAAP | 3%–9% |
| Change non-GAAP | (5)%–5% |

Board of Directors



John E. McGlade
Chairman, President and Chief Executive Officer of Air Products.
Director since 2007.



Michael J. Donahue
Former Group Executive Vice President and Chief Operating Officer of BearingPoint, Inc.
Director since 2001.



David H. Y. Ho
Chairman and Founder of Kiina Investment.
Director since 2013.



Mario L. Baeza
Founder and Controlling Shareholder of Baeza & Co. and Founder and Executive Chairman of V-Me Media, Inc.
Director since 1999.



Ursula O. Fairbairn
President and Chief Executive Officer of Fairbairn Group, LLC.
Director since 1998.



Margaret G. McGlynn
President and Chief Executive Officer of International AIDS Vaccine Initiative.
Director since 2005.



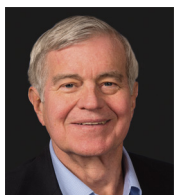
Susan K. Carter
Executive Vice President and Chief Financial Officer of KBR, Inc.
Director since 2011.



W. Douglas Ford
Former Chief Executive, Refining and Marketing, of BP Amoco plc.
Director since 2003.



Edward L. Monser
President and Chief Operating Officer of Emerson Electric Co.
Director since 2013.



William L. Davis, III
Former Chairman, President and Chief Executive Officer of RR Donnelley & Sons Company.
Director since 2005.



Seif Ghasemi
Chairman and Chief Executive Officer of Rockwood Holdings, Inc.
Director since 2013.



Matthew H. Paul
Former Senior Executive Vice President and Chief Financial Officer of McDonald's Corporation.
Director since 2013.



Chadwick C. Deaton
Chairman of Baker Hughes Inc.
Director since 2010.



**Evert Henkes
(Presiding Director)**
Former Chief Executive Officer of Shell Chemicals Ltd.
Director since 2006.



Lawrence S. Smith
Former Chief Financial Officer of Comcast Corporation.
Director since 2004.

Corporate Executive Committee



John E. McGlade
Chairman, President and Chief Executive Officer.



Patricia A. Mattimore
Senior Vice President—Supply Chain.



John D. Stanley
Senior Vice President, General Counsel and Chief Administrative Officer.



M. Scott Crocco
Senior Vice President and Chief Financial Officer.



Guillermo Novo
Senior Vice President and General Manager—Electronics, Performance Materials, Strategy and Technology.



Stephen J. Jones
Senior Vice President and General Manager—Tonnage Gases, Equipment and Energy and China President.



Corning F. Painter
Senior Vice President and General Manager—Merchant Gases.

For more information about corporate governance practices at Air Products, visit our Governance website at www.airproducts.com/company/governance.

First page of 10-K

Last page of 10-K

Shareholders' information

Common stock information

Ticker Symbol: APD

Exchange Listing: New York Stock Exchange

Transfer Agent and Registrar:

American Stock Transfer and Trust Company

6201 15th Ave., Brooklyn, NY 11219

Telephone: 800-937-5449

Internet: www.amstock.com

E-mail: info@amstock.com

Publications for shareholders

In addition to this Annual Report on Form 10-K for the fiscal year ended September 30, 2013, Air Products informs shareholders about Company news through:

Notice of Annual Meeting and Proxy Statement—made available to shareholders in mid-December and posted to the Company's website at www.airproducts.com/annualmeetingmaterials.

Earnings information—shareholders and investors can obtain copies of earnings releases, Annual Reports, 10-Ks and news releases by visiting www.airproducts.com/investors/overview. Shareholders and investors can also register for e-mail updates at that website.

Dividend policy

Dividends on Air Products' common stock are declared by the Board of Directors and, when declared, usually will be paid during the sixth week after the close of the fiscal quarter. It is the Company's objective to pay dividends consistent with the reinvestment of earnings necessary for long-term growth.

Direct investment program

Current shareholders and new investors can conveniently and economically purchase shares of Air Products' common stock and reinvest cash dividends through American Stock Transfer and Trust Company. Registered shareholders can purchase shares on American Stock Transfer and Trust's website, www.investpower.com. New investors can obtain information on the website or by calling 877-322-4941 or 718-921-8200.

Annual meeting

The annual meeting of shareholders will be held on Thursday, January 23, 2014.

Terminology

The term Air Products and Chemicals, Inc., as used in this Report, refers solely to the Delaware corporation of that name. The use of such terms as Air Products, Company, division, organization, we, us, our, and its, when referring to either Air Products and Chemicals, Inc. and its consolidated subsidiaries or to its subsidiaries and affiliates, either individually or collectively, is only for convenience and is not intended to describe legal relationships. Significant subsidiaries are listed as an exhibit to the Form 10-K Report filed by Air Products and Chemicals, Inc. with the Securities and Exchange Commission. Groups, divisions or other business segments of Air Products and Chemicals, Inc. described in this Report are not corporate entities.

Annual certifications

The most recent certifications by our Chief Executive Officer and Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 are filed as exhibits to our Form 10-K. We have also filed with the New York Stock Exchange the most recent Annual CEO Certification as required by Section 303A.12(a) of the New York Stock Exchange Listed Company Manual.

Additional information

The forward-looking statements contained in this Report are qualified by reference to the section entitled "Forward-Looking Statements" on page 42 of the Form 10-K section.

For more information,
please contact us at:

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F 610-481-5900

Corporate Secretary's Office

T 610-481-7067

Investor Relations Office

Simon Moore, Director
T 610-481-5775



tell me more
airproducts.com

