



DIVISION OF
CORPORATION FINANCE

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

February 26, 2015

Via E-mail

Mr. Scott Crocco
Senior Vice President and Chief Financial Officer
Air Products and Chemicals, Inc.
7201 Hamilton Boulevard
Allentown, PA 18195

**RE: Air Products and Chemicals, Inc.
Form 10-K for the Year Ended September 30, 2014
Filed November 24, 2014
File No. 1-4534**

Dear Mr. Crocco:

We have limited our review of your filing to the financial statements and related disclosures and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to these comments within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing your response to these comments, we may have additional comments.

Form 10-K for the Year Ended September 30, 2014

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, page 19

Results of Operations, page 22

1. Please revise future annual and quarterly filings to quantify and discuss the specific factors that impact consolidated cost of sales and gross profit margins during each period presented.

Reconciliation of Non-GAAP Financial Measures, page 30

2. You disclose that the presentation of non-GAAP measures is intended to enhance the usefulness of your financial information by providing measures that management uses

internally to evaluate operating performance and cash flow. We further note your disclosure on page 20 that you increased your focus on cash flow and introduced the non-GAAP measure, Adjusted EBITDA, in the fourth quarter. As such, it appears to us that you are using Adjusted EBITDA as both a performance and liquidity measure. Therefore, please enhance your disclosures in future filings to also reconcile Adjusted EBITDA to the most directly comparable GAAP liquidity measure, cash provided by operating activities, and separately discuss the limitations of your non-GAAP measures as both performance and liquidity measures.

Critical Accounting Policies and Estimates, page 39

Goodwill, page 41

3. You disclose that you had four reportable segments and thirteen reporting units as of September 30, 2014. Please tell us how the reorganization that resulted in your recognition of seven reportable segments effective as of October 1, 2014 impacted your determination and recognition of your reporting units. Please ensure your response provides us with your analysis of ASC 350-20-35-33 – 35-38 regarding the identification of your reporting units and ASC 350-20-35-45. Please also refer to ASC 350-20-55-1 – 55-9 for additional guidance.
4. We note the material goodwill impairment charge you recorded during the current fiscal year. We also note the reporting unit the impairment charge related to continues to have material goodwill and intangible assets. In order for investors to more fully understand the impairment charge you recorded and better assess the likelihood of additional impairment charges, please show us how you will revise future filings to address the following:
 - Quantify and discuss the most significant assumptions you used to determine the impairment charge you recorded, including the growth projections;
 - Provide a sensitivity analysis related to the impairment charge you recorded that indicates the potential impact of changes in your significant assumptions on the fair value of the reporting unit at risk; and
 - Quantify and discuss the nature of any other material assets related to the reporting unit at risk, including the amount of intangible assets.

Item 8. Financial Statements and Supplementary Data, page 47

1. Major Accounting Policies, page 54

Postemployment Benefits, page 55

5. Please confirm and clarify in future filings, if accurate, that, in addition to the criteria you disclose, termination benefits are accrued after a termination plan is communicated to

employees as required by ASC 420-10-25-4. Otherwise, please more fully explain to us how you determined your policy is appropriate.

7. Summarized Financial Information of Equity Affiliates, page 65

6. We note your disclosure that summarized financial information you present has been “compiled based on the unaudited financial statements of the companies accounted for by the equity method.” Please explain to us the appropriateness of referring to your apparent use and reliance on unaudited financial statements given that the summarized financial information you provided is included in your audited financial statements, is covered by your auditors’ report, and is required by Rule 4-08(g) of Regulation S-X.

22. Income Taxes, page 91

7. We note that the foreign taxes and credits line item in your rate reconciliation contributed to a decrease of 10% of your effective tax rate during the current period. Please clarify the nature of the items in the foreign taxes and credits line item in your effective tax rate reconciliations. Please also explain to us your consideration of providing additional disclosures, either in the income tax footnote or MD&A, regarding the impact of material component(s) of this reconciling item on your income taxes. Such disclosures should have the objective of providing information about the quality of, and potential variability of, your earnings and cash flow, so an investor can ascertain the likelihood that past performance is indicative of future performance. The disclosures may include identifying your material tax jurisdictions along with their corresponding pre-tax earnings, statutory tax rates, effective tax rates, and whether the mix has changed materially in the past or is reasonably likely to change in the future.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company’s disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and

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- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

You may contact Jeffrey Gordon, Staff Accountant, at (202) 551-3866 or Anne McConnell, Staff Accountant, at (202) 551-3709 with any questions.

Sincerely,

/s/ John Cash

John Cash
Accounting Branch Chief