



DIVISION OF  
CORPORATION FINANCE

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549-7010

March 15, 2011

Paul E. Huck  
Senior Vice President and Chief Financial Officer  
Air Products and Chemicals, Inc.  
7201 Hamilton Boulevard  
Allentown, Pennsylvania 18195-1501

**Re: Air Products and Chemicals, Inc.  
Form 10-K for the Fiscal Year Ended September 30, 2010  
Filed November 23, 2010  
File No. 1-04534**

Dear Mr. Huck:

We have limited our review of your filing to your contacts with countries that have been identified as state sponsors of terrorism, and we have the following comments. Our review with respect to this issue does not preclude further review by the Assistant Director group with respect to other issues. At this juncture, we are asking you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing the information you provide in response to these comments, we may have additional comments.

General

1. We note on page 6 in your Form 10-K that you own interests in entities operating in Africa, the Middle East, and Latin America, regions generally understood to include Sudan, Iran, Syria, and Cuba. Cuba, Iran, Sudan, and Syria are identified by the State Department as state sponsors of terrorism, and are subject to U.S. economic sanctions and export controls. We note that your Form 10-K does not include disclosure regarding contacts with the referenced countries. Please describe to us the nature and extent of your past, current, and anticipated contacts with Cuba, Iran, Sudan, and Syria, if any, whether through subsidiaries, affiliates, joint ventures, or other direct or indirect arrangements. Your response should describe any materials, including chemicals, products, technology, equipment, components, information, and services that you have provided, or intend to provide, into Cuba, Iran, Sudan, and Syria, directly or indirectly, and any agreements, commercial arrangements, or other contacts you have had with the governments of the referenced countries or entities controlled by those governments.

2. Please tell us whether, to the best of your knowledge, understanding, and belief, any of the materials, including chemicals, products, technology, equipment, or components you may have provided or may intend to provide, directly or indirectly, into Cuba, Iran, Sudan, and Syria, are controlled items included in the Department of Commerce's Commerce Control List. If so, tell us whether any such item have weapons or other military uses, and describe such possible uses of which you are aware. Also, advise us whether, to the best of your knowledge, understanding, and belief, any such items have been put to weapons or other military uses by Cuba, Iran, Sudan, or Syria, and discuss any such uses of which you are aware.
3. Please discuss the materiality of any contacts with Cuba, Iran, Sudan, and Syria, and whether those contacts constitute a material investment risk for your security holders. You should address materiality in quantitative terms, including the approximate dollar amounts of any revenues, assets, and liabilities associated with each of the referenced countries for the last three fiscal years and the subsequent interim period. Also, address materiality in terms of qualitative factors that a reasonable investor would deem important in making an investment decision, including the potential impact of corporate activities upon a company's reputation and share value. Various state and municipal governments, universities, and other investors have proposed or adopted divestment or similar initiatives regarding investment in companies that do business with U.S.-designated state sponsors of terrorism. In this regard, we are aware of a June 2010 news report that your joint venture company based in China had agreed to construct a hydrogen production facility for PetroChina Company Limited, a company that has been the object of divestment and related efforts resulting from its parent company's operations in Sudan and Iran. Please discuss the potential impact on your reputation and share value of your joint venture's relationship with PetroChina.

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 the 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
- the company may not assert staff comments as a defense in any proceeding initiated by

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the Commission or any person under the federal securities laws of the United States.

Please contact Pradip Bhaumik, Special Counsel, at (202) 551-3333 or me at (202) 551-3470 if you have any questions about the comments or our review.

Sincerely,

Cecilia Blye, Chief  
Office of Global Security Risk

cc: Pamela Long  
Assistant Director  
Division of Corporation Finance