

March 13, 2024

Melissa N. Schaeffer
Senior Vice President and Chief Financial Officer
Air Products & Chemicals, Inc.
1940 Air Products Boulevard
Allentown, Pennsylvania 18106-5500

Chemicals, Inc.

Fiscal Year Ended September 30, 2023

Re: Air Products &
Form 10-K for
File No. 001-04534

Dear Melissa N. Schaeffer:

We have limited our review of your filing to the financial statements and related disclosures and have the following comment.

Please respond to this letter 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 a comment applies to your facts and circumstances, please tell us why in your response.

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

Form 10-K for Fiscal Year Ended September 30, 2023

5. Acquisitions, page 73

1. Regarding the agreement to purchase the natural gas-to-syngas processing facility in Qashqadaryo Province, Uzbekistan, for \$1 billion, please provide us with a summary of the material terms of the agreement. Please also provide us with a summary of the analysis you performed in determining that the agreement should be accounted for as a financing arrangement, including the corresponding authoritative literature you considered. Please specifically address your initial accounting as well as ongoing accounting for this transaction. Please also address the need to expand your disclosures.

In closing, we remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

Melissa N. Schaeffer
Air Products & Chemicals, Inc.
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Please contact Tracey Houser at 202-551-3736 or Nudrat Salik at 202-551-3692 with any questions.

FirstName LastNameMelissa N. Schaeffer
Corporation Finance
Comapany NameAir Products & Chemicals, Inc.
Applications and

Sincerely,
Division of
Office of Industrial

