Air Products and Chemicals, Inc. 1940 Air Products Boulevard Allentown, PA 18106-5500 T 610-481-3240 schaefmn@airproducts.com www.airproducts.com

PRODUCTS 1

Melissa N. Schaeffer

Senior Vice President & Chief Financial Officer

April 16, 2024

Via EDGAR

Division of Corporation Finance U.S. Securities and Exchange Commission 100 F Street, N.E. Washington, DC 20549 Attn: Tracey Houser and Nudrat Salik

RE: Air Products and Chemicals, Inc.
Form 10-K for Fiscal Year Ended September 30, 2023
Response Letter Dated April 8, 2024
File No. 001-04534

Dear Mses. Houser and Salik:

Air Products and Chemicals, Inc. ("we", the "Company", or "Air Products") hereby submits this letter in response to your additional comments, dated April 11, 2024 (the "Comment Letter"), with respect to the above-referenced filing and response letter. Set forth below is the heading and text from the Comment Letter, followed by our responses thereto.

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We note your response to our prior comment, including the expanded disclosures you intend to provide in future filings.
Please further expand these disclosures to include your conclusion that the repurchase price with consideration of time
value of money exceeds the original purchase price, as discussed in the first paragraph on page 3 of your response letter,
as this analysis forms the basis of your accounting for these transactions. Please ensure that your disclosures include
consideration of the allocation of the contractual cash inflows to be received from UNG on a monthly basis between the
repurchase price and compensation for your services provided under the agreements for purposes of this analysis, if
correct.

The Company's Response:

We have considered your additional comments and have modified our disclosure. All changes from our Form 10-K disclosure are underlined in the excerpt below.

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Uzbekistan Asset Purchase

On 25 May 2023, we entered into an investment agreement with the Government of the Republic of Uzbekistan and Uzbekneftegaz JSC ("UNG") to purchase a natural gas-to-syngas processing facility in Qashqadaryo Province, Uzbekistan, for \$1 billion. Under the agreement, Air Products will acquire, own, and operate the facility and supply all offtake products to UNG under a 15-year on-site contract, with UNG supplying the feedstock natural gas and utilities. Throughout this term, we receive a fixed monthly fee (regardless of whether UNG requires the output) comprised of two components: a plant capacity fee and an operating and maintenance fee.

We are accounting for the transaction as a financing arrangement as we did not obtain accounting control of the facility due to UNG having the unilateral right to reacquire the facility at the end of the contract term. The repurchase price on a discounted basis, which consists of the total monthly plant capacity fees received over the term of the arrangement plus the repurchase option price, exceeds our purchase price.

Accordingly, our progress payments of approximately \$800, of which \$600 was completed during fiscal year 2023, are reflected within "Financing Receivables" on our consolidated balance sheet as of 30 September 2023. The progress payments are reflected within "Investment in financing receivables" on our consolidated statement of cash flows. In early fiscal year 2024, we made an additional progress payment of \$100.

If you have any questions or require any additional information, please call either myself or William J. Pellicciotti, our Vice President, Controller, and Chief Accounting Officer, at (610) 481-7817.

Sincerely,

/s/ Melissa N. Schaeffer

Melissa N. Schaeffer Senior Vice President and Chief Financial Officer