

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549**

FORM 11-K

FOR ANNUAL REPORTS OF EMPLOYEE STOCK PURCHASE, SAVINGS AND SIMILAR PLANS PURSUANT TO
SECTION 15(d) OF THE SECURITIES AND EXCHANGE ACT

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended 31 December 2019

OR

TRANSITION REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission file number 001-04534

A. Full title of the Plan and the address of the Plan, if different from that of the issuer named below:

**AIR PRODUCTS AND CHEMICALS, INC.
RETIREMENT SAVINGS PLAN**

B. Name of issuer of the securities held pursuant to the Plan and the address of its principal executive offices:

**AIR PRODUCTS AND CHEMICALS, INC.
7201 HAMILTON BOULEVARD
ALLENTOWN, PA 18195-1501**

AIR PRODUCTS AND CHEMICALS, INC.
RETIREMENT SAVINGS PLAN

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All other schedules required by the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974 ("ERISA") have been omitted because there is no information to report.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Plan Participants and Plan Administrator of Air Products and Chemicals, Inc. Retirement Saving Plan

Opinion on the Financial Statements

We have audited the accompanying statement of net assets available for benefits of Air Products and Chemicals, Inc. Retirement Saving Plan (the "Plan") as of 31 December 2019 and 2018 and the related statement of changes in net assets available for benefits for the year ended 31 December 2019, the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the net assets available for benefits as of 31 December 2019 and 2018, and the changes in net assets available for benefits for the year ended on 31 December 2019, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on the financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Plan in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Report on Supplemental Schedule

The supplemental schedule of assets (held at end of year) as of 31 December 2019 has been subjected to audit procedures performed in conjunction with the audit of the Plan's financial statements. The supplemental schedule is the responsibility of the Plan's management. Our audit procedures included determining whether the supplemental schedule reconciles to the financial statements or the underlying accounting and other records, as applicable, and performing procedures to test the completeness and accuracy of the information presented in the supplemental schedule. In forming our opinion on the supplemental schedule, we evaluated whether the supplemental schedule, including its form and content, is presented in compliance with the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. In our opinion, such schedule is fairly stated, in all material respects, in relation to the financial statements as a whole.

/s/ DELOITTE & TOUCHE LLP

Philadelphia, Pennsylvania
26 June 2020

We have served as the auditor of the Plan since 2019

AIR PRODUCTS AND CHEMICALS, INC.
RETIREMENT SAVINGS PLAN
Statements of Net Assets Available for Benefits
As of 31 December 2019 and 2018
(In thousands)

	2019	2018
Assets:		
Participant-directed investments at fair value:		
Interest-bearing Cash	\$ 6,126	\$ 4,609
Money Market Fund	39,478	35,015
Mutual Funds	674,887	550,229
Commingled Funds	826,800	663,061
Company Stock	498,858	380,679
Self-directed Brokerage Account	54,232	49,365
Total participant-directed investments at fair value	2,100,381	1,682,958
Fully benefit-responsive investment contracts at contract value:		
Fixed Income Securities Fund	173,229	171,614
Receivables:		
Notes receivable from participants	14,707	14,796
Employer contributions receivable	348	—
Accrued interest and dividends	459	526
Other receivables	147	912
Total receivables	15,661	16,234
Total assets	2,289,271	1,870,806
Liabilities:		
Payables and accrued liabilities	196	308
Total liabilities	196	308
Net assets available for benefits	\$ 2,289,075	\$ 1,870,498

See notes to financial statements.

AIR PRODUCTS AND CHEMICALS, INC.
RETIREMENT SAVINGS PLAN
Statement of Changes in Net Assets Available for Benefits
For the Year Ended 31 December 2019
(In thousands)

	2019
Additions:	
Contributions:	
Participant contributions	\$ 51,978
Company matching contributions	15,281
Company core contributions	14,260
Total contributions	81,519
Investment income:	
Interest income	808
Dividend income	51,512
Net appreciation in the fair value of investments	459,550
Total investment income	511,870
Total additions	593,389
Deductions:	
Distributions to participants	181,680
Administrative expenses	412
Total deductions	182,092
Net increase prior to plan transfer	411,297
Transfers in	7,280
Net assets available for benefits:	
Beginning of year	1,870,498
End of year	\$ 2,289,075

See notes to financial statements.

**AIR PRODUCTS AND CHEMICALS, INC.
RETIREMENT SAVINGS PLAN**

Notes to Financial Statements

As of 31 December 2019 and 2018 and For the Year Ended 31 December 2019

(1) Description of the Plan

The following description of the Air Products and Chemicals, Inc. Retirement Savings Plan (the "Plan") provides only general information. Participants should refer to the Summary Plan Description and the Plan Document for a more complete description of the Plan's provisions.

(a) General

The Plan is a defined-contribution plan sponsored by Air Products and Chemicals, Inc. (the "Company") covering certain full-time and part-time salaried and hourly employees of the Company and designated subsidiaries. Effective 1 November 2017, the Plan permitted participation by employees whose terms and conditions of employment are covered by the terms of a collective bargaining agreement provided such collective bargaining agreement provides for Plan participation. As of 24 June 2019, all remaining participant balances totaling \$7,280,000 for participants who are or were covered by collective bargaining agreements were transferred to the Plan from the Air Products and Chemicals, Inc. 401(k) Plan. Participants of the Plan are entitled to make before-tax contributions and Roth 401(k) contributions as allowed by Sections 401(k) and 401(m) of the Internal Revenue Code ("IRC") after having completed at least 30 days of service. Company matching contributions are made under IRC Section 401(m). The Plan is subject to the provisions of the Employee Retirement Income Security Act ("ERISA").

(b) Administration

The Board of Directors of the Company (the "Board") has delegated oversight for the design and administration of the Plan to its Management Development and Compensation Committee and oversight for the funding and management of assets of the Plan to its Audit Committee. The Board has delegated authority to the Chairman, President and Chief Executive Officer (the "Chairman") to take such actions as necessary to provide employee pension or welfare benefits, in accordance with its delegation with respect to the Company's pension and welfare benefit plans. The Chairman has delegated some of this authority to the Senior Vice President and Chief Human Resources Officer (role of "Plan Administrator"), who has established a Benefits Committee to have fiduciary responsibility for appeals of the denial of benefits in an ERISA plan. The Plan Administrator means the Senior Vice President and Chief Human Resources Officer, or such other person he or she shall appoint to fill such role. The Audit Committee appointed the Pension Investment Committee (the "Investment Committee") to supervise, monitor and review the investment performance of the Plan's assets. Fidelity Management Trust ("Fidelity") is the trustee of the Plan.

(c) Participant Accounts

Individual accounts are maintained for each participant of the Plan. Each participant's account is credited with the participant's contributions, Company contributions, and allocations of the Plan's earnings. Participant accounts are also charged with withdrawals and an allocation of Plan losses and administrative expenses. Allocations are based on investment elections made by the participant. The benefit to which a participant is entitled is the benefit that can be provided from the participant's vested account balance.

**AIR PRODUCTS AND CHEMICALS, INC.
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Notes to Financial Statements

As of 31 December 2019 and 2018 and For the Year Ended 31 December 2019

(d) Contributions

Subject to certain IRC restrictions, participants may elect to contribute to the Plan on a before-tax 401(k) basis or after-tax Roth 401(k) basis from 3% to 50%, in whole percentages, of compensation, as defined in the Plan Document, through payroll deductions. The before-tax basis allows a participant to defer recognition of income for federal income tax purposes.

Participants who are at least age 50 before the close of the calendar year may make catch-up contributions in accordance with, and subject to the limitations of, IRC Section 414(v).

The Plan is required to return contributions received during the Plan year in excess of the IRC limits.

The Company will match certain contributions to the Plan made by participants. The matching contribution calculation will depend on whether or not the participant receives Company Core Contributions under the Plan. To be eligible for Company Core Contributions, a participant must be (1) a salaried employee hired or rehired after 31 October 2004, (2) an hourly employee who transferred to a salaried status after 31 October 2004, (3) a nonunion hourly employee hired or rehired after 31 January 2011, (4) an employee who becomes a nonunion hourly employee after 31 January 2011 due to a change in employment status and is not earning credited service under the Pension Plan for Hourly Rated Employees of Air Products and Chemicals, Inc., (5) a salaried employee who made an irrevocable election to receive Company Core Contributions under the Plan instead of continuing to earn credited service under the Air Products and Chemicals, Inc. Pension Plan for Salaried Employees, or (6) an employee covered by the terms of a collective bargaining agreement whose terms provide for a Company Core Contribution after 31 October 2017. Company Core Contributions are made under IRC Section 401(a).

Company Core Contributions are cash contributions made by the Company to eligible participants' accounts in accordance with the participants' investment direction election. The amount of Company Core Contributions is based on participants' service and base pay as follows:

- 4% of base pay if credited service is less than 10 years;
- 5% of base pay if credited service is between 10 and 19 years; or
- 6% of base pay if credited service is 20 years or more.

Eligible participants are not required to contribute to the Plan in order to receive the Company Core Contribution.

For participants who are receiving Company Core Contributions, the Company will match participant contributions using the Enhanced Formula as follows:

- \$0.75 for each \$1.00 of the first 4% of base pay that is contributed; plus
- \$0.50 for each \$1.00 of the next 2% of base pay that is contributed.

**AIR PRODUCTS AND CHEMICALS, INC.
RETIREMENT SAVINGS PLAN**

Notes to Financial Statements

As of 31 December 2019 and 2018 and For the Year Ended 31 December 2019

For participants who are not receiving Company Core Contributions, but rather are earning credited service in the Air Products and Chemicals, Inc. Pension Plan for Salaried Employees or in the Pension Plan for Hourly Rated Employees of Air Products and Chemicals, Inc., the Company will match participant contributions using the Regular Formula as follows:

- \$0.75 for each \$1.00 of the first 3% of base pay that is contributed; plus
- \$0.25 for each \$1.00 of the next 3% of base pay that is contributed.

Catch-up contributions are not eligible for matching contributions.

Company matching contributions are invested in the Company's common stock ("Company Stock"). Company matching contributions may be transferred by the Plan's participants to any other of the Plan's investment options at any time. As such, Company Stock is deemed participant directed.

Effective 1 January 2018, on an annual basis, the Company shall ensure that a participant's Company matching contribution is equal to the maximum contribution the participant would receive under the Enhanced Formula for Company Core Contribution Participants and the Regular Formula for all other eligible participants for the calendar year based upon the participant's before-tax and Roth 401(k) Contributions for the entire calendar year. Additional Company matching contributions to provide participants with their maximum amount were \$348,000 for 2019 and are reflected on the Statements of Net Assets Available for Benefits within "Employer contributions receivable."

(e) Contribution Percentage Changes

Contribution percentage changes are effective as soon as administratively possible after receipt of request.

(f) Rollovers

A participant or any other employee who is entitled to make a rollover contribution to the Plan under the IRC may make a cash contribution to the Plan of all or a portion of any such rollover contribution amount.

(g) Vesting

Participants are immediately vested in 100% of their elected salary deferrals, rollover contributions, the Company's matching contributions, Company Core Contributions, and earnings thereon.

(h) Forfeitures

Forfeitures can be used by the Company to reduce Company Core Contributions. There were no forfeitures used to reduce Company Core Contributions in 2019 and there were no unallocated forfeitures at 31 December 2019 and 2018.

AIR PRODUCTS AND CHEMICALS, INC.
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Notes to Financial Statements

As of 31 December 2019 and 2018 and For the Year Ended 31 December 2019

(i) Withdrawal Provisions

Upon application, but no sooner than 12 months after any earlier withdrawal:

- (a) a participant may withdraw all or a portion of after-tax contributions, which have been in the Plan for at least two years;
- (b) after withdrawing all amounts described in subparagraph (a), a participant may withdraw any company matching contributions, which have been in the Plan for at least two years;
- (c) after withdrawing all amounts described in subparagraphs (a) and (b), a participant may withdraw before-tax contributions, Roth 401(k) contributions, and then vested Company Core Contributions upon:
 - (i) attaining age 59½;
 - (ii) providing satisfactory evidence that the withdrawal is required on account of a “hardship.” Hardship withdrawals will be limited to situations in which a participant has an immediate and heavy financial need and a distribution from the Plan is necessary to meet that need. Effective 1 January 2019 hardship distribution provisions were amended in accordance with the Bipartisan Budget Act of 2018. Upon implementation, a Participant is not required to take a plan loan from any plan maintained by the Company or an Affiliated Company, as defined by IRC section 414, in order to obtain a hardship distribution. A hardship withdrawal may be made without regard to whether any other withdrawal has occurred within the last 12 months and will result in the suspension of the right to contribute to the Plan for the next 6 months;
 - (iii) a Qualified Reservist Distribution; or
 - (iv) a distribution pursuant to the Heroes Earnings Assistance and Relief Tax Act of 2008.

A participant, upon separation of employment, is entitled to receive all amounts credited to his or her account, including before-tax, Roth 401(k), after-tax, catch-up, company matching contributions, and Company Core Contributions. This distribution will automatically occur on or about 60 days after the end of the month in which employment ends if the participant’s account balance is less than \$1,000. Participants may continue to repay any outstanding loan balances; any outstanding loan balance which is not repaid within 90 days, will be treated as a taxable distribution. At the discretion of the Plan Administrator, loan balances may be transferred to a successor employer for participants whose employment ends due to a divestiture of a business or segment of the Company. Participants may elect to rollover distributions directly into another qualified plan or an Individual Retirement Account.

The distribution of a participant’s account balance may be deferred until the earlier of age 70½ or death. In accordance with the Setting Every Community Up for Retirement Enhancement (“SECURE”) Act, beginning on 1 January 2020, the age for required minimum distributions will be increased to age 72 for individuals who are younger than 70½ on 31 December 2019.

**AIR PRODUCTS AND CHEMICALS, INC.
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Notes to Financial Statements

As of 31 December 2019 and 2018 and For the Year Ended 31 December 2019

(j) Notes Receivable from Participants

The Plan may make a loan or loans to any participant upon electronic request through Fidelity. Loans may be made in an amount that, when added to the outstanding balance of any other loan, will not exceed the lesser of \$50,000 or one half of the present value of the participant's vested account balance. Participant loans are valued at the sum of the unpaid principal balance, plus accrued but unpaid interest. The loan must be adequately secured, bear a reasonable interest rate, and be repaid within a maximum of five years, unless such loan is for a principal residence, in which case the loan is to be repaid within a maximum of 25 years. The interest rate charged on all outstanding participant loans during the Plan year ended 31 December 2019, ranged from 4.25% to 10.50% with maturities through 2044.

Loan principal and interest repayments are credited directly to the borrowing participant's plan account and invested in accordance with the participant's then-current investment directions.

Plan participant loans may be directly rolled over to a qualified plan of a subsequent employer of the participant pursuant to an agreement between the Company and the subsequent employer at the discretion of the Plan Administrator. In addition, loan participants may repay an amount toward the outstanding loan balance at any time in accordance with the procedures established by the Plan Administrator.

(k) Investment Directions

Participant investment fund elections can be made in increments of 1% provided the percentages total 100%. Designated default funds for the Plan are the State Street Global Advisor Target Retirement Date Funds. Company matching contributions are invested in Company Stock, which may be transferred by the Plan's participants to any other investment option at any time, provided they are not in violation of frequent trading rules, in which case transfers may be limited to the Money Market Fund. Participants can elect to have their contributions to the Plan and Company Core Contributions invested in a Money Market Fund, Mutual Funds, Company Stock, Commingled Funds, and a Fixed Income Securities Fund offered by the Plan. Participants may also direct their investments through a trustee sponsored brokerage account (Fidelity BrokerageLink), which offers the option to invest in a range of Fidelity and non-Fidelity mutual funds. Interest-bearing Cash held in the BrokerageLink accounts is presented separately as short-term investment.

Participant changes to investment elections can apply to future contributions, accumulated savings, or both. Participant investment election changes completed by 4 p.m. (Eastern Time) are effective the same New York Stock Exchange ("NYSE") business day and are reflected in the participant's account the next NYSE business day.

Participants may not redirect accumulated savings directly from the Fixed Income Securities Fund to the Money Market Fund or to Fidelity BrokerageLink.

**AIR PRODUCTS AND CHEMICALS, INC.
RETIREMENT SAVINGS PLAN**

Notes to Financial Statements

As of 31 December 2019 and 2018 and For the Year Ended 31 December 2019

(2) Summary of Significant Accounting Policies

(a) Basis of Accounting

The financial statements and accompanying footnotes were prepared on the accrual basis of accounting in conformity with accounting principles generally accepted in the United States of America ("GAAP"). The Company has elected to file these financial statements with the Securities and Exchange Commission prepared in conformity with guidelines issued under ERISA, as amended.

(b) Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of net assets and liabilities and changes therein, and disclosure of contingent assets and liabilities. Actual results could differ from those estimates.

(c) Investment Valuation and Income Recognition

The Plan's investments are stated at fair value, except for fully benefit responsive contracts which are carried at contract value (see Note 4, *Fixed Income Securities Fund*, for additional information). Quoted market prices are used to value investments.

Purchases and sales are recorded on a trade-date basis. Interest is recorded on an accrual basis. Dividends are recorded on the ex-dividend date. Net appreciation includes the Plan's gains and losses on investments bought and sold as well as held during the year.

(d) Risks and Uncertainties

Investment securities, in general, are exposed to various risks, such as interest rate, credit, and overall market volatility risks. Due to the level of risk associated with certain investment securities, it is reasonably possible that changes in the values of investment securities will occur in the near term and could materially impact participants' account balances and the amounts reported in the accompanying statements of net assets available for benefits. The Plan's exposure to a concentration of credit risk is dependent upon the investment allocations selected by the Plan's participants. At 31 December 2019 and 2018, 22% and 20%, respectively, of the Plan's net assets available for benefits were invested in the common stock of the Company. The underlying value of the Company's stock is impacted by the performance of the Company, the market's evaluation of such performance, and other factors.

(e) Payment of Benefits

Benefits are recorded when paid.

**AIR PRODUCTS AND CHEMICALS, INC.
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Notes to Financial Statements

As of 31 December 2019 and 2018 and For the Year Ended 31 December 2019

(f) New Accounting Pronouncements

In August 2018, the FASB issued guidance which modifies the disclosure requirements for fair value measurements. The guidance is effective for fiscal years beginning after December 15, 2019, with early adoption permitted. Certain amendments must be applied prospectively and other amendments retrospectively. The Plan is currently evaluating the impact this guidance will have on disclosures in the notes to our financial statements.

In January 2016, the FASB issued guidance on recognition and measurement of financial assets and liabilities. This standard was adopted retrospectively and had no impact on the Plan's net assets or changes in net assets.

(3) Fair Value Measurements

Fair value is defined as an exit price, or the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

The fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value into three broad levels as follows:

- Level 1 – Quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2 – Inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the asset or liability.
- Level 3 – Inputs that are unobservable for the asset or liability based on the Company's own assumptions about the assumptions market participants would use in pricing the asset or liability.

If the inputs used to measure the financial assets and liabilities fall within more than one level described above, the categorization is based on the lowest level input that is significant to the fair value measurement of the instrument. Within the Plan, investments are recorded at fair value as follows:

(a) Interest-bearing Cash and Money Market Fund

The carrying amounts of cash and cash equivalents approximate fair value due to short-term maturity.

(b) Mutual Funds

The Mutual Funds are valued by obtaining quoted active market prices from nationally recognized securities exchanges and are classified as Level 1 assets.

(c) Company Stock

Company Stock is valued based on the number of shares held by the Plan at period-end multiplied by the closing price of the Company's stock on the NYSE and, therefore, presented as a Level 1 asset.

**AIR PRODUCTS AND CHEMICALS, INC.
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Notes to Financial Statements

As of 31 December 2019 and 2018 and For the Year Ended 31 December 2019

(d) Commingled Funds

Commingled Funds are valued at net asset value, determined by each fund's trustee based on the fair value of the underlying securities within the funds, which are traded on active markets. The Commingled Funds are not subject to redemption restrictions and are presented as a Level 1 asset.

(e) Fixed Income Securities Fund

The Fixed Income Securities Fund invests in fully-benefit responsive investment contracts that are held at contract value. See Note 4, *Fixed Income Securities Fund*, for additional information on the fund.

(f) Investments Measured at Fair Value

Investments measured at fair value at 31 December 2019 and 2018 are summarized below (in thousands):

	31 December 2019			
	Total	Level 1	Level 2	Level 3
Assets				
Interest-bearing Cash	\$ 6,126	\$ 6,126	\$ —	\$ —
Money Market Fund	39,478	39,478	—	—
Mutual Funds	729,119	729,119	—	—
Company Stock	498,858	498,858	—	—
Commingled Funds	826,800	826,800	—	—
Total investments at fair value	<u>\$ 2,100,381</u>	<u>\$ 2,100,381</u>	<u>\$ —</u>	<u>\$ —</u>
Investments measured at contract value:				
Fixed Income Securities Fund	173,229	—	—	—
Total Investments	<u>\$ 2,273,610</u>	—	—	—

	31 December 2018			
	Total	Level 1	Level 2	Level 3
Assets				
Interest-bearing Cash	\$ 4,609	\$ 4,609	\$ —	\$ —
Money Market Fund	35,015	35,015	—	—
Mutual Funds	599,594	599,594	—	—
Company Stock	380,679	380,679	—	—
Commingled Funds	663,061	663,061	—	—
Total investments at fair value	<u>\$ 1,682,958</u>	<u>\$ 1,682,958</u>	<u>\$ —</u>	<u>\$ —</u>
Investments measured at contract value:				
Fixed Income Securities Fund	171,614	—	—	—
Total Investments	<u>\$ 1,854,572</u>	—	—	—

**AIR PRODUCTS AND CHEMICALS, INC.
RETIREMENT SAVINGS PLAN**

Notes to Financial Statements

As of 31 December 2019 and 2018 and For the Year Ended 31 December 2019

(4) Fixed Income Securities Fund

Contributions made to the Fixed Income Securities Fund (the "Fund") are invested in traditional investment contracts with insurance companies and other financial institutions, and short to intermediate-term fixed income securities or portfolios that are "wrapped" by third-party financial institutions that guarantee principal and a predetermined interest rate yield. The contract issuers of the traditional investment contracts and the wrap providers are highly rated financial institutions. The contracts held in the Fund are deemed fully benefit-responsive as they provide that the Plan's participants may make withdrawals at contract value. As described in Note 2, *Summary of Significant Accounting Policies*, because the contracts are deemed fully benefit-responsive, contract value is the relevant measurement attributable for the contracts held in the Fund. Contract value represents contributions made under the contract, plus earnings, less participant withdrawals and administrative expenses.

No valuation reserves were recorded against the contract value for credit risk of the contract issuers or otherwise for the Fund at 31 December 2019 and 2018.

Key factors that could influence future average interest crediting rates include, but are not limited to the following: the Fund's cash flows, changes in interest rates, total return performance of the bond strategies underlying each of the Fund's contracts, and default or credit failures of any of the securities, investment contracts, or other investments held in the Fund.

Participants may ordinarily direct the withdrawal or transfer of all or a portion of their investment at contract value. Certain events, although considered unlikely and not probable, such as a change in administration or operation of the Plan or the Fund, group terminations, layoffs, or exclusion of group eligibility in the Plan, may limit the ability of participants to access their investments at contract value. The contract issuers may terminate the contracts in the unlikely event of a default by the Plan.

(5) Income Tax Status

The Internal Revenue Service ("IRS") has determined and informed the Company, by letter dated 16 February 2017, that the Plan is designed in accordance with applicable sections of the IRC. The determination letter covered Plan amendments adopted through 14 December 2015. Although the Plan has been amended since receiving the determination letter, the Plan Administrator and the Plan's tax counsel believe that the Plan is designed and is currently being operated in compliance with the applicable requirements of the IRC and, therefore, believe that the Plan is qualified as tax-exempt.

GAAP requires Plan management to evaluate tax positions taken by the Plan and recognize a tax liability (or asset) if the Plan has taken an uncertain position that more likely than not would not be sustained upon examination by the IRS. The Plan Administrator has analyzed the tax positions taken by the Plan, and has concluded that as of 31 December 2019 and 2018, there were no uncertain positions taken or expected to be taken that would require recognition of a liability (or asset) or disclosure in the financial statements. The Plan is subject to routine audits by taxing jurisdictions; however, there are currently no audits for any tax periods in progress. The Plan Administrator believes it is no longer subject to income tax examinations for years prior to 2012.

AIR PRODUCTS AND CHEMICALS, INC.
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Notes to Financial Statements

As of 31 December 2019 and 2018 and For the Year Ended 31 December 2019

(6) Expenses of the Plan

All reasonable third-party fees and expenses for administration of the Plan have been paid by the Plan, including (but not limited to) trustee fees, record-keeping fees, audit fees, proxy voting fees, and communication expenses. Such expenses may be assessed to participant accounts as a quarterly administrative charge. Expenses incident to the management of the Plan's investments are deducted from the earnings of the respective investments.

(7) Plan Termination

Although it has not expressed any intent to do so, the Company has the right under the Plan to discontinue its contributions at any time and to terminate the Plan subject to the provisions of ERISA.

(8) Related-Party Transactions

The Plan holds common stock of the Company, representing qualifying equity securities as defined by ERISA. The Plan held qualifying equity securities valued at \$498,858,000 and \$380,679,000 at 31 December 2019 and 2018, representing 22% and 20% of net assets available for benefits, respectively.

Plan investments include shares of funds managed by Fidelity. Fidelity is the trustee and recordkeeper, as defined by the Plan. Therefore, these transactions qualify as exempt party-in-interest transactions. Fees paid for investment management services were included as a reduction of the return earned on each fund. The Plan's investments in funds managed by Fidelity are valued at \$531,711,000 and \$441,973,000 at 31 December 2019 and 2018, representing 23% and 24% of net assets available for benefits, respectively.

(9) Subsequent Events

Subsequent to year end, there was an outbreak of the novel corona virus ("COVID 19") which impacted the financial markets and the global economy. The outbreak of COVID 19 is still on-going and the magnitude of impact in the financial markets is highly uncertain and cannot be predicted. The effect of this impact has not been reflected in these financial statements and may adversely affect the Plan's net assets available for benefits. The related financial impact and duration cannot be reasonably estimated at this time.

On 27 March 2020, the Coronavirus Aid, Relief, and Economic Security ("CARES") Act was passed by Congress. The CARES Act provides immediate and temporary relief for retirement plan sponsors and their participants with respect to employer contributions, distributions and participant loans. The provisions of the CARES Act may be effective and operationalized immediately, prior to amending the plan document.

The Plan has implemented the following relief provisions, however its future effects on the Plan's net assets available for benefits and changes in net assets available for benefits are uncertain:

- *Coronavirus-related distribution* – Participants may take a coronavirus-related distribution of up to \$100,000 from their retirement plan without a 10% early withdrawal penalty. Eligible distributions can be taken up to December 31, 2020. Coronavirus-related distributions may be repaid within three years.
- *Required minimum distributions ("RMDs")* – RMDs were temporarily suspended for 2020.

AIR PRODUCTS AND CHEMICALS, INC.
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Notes to Financial Statements

As of 31 December 2019 and 2018 and For the Year Ended 31 December 2019

(10) Reconciliation of Financial Statements to Form 5500

The following is a reconciliation of net assets available for benefits per the financial statements at 31 December 2019 and 2018 to Form 5500:

	2019	2018
	(In thousands)	
Net assets available for benefits per the financial statements	\$ 2,289,075	\$ 1,870,498
Adjustment from contract value to fair value for fully benefit-responsive investment contracts	4,188	(663)
Amounts allocated to withdrawing participants	—	(239)
Net assets available for benefits per Form 5500	\$ 2,293,263	\$ 1,869,596

The following is a reconciliation of benefits paid to participants per the financial statements for the year ended 31 December 2019 to the Form 5500:

	2019
	(In thousands)
Distributions to participants per the financial statements	\$ 181,680
Amounts allocated to withdrawing participants at 31 December 2019	—
Amounts allocated to withdrawing participants at 31 December 2018	(239)
Distributions to participants per Form 5500	\$ 181,441

The following is a reconciliation of the net increase in net assets per the financial statements for the year ended 31 December 2019 to the Form 5500:

	2019
	(In thousands)
Increase in net assets per the financial statements	\$ 418,577
Change in the adjustment from contract value to fair value for fully benefit-responsive investment contracts	4,851
Change in amounts allocated to withdrawing participants	239
Net increase per Form 5500	\$ 423,667

Air Products and Chemicals, Inc. Retirement Savings Plan
Employer ID No: 23-1274455, Plan No: 001
Schedule H, Part IV, Line 4(i) – Schedule of Assets (Held at End of Year)
As of 31 December 2019
(In thousands except for share data)

Identity of issue	Description	Current value
Interest-bearing cash:		
* Fidelity Trust Management Company	Cash	\$ 6,126
Money Market Fund:		
* Fidelity Investments Money Market Government Portfolio - Institutional Class	Money market fund; par value	39,478
Life Cycle Funds (Lending Series Fund Class V):		
SS Target Retirement Income Securities	Commingled investment pool	17,630
SS Target Retirement 2015 Securities	Commingled investment pool	15,967
SS Target Retirement 2020 Securities	Commingled investment pool	67,462
SS Target Retirement 2025 Securities	Commingled investment pool	72,885
SS Target Retirement 2030 Securities	Commingled investment pool	88,922
SS Target Retirement 2035 Securities	Commingled investment pool	40,535
SS Target Retirement 2040 Securities	Commingled investment pool	53,794
SS Target Retirement 2045 Securities	Commingled investment pool	28,480
SS Target Retirement 2050 Securities	Commingled investment pool	24,698
SS Target Retirement 2055 Securities	Commingled investment pool	17,469
SS Target Retirement 2060 Securities	Commingled investment pool	3,762
Corporate Bond Fund:		
Western Asset Core Plus Bond CIF R1	Commingled investment pool	91,188
Bond Index Fund:		
Vanguard Total Bond Market Index Fund	Mutual fund shares: 2,594,541	28,670
Balanced Fund:		
Dodge & Cox Balanced Fund	Mutual fund shares: 1,278,770	129,923
S&P 500 Index Fund:		
* Fidelity 500 Index Fund	Mutual fund shares: 1,932,649	216,495
Extended Market Index Fund:		
* Fidelity Extended Market Index Fund	Mutual fund shares: 462,250	30,088
Mid-Cap Core Fund:		
Principal Funds Inc. MidCap Fund Institutional Class	Mutual fund shares: 2,284,508	70,614
Large Cap Value Fund:		
Vanguard Windsor II Fund Admiral	Mutual fund shares: 2,704,429	174,706
Large Cap Growth Fund:		
JPMCB Large Cap Growth Fund	Commingled investment pool	125,332
Limited Term Government Fund:		
* Fidelity Limited Term Government Fund	Mutual fund shares: 1,514	15
International Stock Funds:		
* Fidelity International Discovery Commingled Pool	Commingled investment pool	70,247
Vanguard Total International Stock Index Fund	Mutual fund shares: 204,032	24,376
Small Cap Core Fund:		
* FIAM Small Capitalization Core Commingled Pool	Commingled investment pool	108,429
Common Stock:		
* Air Products and Chemicals, Inc. Common Stock	Common stock shares: 2,122,820; Historical Cost: \$192,471	498,858
Fixed Income Securities Fund:		
Invesco Stable Value Fund	Guaranteed investment contracts; 2.73% (average yield) in 2019	177,418
Self-Directed Brokerage Account:		
* Fidelity BrokerageLink	Brokerage account for many publicly available mutual funds	54,232
	Total investments	\$ 2,277,799
* Participant loans	Interest rates ranging from 4.25% to 10.50% with various maturity dates	\$ 14,707

* Represents investments with a party in interest.

Note: Cost information not presented because investments are participant directed.
See accompanying Report of Independent Registered Public Accounting Firm.

INDEX TO EXHIBIT

Exhibit No.	Description
23.1	Consent of Independent Registered Public Accounting Firm

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the trustees (or other persons who administer the employee benefit plan) have duly caused this Annual Report to be signed on its behalf by the undersigned hereunto duly authorized.

Air Products and Chemicals, Inc. Retirement Savings
Plan

(Name of Plan)

Date: 26 June 2020

By: /s/ Sean D. Major

Sean D. Major
Executive Vice President, General Counsel and
Secretary

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in Registration Statement No. 333-204388 on Form S-8 of our report dated 26 June 2020, relating to the financial statements and financial statement schedules of Air Product and Chemical Inc. Retirement Savings Plan, appearing in this Annual Report on Form 11-K of Air Product and Chemical Inc. Retirement Savings Plan for the year ended 31 December 2019.

/s/ DELOITTE & TOUCHE LLP

Philadelphia, Pennsylvania
26 June 2020