

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

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended 30 September 2021.

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission file number **001-04534**



AIR PRODUCTS AND CHEMICALS, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

23-1274455

(I.R.S. Employer Identification No.)

1940 Air Products Boulevard
Allentown, Pennsylvania 18106-5500
(Address of principal executive offices) (Zip Code)
610-481-4911
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$1.00 per share	APD	New York Stock Exchange
1.000% Euro Notes due 2025	APD25	New York Stock Exchange
0.500% Euro Notes due 2028	APD28	New York Stock Exchange
0.800% Euro Notes due 2032	APD32	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C.7262(b)) by the registered public accounting firm that prepared or issued its audit report.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes No

The aggregate market value of the voting stock held by non-affiliates of the registrant on 31 March 2021 was approximately \$62.1 billion. For purposes of the foregoing calculations, all directors and/or executive officers have been deemed to be affiliates, but the registrant disclaims that any such director and/or executive officer is an affiliate. The number of shares of common stock outstanding as of 31 October 2021 was 221,460,382.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement for the Annual Meeting of Shareholders to be held on 3 February 2022 are incorporated by reference into Part III.

AIR PRODUCTS AND CHEMICALS, INC.
ANNUAL REPORT ON FORM 10-K
For the fiscal year ended 30 September 2021

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FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains “forward-looking statements” within the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include all statements that do not relate solely to historical or current facts and can generally be identified by words such as “anticipate,” “believe,” “could,” “estimate,” “expect,” “forecast,” “future,” “goal,” “intend,” “may,” “outlook,” “plan,” “positioned,” “possible,” “potential,” “project,” “should,” “target,” “will,” “would,” and similar expressions or variations thereof, or the negative thereof, but these terms are not the exclusive means of identifying such statements. Forward-looking statements are based on management’s expectations and assumptions as of the date of this report and are not guarantees of future performance. You are cautioned not to place undue reliance on our forward-looking statements.

Forward-looking statements may relate to a number of matters, including expectations regarding revenue, margins, expenses, earnings, tax provisions, cash flows, pension obligations, share repurchases or other statements regarding economic conditions or our business outlook; statements regarding plans, projects, strategies and objectives for our future operations, including our ability to win new projects and execute the projects in our backlog; and statements regarding our expectations with respect to pending legal claims or disputes. While forward-looking statements are made in good faith and based on assumptions, expectations and projections that management believes are reasonable based on currently available information, actual performance and financial results may differ materially from projections and estimates expressed in the forward-looking statements because of many factors, including, without limitation:

- the duration and impacts of the ongoing COVID-19 global pandemic and efforts to contain its transmission, including the effect of these factors on our business, our customers, economic conditions and markets generally;
- changes in global or regional economic conditions, inflation, and supply and demand dynamics in the market segments we serve, or in the financial markets that may affect the availability and terms on which we may obtain financing;
- the ability to implement price increases to offset cost increases;
- disruptions to our supply chain and related distribution delays and cost increases;
- risks associated with having extensive international operations, including political risks, risks associated with unanticipated government actions and risks of investing in developing markets;
- project delays, contract terminations, customer cancellations, or postponement of projects and sales;
- our ability to develop, operate, and manage costs of large-scale and technically complex projects, including gasification and hydrogen projects;
- the future financial and operating performance of major customers, joint ventures, and equity affiliates;
- our ability to develop, implement, and operate new technologies;
- our ability to execute the projects in our backlog and refresh our pipeline of new projects;
- tariffs, economic sanctions and regulatory activities in jurisdictions in which we and our affiliates and joint ventures operate;
- the impact of environmental, tax, or other legislation, as well as regulations and other public policy initiatives affecting our business and the business of our affiliates and related compliance requirements, including legislation, regulations, or policies intended to address global climate change;
- changes in tax rates and other changes in tax law;
- the timing, impact, and other uncertainties relating to acquisitions and divestitures, including our ability to integrate acquisitions and separate divested businesses, respectively;
- risks relating to cybersecurity incidents, including risks from the interruption, failure or compromise of our information systems;

FORWARD-LOOKING STATEMENTS (CONTINUED)

- catastrophic events, such as natural disasters and extreme weather events, public health crises, acts of war, or terrorism;
- the impact on our business and customers of price fluctuations in oil and natural gas and disruptions in markets and the economy due to oil and natural gas price volatility;
- costs and outcomes of legal or regulatory proceedings and investigations;
- asset impairments due to economic conditions or specific events;
- significant fluctuations in inflation, interest rates and foreign currency exchange rates from those currently anticipated;
- damage to facilities, pipelines or delivery systems, including those we own or operate for third parties;
- availability and cost of electric power, natural gas, and other raw materials; and
- the success of productivity and operational improvement programs.

In addition to the foregoing factors, forward-looking statements contained herein are qualified with respect to the risks disclosed elsewhere in this document, including in Item 1A, *Risk Factors*, Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations*, and Item 7A, *Quantitative and Qualitative Disclosures About Market Risk*. Any of these factors, as well as those not currently anticipated by management, could cause our results of operations, financial condition or liquidity to differ materially from what is expressed or implied by any forward-looking statement. Except as required by law, we disclaim any obligation or undertaking to update or revise any forward-looking statements contained herein to reflect any change in assumptions, beliefs, or expectations or any change in events, conditions, or circumstances upon which any such forward-looking statements are based.

PART I

Item 1. Business.

Air Products and Chemicals, Inc., a Delaware corporation originally founded in 1940, serves customers globally with a unique portfolio of products, services, and solutions that include atmospheric gases, process and specialty gases, equipment, and services. Focused on serving energy, environment and emerging markets, we provide essential industrial gases, related equipment, and applications expertise to customers in dozens of industries, including refining, chemicals, metals, electronics, manufacturing, and food and beverage. We are the world's largest supplier of hydrogen and have built leading positions in growth markets such as helium and liquefied natural gas ("LNG") process technology and equipment. We develop, engineer, build, own, and operate some of the world's largest industrial gas projects, including gasification projects that sustainably convert abundant natural resources into syngas for the production of high-value power, fuels, and chemicals and are developing carbon capture projects and world-scale low carbon and carbon-free hydrogen projects that will support global transportation and energy transition away from fossil fuels.

As used in this report, unless the context indicates otherwise, the terms "we," "our," "us," the "Company," "Air Products," or "registrant" include controlled subsidiaries, affiliates, and predecessors of Air Products and our controlled subsidiaries and affiliates.

Except as otherwise noted, the description of our business below reflects our continuing operations. Refer to Note 5, *Discontinued Operations*, to the consolidated financial statements for activity associated with discontinued operations.

During the fiscal year ended 30 September 2021 (“fiscal year 2021”), we reported our continuing operations in five reporting segments under which we managed our operations, assessed performance, and reported earnings: Industrial Gases – Americas; Industrial Gases – EMEA (Europe, Middle East, and Africa); Industrial Gases – Asia; Industrial Gases – Global; and Corporate and other. The discussion that follows is based on those operations. Refer to Note 23, *Business Segment and Geographic Information*, to the consolidated financial statements for additional details on our reportable business segments.

On 4 November 2021, we announced the reorganization of our industrial gases segments effective 1 October 2021. Refer to Note 24, *Subsequent Events*, for additional information.

Industrial Gases Business

Our Industrial Gases business produces atmospheric gases, such as oxygen, nitrogen, and argon; process gases, such as hydrogen, helium, carbon dioxide (CO₂), carbon monoxide, and syngas; and specialty gases. Atmospheric gases are produced through various air separation processes, of which cryogenic is the most prevalent. Process gases are produced by methods other than air separation. For example, hydrogen, carbon monoxide, and syngas are produced by steam methane reforming of natural gas and by the gasification of liquid and solid hydrocarbons. Hydrogen is produced by purifying byproduct sources obtained from the chemical and petrochemical industries. Helium is produced as a byproduct of gases extracted from underground reservoirs, primarily natural gas, but also CO₂ purified before resale. The Industrial Gases business also develops, builds, and operates equipment for the production or processing of gases, such as air separation units and non-cryogenic generators.

Our Industrial Gases business is organized and operated regionally. The regional Industrial Gases segments supply gases, related equipment, and applications in the relevant region to diversified customers in many industries, including those in refining, chemicals, metals, electronics, manufacturing, and food and beverage. Hydrogen is used by refiners to facilitate the conversion of heavy crude feedstock and lower the sulfur content of gasoline and diesel fuels, as well as in the developing hydrogen-for-mobility markets. We have hydrogen fueling stations that support commercial markets in California and Japan as well as demonstration projects in Europe, Saudi Arabia, and other parts of Asia. The chemicals industry uses hydrogen, oxygen, nitrogen, carbon monoxide, and syngas as feedstocks in the production of many basic chemicals. The energy production industry uses nitrogen injection for enhanced recovery of oil and natural gas and oxygen for gasification. Oxygen is used in combustion and industrial heating applications, including in the steel, certain nonferrous metals, glass, and cement industries. Nitrogen applications are used in food processing for freezing and preserving flavor, and nitrogen is used for inerting in various fields, including the metals, chemical, and semiconductor industries. Helium is used in laboratories and healthcare for cooling and in other industries for pressurizing, purging, and lifting. Argon is used in the metals and other industries for its unique inerting, thermal conductivity, and other properties. Industrial gases are also used in welding and providing healthcare and are utilized in various manufacturing processes to make them more efficient and to optimize performance.

Industrial gases are generally produced at or near the point of use given the complexity and inefficiency with storing molecules at low temperatures. Helium, however, is generally sourced globally, at long distances from point of sale. As a result, we maintain an inventory of helium stored in our fleet of ISO containers as well as at the U.S. Bureau of Land Management underground storage facility in Amarillo, Texas.

We distribute gases to our sale of gas customers through different supply modes depending on various factors including the customer's volume requirements and location. Our supply modes are as follows:

- *Liquid Bulk*—Product is delivered in bulk (in liquid or gaseous form) by tanker or tube trailer and stored, usually in its liquid state, in equipment that we typically design and install at the customer's site for vaporizing into a gaseous state as needed. Liquid bulk sales are usually governed by three- to five-year contracts.
- *Packaged Gases*—Small quantities of product are delivered in either cylinders or dewars. We operate packaged gas businesses in Europe, Asia, and Latin America. In the United States, our packaged gas business sells products (principally helium) only for the electronics and magnetic resonance imaging industries.
- *On-Site Gases*—Large quantities of hydrogen, nitrogen, oxygen, carbon monoxide, and syngas (a mixture of hydrogen and carbon monoxide) are provided to customers, principally in the energy production and refining, chemical, and metals industries worldwide, that require large volumes of gases and have relatively constant demand. Gases are produced and supplied by large facilities we construct or acquire on or near the customers' facilities or by pipeline systems from centrally located production facilities. These sale of gas contracts are generally governed by 15- to 20-year contracts. We also deliver smaller quantities of product through small on-site plants (cryogenic or non-cryogenic generators), typically via a 10- to 15-year sale of gas contract.

Electricity is the largest cost component in the production of atmospheric gases. Steam methane reformers utilize natural gas as the primary raw material and gasifiers use liquid and solid hydrocarbons as the principal raw material for the production of hydrogen, carbon monoxide, and syngas. We mitigate electricity, natural gas, and hydrocarbon price fluctuations contractually through pricing formulas, surcharges, and cost pass-through and tolling arrangements. During fiscal year 2021, no significant difficulties were encountered in obtaining adequate supplies of power and natural gas.

We obtain helium from a number of sources globally, including crude helium for purification from the U.S. Bureau of Land Management's helium reserve.

The regional Industrial Gases segments also include our share of the results of several joint ventures accounted for by the equity method, which we report in our financial statements as income from equity affiliates. The largest of these joint ventures operate in China, India, Italy, Mexico, Saudi Arabia, South Africa, and Thailand.

Each of the regional Industrial Gases segments competes against three global industrial gas companies: Air Liquide S.A., Messer, and Linde plc, as well as regional competitors. Competition in Industrial Gases is based primarily on price, reliability of supply, and the development of industrial gas applications. We derive a competitive advantage in locations where we have pipeline networks, which enable us to provide reliable and economic supply of products to our larger customers.

Overall regional industrial gases sales constituted approximately 92%, 94%, and 96% of consolidated sales in fiscal years 2021, 2020, and 2019, respectively. Sales of atmospheric gases constituted approximately 47%, 47%, and 46% of consolidated sales in fiscal years 2021, 2020, and 2019, respectively, while sales of tonnage hydrogen, syngas, and related products constituted approximately 22%, 22%, and 26% of consolidated sales in fiscal years 2021, 2020, and 2019, respectively.

Industrial Gases Equipment

We design and manufacture equipment for air separation, hydrocarbon recovery and purification, natural gas liquefaction, and liquid helium and liquid hydrogen transport and storage. The Industrial Gases – Global segment includes activity primarily related to the sale of cryogenic and gas processing equipment for air separation. The equipment is sold worldwide to customers in a variety of industries, including chemical and petrochemical manufacturing, oil and gas recovery and processing, and steel and primary metals processing. The Corporate and other segment includes: our LNG equipment business, our Gardner Cryogenics business fabricating helium and hydrogen transport and storage containers, and our Rotoflow business, which manufactures turboexpanders and other precision rotating equipment. Steel, aluminum, and capital equipment subcomponents (compressors, etc.) are the principal raw materials in the manufacturing of equipment. Raw materials for individual projects typically are acquired under firm purchase agreements. Equipment is produced at our manufacturing sites with certain components being procured from subcontractors and vendors. Competition in the equipment business is based primarily on plant efficiency, service, technical know-how and price, as well as schedule and plant performance guarantees. Sale of equipment constituted approximately 8%, 6%, and 4% of consolidated sales in fiscal years 2021, 2020, and 2019, respectively.

Our backlog of equipment orders was approximately \$1.3 billion on 30 September 2021 (as compared to a total backlog of approximately \$1.6 billion on 30 September 2020). We estimate that approximately half of the total equipment sales backlog as of 30 September 2021 will be recognized as revenue during fiscal year 2022, dependent on execution schedules of the relevant projects.

International Operations

Through our subsidiaries, affiliates, and joint ventures accounted for using the equity method, we conduct business in 53 countries outside the United States. Our international businesses are subject to risks customarily encountered in foreign operations, including fluctuations in foreign currency exchange rates and controls, tariffs, trade sanctions, and import and export controls, and other economic, political, and regulatory policies of local governments described in Item 1A, *Risk Factors*, below.

We have majority or wholly owned foreign subsidiaries that operate in Canada; 18 European countries (including the Netherlands, Spain, and the United Kingdom); 11 Asian countries (including China, South Korea, and Taiwan); seven Latin American countries (including Brazil and Chile); six countries in the Middle East (including Saudi Arabia), and three African countries. We also own less-than-controlling interests in entities operating in Europe, Asia, Latin America, the Middle East, and Africa (including China, India, Italy, Mexico, Oman, Saudi Arabia, South Africa, and Thailand).

Financial information about our foreign operations and investments is included in Note 7, *Summarized Financial Information of Equity Affiliates*; Note 21, *Income Taxes*; and Note 23, *Business Segment and Geographic Information*, to the consolidated financial statements included under Item 8, below. Information about foreign currency translation is included under “Foreign Currency” in Note 1, *Major Accounting Policies*, and information on our exposure to currency fluctuations is included in Note 12, *Financial Instruments*, to the consolidated financial statements, included under Item 8, below, and in “Foreign Currency Exchange Rate Risk,” included under Item 7A, below.

Technology Development

We pursue a market-oriented approach to technology development through research and development, engineering, and commercial development processes. We conduct research and development principally in our laboratories located in the United States (Trexlerstown, Pennsylvania), the United Kingdom (Basingstoke and Carrington), Spain (Barcelona), China (Shanghai), and Saudi Arabia (Dhahran). We also fund and cooperate in research and development programs conducted by a number of major universities and undertake research work funded by others, including the United States government.

Development of technology for use within the Industrial Gases business focuses primarily on new and improved processes and equipment for the production and delivery of industrial gases and new or improved applications for industrial gas products.

During fiscal year 2021, we owned approximately 780 United States patents, approximately 3,480 foreign patents, and were a licensee under certain patents owned by others. While the patents and licenses are considered important, we do not consider our business as a whole to be materially dependent upon any particular patent, patent license, or group of patents or licenses.

Environmental Regulation

We are subject to various environmental laws, regulations, and public policies in the countries in which we have operations. Compliance with these measures often results in higher capital expenditures and costs. In the normal course of business, we are involved in legal proceedings under the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA," the federal Superfund law); Resource Conservation and Recovery Act ("RCRA"); and similar state and foreign environmental laws relating to the designation of certain sites for investigation or remediation. Our accounting policy for environmental expenditures is discussed in Note 1, *Major Accounting Policies*, and environmental loss contingencies are discussed in Note 16, *Commitments and Contingencies*, to the consolidated financial statements, included under Item 8, below.

Some of our operations are within jurisdictions that have or are developing regulatory regimes governing emissions of greenhouse gases ("GHG"), including CO₂. These include existing coverage under the European Union Emission Trading System, the California Cap-and-Trade Program, China's Emission Trading Scheme and its nation-wide expansion, and South Korea's Emission Trading Scheme. In the Netherlands, a CO₂ emissions tax was enacted on 1 January 2021. In Canada, Alberta's Technology Innovation and Emission Reduction System went into effect 1 January 2020. In Ontario, Environment & Climate Change Canada's Output Based Pricing System ("OBPS") is currently in effect, however, effective 1 January 2022, Ontario's GHG Emissions Performance Standards program will be used in lieu of adherence to the OBPS. In addition, the U.S. Environmental Protection Agency ("EPA") requires mandatory reporting of GHG emissions and is regulating GHG emissions for new construction and major modifications to existing facilities. Some jurisdictions have various mechanisms to target the power sector to achieve emission reductions, which often result in higher power costs.

Increased public concern may result in more international, U.S. federal, and/or regional requirements to reduce or mitigate the effects of GHG emissions. Although uncertain, these developments could increase our costs related to consumption of electric power, hydrogen production and application of our gasification technology. We believe we will be able to mitigate some of the increased costs through contractual terms, but the lack of definitive legislation or regulatory requirements prevents an accurate estimate of the long-term impact these measures will have on our operations. Any legislation that limits or taxes GHG emissions could negatively impact our growth, increase our operating costs, or reduce demand for certain of our products.

Regulation of GHG may also produce new opportunities for us. We continue to develop technologies to help our facilities and our customers lower energy consumption, improve efficiency and lower emissions. We see significant opportunities for gasification, carbon capture technologies and hydrogen for mobility and energy transition.

We estimate that we spent approximately \$8 million, \$4 million, and \$5 million in fiscal years 2021, 2020, and 2019, respectively, on capital projects reflected in continuing operations to control pollution. Capital expenditures to control pollution are estimated to be approximately \$8 million in both fiscal years 2022 and 2023.

For additional information regarding environmental matters, refer to Note 16, *Commitments and Contingencies*, to the consolidated financial statements.

Employees

We believe our employees are our most valuable asset and are critical to our success as an organization. Our goal is to be the safest, most diverse and most profitable industrial gas company in the world, providing excellent service to our customers. Integral to our success is the continued development of our 4S culture (Safety, Speed, Simplicity and Self-Confidence) and creating a work environment where our employees feel that they belong and matter. Our talent related initiatives, including employee recruitment and development, diversity and inclusion and compensation and benefit programs, are focused on building and retaining the world-class and talented staff that is needed to meet our goals.

On 30 September 2021, we had approximately 20,875 employees, of whom approximately 20,625 were full-time and approximately 15,575 were located outside the United States. We have collective bargaining agreements with unions and works councils at certain locations that expire on various dates over the next four years. We consider relations with our employees to be good.

Our 2021 Sustainability Report details our growth strategy and the role our most valuable asset and our competitive advantage, our employees, play in achieving our goals. Rooted in our framework of Grow- Conserve- Care, our higher purpose is to bring people together to collaborate and innovate solutions to the world's most significant energy and environmental sustainability challenges. Our 2021 Sustainability Report details how we care for our employees.

Safety

Safety is fundamental to who we are as a company. Safety is a shared value, and our employees' commitment to safety is demonstrated in many ways every day. Safety is a critical component of everything we do, everywhere in the world. Our goal is to be the safest industrial gas company in the world.

Diversity, Inclusion, and Belonging

Our 2021 Sustainability Report sets forth our announced goals to further increase the percentage of women and U.S. minorities in professional and managerial roles and the recruitment and talent development strategies we have in place to ensure we meet these goals. Since the publication of our 2021 Sustainability Report, we have announced goals to further increase the percentage of women and U.S. minorities in professional and managerial roles. By 2025, we aim to achieve at least 28 percent female representation in the professional and managerial population globally. Due to significant increase of our U.S. minority representation, our new 2025 diversity goal is to achieve at least 30 percent U.S. minority representation in professional and managerial roles. We established these targets following analysis of our global employee representation metrics and future talent needs, as well as assessing industry benchmarks and peer companies.

Compensation

As detailed in our 2021 Sustainability Report, in order to create a diverse workplace, individuals must be compensated fairly and equitably. A work environment where employees know they belong and matter includes fair and equitable pay. Our pay practices apply equally to all employees irrespective of gender, race, religion, disability, age, or any other form of personal difference. We strive to pay competitively in local markets where we do business and compete for talent. We benchmark our compensation to ensure that we are keeping pace with the market to provide competitive pay and benefits. A gender pay equity analysis completed by a third-party in 2020 resulted in no significant adverse findings for minorities in the U.S. and for females globally.

We value the contributions of our employees, particularly in the face of the challenges posed by the COVID-19 pandemic. Many of our employees are on the front line during the pandemic, keeping our plants running and delivering to our customers the products they need. When possible, employees have been working from home to help maintain their health and safety as well as business continuity. We have not laid off any of our employees or reduced their salaries due to COVID-19.

Seasonality

Our businesses are not subject to seasonal fluctuations to any material extent.

Inventories

We maintain limited inventory where required to facilitate the supply of products to customers on a reasonable delivery schedule. Inventory consists primarily of crude helium, industrial gas, and specialty gas inventories supplied to customers through liquid bulk and packaged gases supply modes.

Customers

We do not have a homogeneous customer base or end market, and no single customer accounts for more than 10% of our consolidated revenues. We do have concentrations of customers in specific industries, primarily refining, chemicals, and electronics. Within each of these industries, we have several large-volume customers with long-term contracts. A negative trend affecting one of these industries, or the loss of one of these major customers, although not material to our consolidated revenue, could have an adverse impact on our financial results.

Governmental Contracts

Our business is not subject to a government entity's renegotiation of profits or termination of contracts that would be material to our business as a whole.

Available Information

All periodic and current reports, registration statements, proxy statements, and other filings that we are required to file with the Securities and Exchange Commission ("SEC"), including our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) of the Securities Exchange Act of 1934 (the "Exchange Act"), are available free of charge through our website at www.airproducts.com. Such documents are available as soon as reasonably practicable after electronic filing of the material with the SEC. All such reports filed during the period covered by this report were available on our website on the same day as filing. In addition, our filings with the SEC are available free of charge on the SEC's website, www.sec.gov.

Our Executive Officers

Our executive officers and their respective positions and ages on 18 November 2021 follow. Information with respect to offices held is stated in fiscal years.

Name	Age	Office
Seifi Ghasemi	77	Chairman, President, and Chief Executive Officer (became Chairman, President and Chief Executive Officer in 2014 and previously served as Chairman and Chief Executive Officer of Rockwood Holdings, Inc. from 2001 to 2014). Mr. Ghasemi is a member and Chairman of the Board of Directors and the Chairman of the Executive Committee of the Board of Directors.
Sean D. Major	57	Executive Vice President, General Counsel and Secretary (Executive Vice President and General Counsel since May 2017 and Secretary since December 2017). Previously, Mr. Major served as Executive Vice President, General Counsel and Secretary for Joy Global Inc. from 2007 to 2017.
Melissa N. Schaeffer	42	Senior Vice President and Chief Financial Officer (became Senior Vice President and Chief Financial Officer in August 2021). Ms. Schaeffer joined the Company in 2016 and most recently served as Vice President, Finance – GEMTE, Americas, Middle East, and India from 2020 to 2021 and previously served as Vice President, Chief Audit Executive from 2016 to 2020.
Dr. Samir J. Serhan	60	Chief Operating Officer (Executive Vice President since December 2016 and Chief Operating Officer since May 2020). Dr. Serhan served as President, Global HyCO, from 2014 to 2016 for Praxair Inc. From 2000-2014, he worked in leadership positions in the U.S. and Germany for The Linde Group, including as Managing Director of Linde Engineering from 2008-2014.

Item 1A. Risk Factors.

Our operations are affected by various risks, many of which are beyond our control. In evaluating investment in the Company and the forward-looking information contained in this Annual Report on Form 10-K or presented elsewhere from time to time, you should carefully consider the risk factors discussed below. Any of these risks could have a material adverse effect on our business, operating results, financial condition, and the actual outcome of matters as to which forward-looking statements are made and could adversely affect the value of an investment in our securities. The risks described below are not all inclusive but are designed to highlight what we believe are important factors to consider when evaluating our expectations. In addition to such risks, there may be additional risks and uncertainties that adversely affect our business, performance, or financial condition in the future that are not presently known, are not currently believed to be significant, or are not identified below because they are common to all businesses.

Risks Related to Economic Conditions

The COVID-19 global pandemic may materially and adversely impact our business, financial condition and results of operations.

The COVID-19 global pandemic, including resurgences and variants of the virus that causes COVID-19, and efforts to reduce its spread have led, and may continue to lead to, significant changes in levels of economic activity and significant disruption and volatility in global markets. These factors have led, and may continue to lead, to reduced demand for industrial gas products, particularly in our merchant business. In addition, COVID-19 may result in reduced sales in our other businesses, lower returns for certain of our projects, and the potential delay or cancellation of certain projects in our pipeline.

In addition, we are monitoring the health of our employees and many of our employees, including those based at our headquarters, are working remotely in accordance with health safety guidance and applicable governmental orders. Action by health or other governmental authorities requiring the closure of our facilities, recommending other physical distancing measures, or mandating vaccination against COVID-19 could negatively impact our business and those of our service providers and customers. Although we have business continuity and other safeguards in place, we cannot be certain that they will be fully effective for extended periods of time.

As the pandemic and responses to it continue to evolve we may experience further adverse impacts on our operations, and our ability to access capital on favorable terms, or at all, may be impaired. In addition, we may face unpredictable increases in demand for certain of our products when restrictions on business and travel end. If demand for our products exceeds our capacity, it could adversely affect our financial results and customer relationships. Although the duration and ultimate impact of these factors is unknown at this time, the decline in economic conditions due to COVID-19, or another disease-causing similar impacts, may adversely affect our business, financial condition and results of operations and such impact may be material.

Further, to the extent COVID-19 adversely affects our business, financial condition, and results of operations and global economic conditions more generally, it may also have the effect of heightening many of the other risks described herein.

Changes in global and regional economic conditions, the markets we serve, or the financial markets may adversely affect our results of operations and cash flows.

Unfavorable conditions in the global economy or regional economies, the markets we serve or financial markets may decrease the demand for our goods and services and adversely impact our revenues, operating results, and cash flows.

Demand for our products and services depends in part on the general economic conditions affecting the countries and markets in which we do business. Weak economic conditions in certain geographies and changing supply and demand balances in the markets we serve have negatively impacted demand for our products and services in the past, including most recently due to COVID-19, and may do so in the future. Reduced demand for our products and services would have a negative impact on our revenues and earnings. In addition, reduced demand could depress sales, reduce our margins, constrain our operating flexibility or reduce efficient utilization of our manufacturing capacity, or result in charges which are unusual or nonrecurring. Excess capacity in our manufacturing facilities or those of our competitors could decrease our ability to maintain pricing and generate profits.

In addition, our operating results in one or more segments may be affected by uncertain or deteriorating economic conditions for particular customer markets within a segment. A decline in the industries served by our customers or adverse events or circumstances affecting individual customers can reduce demand for our products and services and impair the ability of such customers to satisfy their obligations to us, resulting in uncollected receivables, unanticipated contract terminations, project delays or the inability to recover plant investments, any of which may negatively impact our financial results.

Weak overall demand or specific customer conditions may also cause customer shutdowns or defaults or otherwise make us unable to operate facilities profitably and may force sale or abandonment of facilities and equipment or prevent projects from coming on-stream when expected. These or other events associated with weak economic conditions or specific market, product, or customer events may require us to record an impairment on tangible assets, such as facilities and equipment, or intangible assets, such as intellectual property or goodwill, which would have a negative impact on our financial results.

Our extensive international operations can be adversely impacted by operational, economic, political, security, legal, and currency translation risks that could decrease profitability.

In fiscal year 2021, over 60% of our sales were derived from customers outside the United States and many of our operations, suppliers, and employees are located outside the United States. Our operations in foreign jurisdictions may be subject to risks including exchange control regulations, import and trade restrictions, trade policy and other potentially detrimental domestic and foreign governmental practices or policies affecting U.S. companies doing business abroad. Changing economic and political conditions within foreign jurisdictions, strained relations between countries, or the imposition of tariffs or international sanctions can cause fluctuations in demand, price volatility, supply disruptions, or loss of property. The occurrence of any of these risks could have a material adverse impact on our financial condition, results of operation, and cash flows.

Our growth strategies depend in part on our ability to further penetrate markets outside the United States, particularly in markets such as China, India, Indonesia, and the Middle East, and involve significantly larger and more complex projects, including gasification and large-scale hydrogen projects, some in regions where there is the potential for significant economic and political disruptions. We are actively investing large amounts of capital and other resources, in some cases through joint ventures, in developing markets, which we believe to have high growth potential. Our operations in these markets may be subject to greater risks than those faced by our operations in mature economies, including political and economic instability, project delay or abandonment due to unanticipated government actions, inadequate investment in infrastructure, undeveloped property rights and legal systems, unfamiliar regulatory environments, relationships with local partners, language and cultural differences and increased difficulty recruiting, training and retaining qualified employees. In addition, our properties and contracts in these locations may be subject to seizure and cancellation, respectively, without full compensation for loss. Successful operation of particular facilities or execution of projects may be disrupted by civil unrest, acts of war, sabotage or terrorism, and other local security concerns. Such concerns may require us to incur greater costs for security or require us to shut down operations for a period of time.

Furthermore, because the majority of our revenue is generated from sales outside the United States, we are exposed to fluctuations in foreign currency exchange rates. Our business is primarily exposed to translational currency risk as the results of our foreign operations are translated into U.S. dollars at current exchange rates throughout the fiscal period. Our policy is to minimize cash flow volatility from changes in currency exchange rates. We choose not to hedge the translation of our foreign subsidiaries' earnings into dollars. Accordingly, reported sales, net earnings, cash flows, and fair values have been, and in the future will be, affected by changes in foreign exchange rates. For a more detailed discussion of currency exposure, see Item 7A, *Quantitative and Qualitative Disclosures About Market Risk*, below.

Risks Related to Our Business

Operational and project execution risks, particularly with respect to our largest projects, may adversely affect our operations or financial results.

A significant and growing portion of our business involves gasification and other large-scale projects that involve challenging engineering, procurement and construction phases that may last up to several years and involve the investment of billions of dollars. These projects are technically complex, often reliant on significant interaction with government authorities and face significant financing, development, operational and reputational risks. We may encounter difficulties in engineering, delays in designs or materials provided by the customer or a third party, equipment and materials delivery delays, schedule changes, customer scope changes, delays related to obtaining regulatory permits and rights-of-way, inability to find adequate sources of labor in the locations where we are building new plants, weather-related delays, delays by customers' contractors in completing their portion of a project, technical or transportation difficulties, cost overruns, supply difficulties, geopolitical risks and other factors, many of which are beyond our control, that may impact our ability to complete a project within the original delivery schedule. In some cases, delays and additional costs may be substantial, and we may be required to cancel a project and/or compensate the customer for the delay. We may not be able to recover any of these costs. In addition, in some cases we seek financing for large projects and face market risk associated with the availability and terms of such financing. These financing arrangements may require that we comply with certain performance requirements which, if not met, could result in default and restructuring costs or other losses. All of these factors could also negatively impact our reputation or relationships with our customers, suppliers and other third parties, any of which could adversely affect our ability to secure new projects in the future.

The operation of our facilities, pipelines, and delivery systems inherently entails hazards that require continuous oversight and control, such as pipeline leaks and ruptures, fire, explosions, toxic releases, mechanical failures, vehicle accidents, or cyber incidents. If operational risks materialize, they could result in loss of life, damage to the environment, or loss of production, all of which could negatively impact our ongoing operations, reputation, financial results, and cash flows. In addition, our operating results are dependent on the continued operation of our production facilities and our ability to meet customer requirements, which depend, in part, on our ability to properly maintain and replace aging assets.

We are subject to extensive government regulation in the jurisdictions in which we do business. Regulations addressing, among other things, import/export restrictions, anti-bribery and corruption, and taxes, can negatively impact our financial condition, results of operation, and cash flows.

We are subject to government regulation in the United States and in the foreign jurisdictions where we conduct business. The application of laws and regulations to our business is sometimes unclear. Compliance with laws and regulations may involve significant costs or require changes in business practices that could result in reduced profitability. If there is a determination that we have failed to comply with applicable laws or regulations, we may be subject to penalties or sanctions that could adversely impact our reputation and financial results. Compliance with changes in laws or regulations can result in increased operating costs and require additional, unplanned capital expenditures. Export controls or other regulatory restrictions could prevent us from shipping our products to and from some markets or increase the cost of doing so. Changes in tax laws and regulations and international tax treaties could affect the financial results of our businesses. Increasingly aggressive enforcement of anti-bribery and anti-corruption requirements, including the U.S. Foreign Corrupt Practices Act, the United Kingdom Bribery Act and the China Anti-Unfair Competition Law, could subject us to criminal or civil sanctions if a violation is deemed to have occurred. In addition, we are subject to laws and sanctions imposed by the U.S. and other jurisdictions where we do business that may prohibit us, or certain of our affiliates, from doing business in certain countries, or restricting the kind of business that we may conduct. Such restrictions may provide a competitive advantage to competitors who are not subject to comparable restrictions or prevent us from taking advantage of growth opportunities.

Further, we cannot guarantee that our internal controls and compliance systems will always protect us from acts committed by employees, agents, business partners or that businesses that we acquire would not violate U.S. and/or non-U.S. laws, including the laws governing payments to government officials, bribery, fraud, kickbacks and false claims, pricing, sales and marketing practices, conflicts of interest, competition, export and import compliance, money laundering, and data privacy. Any such improper actions or allegations of such acts could damage our reputation and subject us to civil or criminal investigations in the U.S. and in other jurisdictions and related shareholder lawsuits, could lead to substantial civil and criminal, monetary and non-monetary penalties, and could cause us to incur significant legal and investigatory fees. In addition, the government may seek to hold us liable as a successor for violations committed by companies in which we invest or that we acquire.

We may be unable to successfully identify, execute or effectively integrate acquisitions, or effectively disentangle divested businesses.

Our ability to grow revenue, earnings, and cash flow at anticipated rates depends in part on our ability to identify, successfully acquire and integrate businesses and assets at appropriate prices, and realize expected growth, synergies, and operating efficiencies. We may not be able to complete transactions on favorable terms, on a timely basis or at all. In addition, our results of operations and cash flows may be adversely impacted by the failure of acquired businesses or assets to meet expected returns, the failure to integrate acquired businesses, the inability to dispose of non-core assets and businesses on satisfactory terms and conditions, and the discovery of unanticipated liabilities or other problems in acquired businesses or assets for which we lack adequate contractual protections or insurance. In addition, we may incur asset impairment charges related to acquisitions that do not meet expectations.

We continually assess the strategic fit of our existing businesses and may divest businesses that are deemed not to fit with our strategic plan or are not achieving the desired return on investment. These transactions pose risks and challenges that could negatively impact our business and financial statements. For example, when we decide to sell or otherwise dispose of a business or assets, we may be unable to do so on satisfactory terms within our anticipated time frame or at all. In addition, divestitures or other dispositions may dilute our earnings per share, have other adverse financial and accounting impacts, distract management, and give rise to disputes with buyers. In addition, we have agreed, and may in the future agree, to indemnify buyers against known and unknown contingent liabilities. Our financial results could be impacted adversely by claims under these indemnification provisions.

The security of our information technology systems could be compromised, which could adversely affect our ability to operate.

We depend on information technology to enable us to operate safely and efficiently and interface with our customers as well as to maintain our internal control environment and financial reporting accuracy and efficiency. Our information technology capabilities are delivered through a combination of internal and external services and service providers. If we do not allocate and effectively manage the resources necessary to build and sustain the proper technology infrastructure, we could be subject to transaction errors, processing inefficiencies, the loss of customers, business disruptions, property damage, or the loss of or damage to our confidential business information due to a security breach. In addition, our information technology systems may be damaged, disrupted or shut down due to attacks by computer hackers, computer viruses, employee error or malfeasance, power outages, hardware failures, telecommunication or utility failures, catastrophes or other unforeseen events, and in any such circumstances our system redundancy and other disaster recovery planning may be ineffective or inadequate. Security breaches of our systems (or the systems of our customers, suppliers or other business partners) could result in the misappropriation, destruction or unauthorized disclosure of confidential information or personal data belonging to us or to our employees, partners, customers or suppliers, and may subject us to legal liability.

As with most large systems, our information technology systems have in the past been, and in the future likely will be subject to computer viruses, malicious codes, unauthorized access and other cyber-attacks, and we expect the sophistication and frequency of such attacks to continue to increase. To date, we are not aware of any significant impact on our operations or financial results from such attempts; however, unauthorized access could disrupt our business operations, result in the loss of assets, and have a material adverse effect on our business, financial condition, or results of operations. Any of the attacks, breaches or other disruptions or damage described above could: interrupt our operations at one or more sites; delay production and shipments; result in the theft of our and our customers' intellectual property and trade secrets; damage customer and business partner relationships and our reputation; result in defective products or services, physical damage to facilities, pipelines or delivery systems, including those we own or operate for third parties, legal claims and proceedings, liability and penalties under privacy laws, or increased costs for security and remediation; or raise concerns regarding our internal control environment and internal control over financial reporting. Each of these consequences could adversely affect our business, reputation and our financial statements.

Our business involves the use, storage, and transmission of information about our employees, vendors, and customers. The protection of such information, as well as our proprietary information, is critical to us. The regulatory environment surrounding information security and privacy is increasingly demanding, with the frequent imposition of new and constantly changing requirements. We have established policies and procedures to help protect the security and privacy of this information. We also, from time to time, export sensitive customer data and technical information to recipients outside the United States. Breaches of our security measures or the accidental loss, inadvertent disclosure, or unapproved dissemination of proprietary information or sensitive or confidential data about us or our customers, including the potential loss or disclosure of such information or data as a result of fraud, trickery, or other forms of deception, could expose us, our customers, or the individuals affected to a risk of loss or misuse of this information, which could ultimately result in litigation and potential legal and financial liability. These events could also damage our reputation or otherwise harm our business.

Interruption in ordinary sources of raw material or energy supply or an inability to recover increases in energy and raw material costs from customers could result in lost sales or reduced profitability.

Hydrocarbons, including natural gas, are the primary feedstock for the production of hydrogen, carbon monoxide, and syngas. Energy, including electricity, natural gas, and diesel fuel for delivery trucks, is the largest cost component of our business. Because our industrial gas facilities use substantial amounts of electricity, inflation and energy price fluctuations could materially impact our revenues and earnings. A disruption in the supply of energy, components, or raw materials, whether due to market conditions, legislative or regulatory actions, the COVID-19 pandemic, natural events, or other disruption, could prevent us from meeting our contractual commitments and harm our business and financial results.

Our supply of crude helium for purification and resale is largely dependent upon natural gas production by crude helium suppliers. Lower natural gas production resulting from natural gas pricing dynamics, supplier operating or transportation issues, or other interruptions in sales from crude helium suppliers, can reduce our supplies of crude helium available for processing and resale to customers.

We typically contract to pass-through cost increases in energy and raw materials to customers, but such cost pass-through results in declining margins, and cost variability can negatively impact our other operating results. For example, we may be unable to raise prices as quickly as costs rise, or competitive pressures may prevent full recovery of such costs. In addition, increases in energy or raw material costs that cannot be passed on to customers for competitive or other reasons may negatively impact our revenues and earnings. Even where costs are passed through, price increases can cause lower sales volume.

New technologies create performance risks that could impact our financial results or reputation.

We are continually developing and implementing new technologies and product offerings. Existing technologies are being implemented in products and designs or at scales beyond our experience base. These technological expansions can create nontraditional performance risks to our operations. Failure of the technologies to work as predicted, or unintended consequences of new designs or uses, could lead to cost overruns, project delays, financial penalties, or damage to our reputation. In addition, gasification and other large-scale projects may contain processes or technologies that we have not operated at the same scale or in the same combination, and although such projects generally include technologies and processes that have been demonstrated previously by others, such technologies or processes may be new to us and may introduce new risks to our operations. Additionally, there is also a risk that our new technologies may become obsolete and replaced by other market alternatives. Performance difficulties on these larger projects may have a material adverse effect on our operations and financial results. In addition, performance challenges may adversely affect our reputation and our ability to obtain future contracts for gasification projects.

Protecting our intellectual property is critical to our technological development and we may suffer competitive harm from infringement on such rights.

As we develop new technologies, it is critical that we protect our intellectual property assets against third-party infringement. We own a number of patents and other forms of intellectual property related to our products and services. As we develop new technologies there is a risk that our patent applications may not be granted, or we may not receive sufficient protection of our proprietary interests. We may also expend considerable resources in defending our patents against third-party infringement. It is critical that we protect our proprietary interests to prevent competitive harm.

Legal and Regulatory Risks

Legislative, regulatory, and societal responses to global climate change create financial risk.

We are the world's leading supplier of hydrogen, the primary use of which is the production of ultra-low sulfur transportation fuels that have significantly reduced transportation emissions and helped improve human health. To make the high volumes of hydrogen needed by our customers, we use steam methane reforming, which produces carbon dioxide. In addition, gasification enables the conversion of lower value feedstocks into cleaner energy and value-added products; however, our gasification projects also produce carbon dioxide. Some of our operations are within jurisdictions that have or are developing regulatory regimes governing GHG emissions, including CO₂, which may lead to direct and indirect costs on our operations. Furthermore, some jurisdictions have various mechanisms to target the power sector to achieve emission reductions, which often result in higher power costs.

Increased public concern and governmental action may result in more international, U.S. federal and/or regional requirements to reduce or mitigate the effects of GHG emissions. Although uncertain, these developments could increase our costs related to consumption of electric power, hydrogen production and application of our gasification technology. We believe we will be able to mitigate some of the increased costs through contractual terms, but the lack of definitive legislation or regulatory requirements prevents an accurate estimate of the long-term impact these measures will have on our operations. Any legislation or governmental action that limits or taxes GHG emissions could negatively impact our growth, increase our operating costs, or reduce demand for certain of our products.

Our financial results may be affected by various legal and regulatory proceedings, including antitrust, tax, environmental, or other matters.

We are subject to litigation and regulatory investigations and proceedings in the normal course of business and could become subject to additional claims in the future, some of which could be material. While we seek to limit our liability in our commercial contractual arrangements, there are no guarantees that each contract will contain suitable limitations of liability or that limitations of liability will be enforceable. Also, the outcome of existing legal proceedings may differ from our expectations because the outcomes of litigation, including regulatory matters, are often difficult to predict reliably. Various factors or developments can lead us to change current estimates of liabilities and related insurance receivables, where applicable, or make such estimates for matters previously not susceptible to reasonable estimates, such as a significant judicial ruling or judgment, a significant settlement, significant regulatory developments, or changes in applicable law. A future adverse ruling, settlement, or unfavorable development could result in charges that could have a material adverse effect on our financial condition, results of operations, and cash flows in any particular period.

Costs and expenses resulting from compliance with environmental regulations may negatively impact our operations and financial results.

We are subject to extensive federal, state, local, and foreign environmental and safety laws and regulations concerning, among other things, emissions in the air; discharges to land and water; and the generation, handling, treatment, and disposal of hazardous waste and other materials. We take our environmental responsibilities very seriously, but there is a risk of adverse environmental impact inherent in our manufacturing operations and in the transportation of our products. Future developments and more stringent environmental regulations may require us to make additional unforeseen environmental expenditures. In addition, laws and regulations may require significant expenditures for environmental protection equipment, compliance, and remediation. These additional costs may adversely affect our financial results. For a more detailed description of these matters, see Item 1, *Business—Environmental Regulation*, above.

A change of tax law in key jurisdictions could result in a material increase in our tax expense.

The multinational nature of our business subjects us to taxation in the United States and numerous foreign jurisdictions. Due to economic and political conditions, tax rates in various jurisdictions may be subject to significant change. Our future effective tax rates could be affected by changes in the mix of earnings in countries with differing statutory tax rates, changes in the valuation of deferred tax assets and liabilities, or changes in tax laws or their interpretation.

Changes to income tax laws and regulations in any of the jurisdictions in which we operate, or in the interpretation of such laws, could significantly increase our effective tax rate and adversely impact our financial condition, results of operations, or cash flows. Various levels of government, including the U.S. federal government, are increasingly focused on tax reform and other legislative action to increase tax revenue. Further changes in tax laws in the U.S. or foreign jurisdictions where we operate could have a material adverse effect on our business, results of operations, or financial condition.

General Risk Factors

Catastrophic events could disrupt our operations or the operations of our suppliers or customers, having a negative impact on our business, financial results, and cash flows.

Our operations could be impacted by catastrophic events outside our control, including severe weather conditions such as hurricanes, floods, earthquakes, storms, epidemics, pandemics, acts of war, and terrorism. Any such event could cause a serious business disruption that could affect our ability to produce and distribute products and possibly expose us to third-party liability claims. Additionally, such events could impact our suppliers, customers, and partners, which could cause energy and raw materials to be unavailable to us, or our customers to be unable to purchase or accept our products and services. Any such occurrence could have a negative impact on our operations and financial results.

The United Kingdom's ("UK") exit from European Union ("EU") membership could adversely affect our European Operations.

Although the UK's exit from EU membership on 31 January 2021 ("Brexit") did not result in material disruptions to customer demand, our relationships with customers and suppliers, or our European business, the ultimate effects of Brexit on us are still difficult to predict. Adverse consequences from Brexit may include greater restrictions on imports and exports between the UK and EU members and increased regulatory complexities. Any of these factors could adversely affect customer demand, our relationships with customers and suppliers, and our European business overall.

Inability to compete effectively in a segment could adversely impact sales and financial performance.

We face strong competition from large global competitors and many smaller regional competitors in many of our business segments. Introduction by competitors of new technologies, competing products, or additional capacity could weaken demand for, or impact pricing of our products, negatively impacting financial results. In addition, competitors' pricing policies could affect our profitability or market share.

Item 1B. Unresolved Staff Comments.

We have not received any written comments from the Commission staff that remain unresolved.

Item 2. Properties.

Air Products and Chemicals, Inc. owns its principal administrative offices in Trexlertown, Pennsylvania, and the Company's new global headquarters and co-located research and development facility in Allentown, Pennsylvania, as well as regional offices in Hershaw, England; Medellin, Colombia; and Santiago, Chile. We lease the principal administrative offices in Shanghai, China; Pune, India; Vadodara, India; and Dhahran, Saudi Arabia. We lease administrative offices in the United States, Canada, Spain, Malaysia, and China for our Global Business Support organization.

Descriptions of the properties used by our five business segments are provided below. We believe that our facilities are suitable and adequate for our current and anticipated future levels of operation.

Industrial Gases – Americas

This business segment currently operates from over 425 production and distribution facilities in North and South America. Approximately 25% of these facilities are located on owned property and 10% are integrated sites that serve dedicated customers as well as merchant customers. We have sufficient property rights and permits for the ongoing operation of our pipeline systems in the Gulf Coast, California, and Arizona in the United States and Alberta and Ontario in Canada. Management and sales support is based in our Trexlertown, Medellin, and Santiago offices referred to above, and at 12 leased properties located throughout North and South America.

Industrial Gases – EMEA

This business segment currently operates from over 200 production and distribution facilities in Europe, the Middle East, India, and Africa, approximately one-third of which are on owned property. We have sufficient property rights and permits for the ongoing operation of our pipeline systems in the Netherlands, the United Kingdom, Belgium, France, and Germany. Management and sales support for this business segment is based in Hershaw, England, referred to above; Barcelona, Spain; and at 16 leased regional office sites and 15 leased local office sites, located throughout the region.

Industrial Gases – Asia

This business segment currently operates from over 200 production and distribution facilities within Asia, approximately 25% of which are on owned property or long-duration term grants. We have sufficient property rights and permits for the ongoing operation of our pipeline systems in China, South Korea, Taiwan, Malaysia, Singapore, and Indonesia. Management and sales support for this business segment is based in Shanghai, China, and Kuala Lumpur, Malaysia, and in 30 leased office locations throughout the region.

Industrial Gases – Global

Management, sales, and engineering support for this business segment is based in our principal administrative offices noted above.

Equipment is manufactured in Missouri in the United States and Shanghai, China.

Research and development activities are primarily conducted at owned locations in the United States, the United Kingdom, and Saudi Arabia.

Helium is processed at multiple sites in the United States and then distributed to and from transfill sites globally.

Corporate and other

Corporate administrative functions are based in our administrative offices referred to above.

The LNG business operates a manufacturing facility in Florida in the United States with management, engineering, and sales support based in the Trexlertown offices referred to above.

The Gardner Cryogenic business operates at facilities in Pennsylvania and Kansas in the United States.

The Rotoflow business operates manufacturing and service facilities in Texas and Pennsylvania in the United States with management, engineering, and sales support based in the Trexlertown offices referred to above and a nearby leased office.

Item 3. Legal Proceedings.

In the normal course of business, we and our subsidiaries are involved in various legal proceedings, including commercial, competition, environmental, intellectual property, regulatory, product liability, and insurance matters. Although litigation with respect to these matters is routine and incidental to the conduct of our business, such litigation could result in large monetary awards, especially if compensatory and/or punitive damages are awarded. However, we believe that litigation currently pending to which we are a party will be resolved without any material adverse effect on our financial position, earnings, or cash flows.

From time to time, we are also involved in proceedings, investigations, and audits involving governmental authorities in connection with environmental, health, safety, competition, and tax matters.

We are a party to proceedings under CERCLA, RCRA, and similar state and foreign environmental laws relating to the designation of certain sites for investigation or remediation. Presently there are 31 sites on which a final settlement has not been reached where we, along with others, have been designated a potentially responsible party by the Environmental Protection Agency or is otherwise engaged in investigation or remediation, including cleanup activity at certain of its current and former manufacturing sites. We do not expect that any sums we may have to pay in connection with these environmental matters would have a material adverse impact on our consolidated financial position. Additional information on our environmental exposure is included under Item 1, Business–Environmental Regulation, and Note 16, Commitments and Contingencies, to the consolidated financial statements.

In September 2010, the Brazilian Administrative Council for Economic Defense ("CADE") issued a decision against our Brazilian subsidiary, Air Products Brasil Ltda., and several other Brazilian industrial gas companies for alleged anticompetitive activities. CADE imposed a civil fine of R\$179.2 million (approximately \$33 million at 30 September 2021) on Air Products Brasil Ltda. This fine was based on a recommendation by a unit of the Brazilian Ministry of Justice, following an investigation beginning in 2003, which alleged violation of competition laws with respect to the sale of industrial and medical gases. The fines are based on a percentage of our total revenue in Brazil in 2003.

We have denied the allegations made by the authorities and filed an appeal in October 2010 with the Brazilian courts. On 6 May 2014, our appeal was granted and the fine against Air Products Brasil Ltda. was dismissed. CADE has appealed that ruling and the matter remains pending. We, with advice of our outside legal counsel, have assessed the status of this matter and have concluded that, although an adverse final judgment after exhausting all appeals is possible, such a judgment is not probable. As a result, no provision has been made in the consolidated financial statements. In the event of an adverse final judgment, we estimate the maximum possible loss to be the full amount of the fine of R\$179.2 million (approximately \$33 million at 30 September 2021) plus interest accrued thereon until final disposition of the proceedings.

Additionally, Winter Storm Uri, a severe winter weather storm in the U.S. Gulf Coast in February 2021, disrupted our operations and caused power and natural gas prices to spike significantly in Texas. We are currently in the early stages of litigation of a dispute regarding energy management services related to the impact of this unusual event, and other disputes may arise from such power price increases. In addition, legislative action may affect power supply and energy management charges. While it is reasonably possible that we could incur additional costs related to power supply and energy management services in Texas related to the winter storm, it is too early to estimate potential losses, if any, given significant unknowns resulting from the unusual nature of this event.

Other than the matters discussed above, we do not currently believe there are any legal proceedings, individually or in the aggregate, that are reasonably possible to have a material impact on our financial condition, results of operations, or cash flows. However, a future charge for regulatory fines or damage awards could have a significant impact on our net income in the period in which it is recorded.

Item 4. Mine Safety Disclosures.

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters, and Issuer Purchases of Equity Securities.

Our common stock is listed on the New York Stock Exchange under the symbol "APD." As of 31 October 2021, there were 4,722 record holders of our common stock.

Cash dividends on our common stock are paid quarterly. It is our expectation that we will continue to pay cash dividends in the future at comparable or increased levels. The Board of Directors determines whether to declare dividends and the timing and amount based on financial condition and other factors it deems relevant. Dividend information for each quarter of fiscal years 2021 and 2020 is summarized below:

	2021	2020
Fourth quarter	\$1.50	\$1.34
Third quarter	\$1.50	\$1.34
Second quarter	\$1.50	\$1.34
First quarter	\$1.34	\$1.16
Total	\$5.84	\$5.18

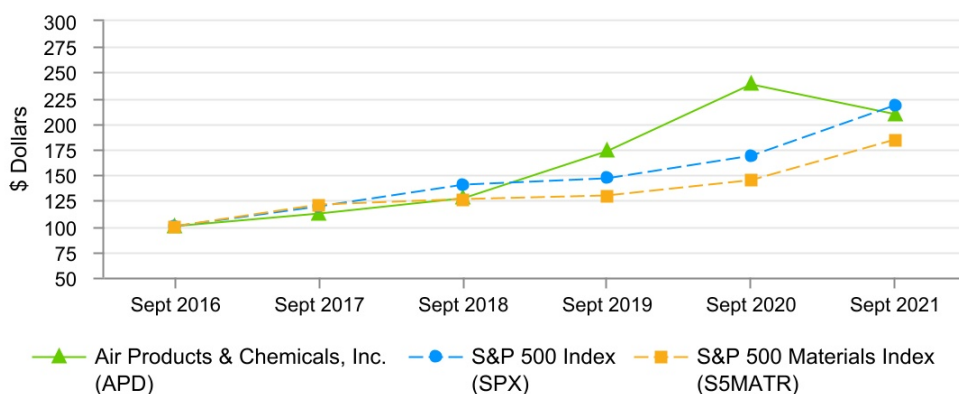
Purchases of Equity Securities by the Issuer

On 15 September 2011, the Board of Directors authorized the repurchase of up to \$1.0 billion of our outstanding common stock. This program does not have a stated expiration date. We repurchase shares pursuant to Rules 10b5-1 and 10b-18 under the Exchange Act through repurchase agreements established with one or more brokers. There were no purchases of stock during fiscal year 2021. At 30 September 2021, \$485.3 million in share repurchase authorization remained. Additional purchases will be completed at our discretion while maintaining sufficient funds for investing in our business and pursuing growth opportunities.

Performance Graph

The performance graph below compares the five-year cumulative returns of our common stock with those of the Standard & Poor's 500 Index ("S&P 500 Index") and the Standard & Poor's 500 Materials Index ("S&P 500 Materials Index"). The figures assume an initial investment of \$100 and the reinvestment of all dividends.

**COMPARISON OF FIVE YEAR CUMULATIVE SHAREHOLDER RETURN
Air Products & Chemicals, Inc., S&P 500 Index, and S&P 500 Materials Index
Comparative Growth of a \$100 Investment
(Assumes Reinvestment of All Dividends)**



	Sept 2016	Sept 2017	Sept 2018	Sept 2019	Sept 2020	Sept 2021
Air Products & Chemicals, Inc.	100	112	127	173	238	209
S&P 500 Index	100	119	140	146	168	218
S&P 500 Materials Index	100	121	126	130	145	184

Item 6. [Reserved]

Not applicable.

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

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This Management's Discussion and Analysis contains "forward-looking statements" within the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, including statements about business outlook. These forward-looking statements are based on management's expectations and assumptions as of the date of this Annual Report on Form 10-K and are not guarantees of future performance. Actual performance and financial results may differ materially from projections and estimates expressed in the forward-looking statements because of many factors not anticipated by management, including, without limitation, those described in *Forward-Looking Statements* and Item 1A, *Risk Factors*, of this Annual Report.

The following discussion should be read in conjunction with the consolidated financial statements and the accompanying notes contained in this Annual Report. Unless otherwise stated, financial information is presented in millions of dollars, except for per share data. Except for net income, which includes the results of discontinued operations, financial information is presented on a continuing operations basis.

The content of our Management's Discussion and Analysis has been updated pursuant to SEC disclosure modernization rules that are effective as of the date of this Annual Report. Comparisons of our results of operations and liquidity and capital resources are for fiscal years 2021 and 2020. For a discussion of changes from fiscal year 2019 to fiscal year 2020 and other financial information related to fiscal year 2019, refer to Part II, [Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations](#), of our Annual Report on Form 10-K for the fiscal year ended 30 September 2020. This document was filed with the SEC on 19 November 2020.

The financial measures discussed below are presented in accordance with U.S. generally accepted accounting principles ("GAAP"), except as noted. We present certain financial measures on an "adjusted," or "non-GAAP," basis because we believe such measures, when viewed together with financial results computed in accordance with GAAP, provide a more complete understanding of the factors and trends affecting our historical financial performance. For each non-GAAP financial measure, including adjusted diluted earnings per share ("EPS"), adjusted EBITDA, adjusted EBITDA margin, adjusted effective tax rate, and capital expenditures, we present a reconciliation to the most directly comparable financial measure calculated in accordance with GAAP. These reconciliations and explanations regarding the use of non-GAAP measures are presented under "Reconciliations of Non-GAAP Financial Measures" beginning on page 31.

For information concerning activity with our related parties, refer to Note 22, *Supplemental Information*, to the consolidated financial statements.

BUSINESS OVERVIEW

Air Products and Chemicals, Inc., a Delaware corporation originally founded in 1940, serves customers globally with a unique portfolio of products, services, and solutions that include atmospheric gases, process and specialty gases, equipment, and services. Focused on serving energy, environment and emerging markets, we provide essential industrial gases, related equipment, and applications expertise to customers in dozens of industries, including refining, chemicals, metals, electronics, manufacturing, and food and beverage. We are the world's largest supplier of hydrogen and have built leading positions in growth markets such as helium and liquefied natural gas ("LNG") process technology and equipment. We develop, engineer, build, own, and operate some of the world's largest industrial gas projects, including gasification projects that sustainably convert abundant natural resources into syngas for the production of high-value power, fuels, and chemicals and are developing carbon capture projects and world-scale low carbon and carbon-free hydrogen projects that will support global transportation and the energy transition away from fossil fuels.

With operations in over 50 countries, in fiscal year 2021 we had sales of \$10.3 billion and assets of \$26.9 billion. Approximately 20,875 passionate, talented, and committed employees from diverse backgrounds are driven by our higher purpose to create innovative solutions that benefit the environment, enhance sustainability, and address the challenges facing customers, communities, and the world.

As of 30 September 2021, our operations were organized into five reportable business segments under which we managed our operations, assessed performance, and reported earnings:

- Industrial Gases – Americas;
- Industrial Gases – EMEA (Europe, Middle East, and Africa);
- Industrial Gases – Asia;
- Industrial Gases – Global; and
- Corporate and other

This Management's Discussion and Analysis discusses our results based on these operations. Refer to Note 23, *Business Segment and Geographic Information*, to the consolidated financial statements for additional details on our reportable business segments.

On 4 November 2021, we announced the reorganization of our industrial gases segments effective 1 October 2021. Refer to Note 24, *Subsequent Events*, for additional information.

2021 IN SUMMARY

In fiscal year 2021, we continued to execute our growth strategy, including announcement of several new gasification, carbon capture, and hydrogen projects that will drive the world's energy transition from fossil fuels. At the same time, we remained focused on our base business, delivering consistent results despite external challenges globally and absorbing costs for additional resources needed to support growth. In the second half of the year, demand for most merchant products returned to pre-pandemic levels. Additionally, we continued to create shareholder value by increasing the quarterly dividend on our common stock to \$1.50 per share, representing a 12% increase from the previous dividend. This is the 39th consecutive year that we have increased our quarterly dividend payment.

Fiscal year 2021 results are summarized below:

- Sales of \$10.3 billion increased 17%, or \$1.5 billion, due to higher energy and natural gas cost pass-through to customers, higher volumes, favorable currency impacts, and positive pricing that more than offset power cost increases in the second half of the year.
- Operating income of \$2,281.4 increased 2%, or \$43.8, and operating margin of 22.1% decreased 320 basis points ("bp").
- Net income of \$2,114.9 increased 10%, or \$183.8, and net income margin of 20.5% decreased 130 bp.
- Adjusted EBITDA of \$3,883.2 increased 7%, or \$263.4, and adjusted EBITDA margin of 37.6% decreased 330 bp.
- Diluted EPS of \$9.12 increased 7%, or \$0.57 per share, and adjusted diluted EPS of \$9.02 increased 8%, or \$0.64 per share. A summary table of changes in diluted EPS is presented below.

Changes in Diluted EPS Attributable to Air Products

The per share impacts presented in the table below were calculated independently and may not sum to the total change in diluted EPS due to rounding.

Fiscal Year Ended 30 September	2021	2020	Increase (Decrease)
Total Diluted EPS	\$9.43	\$8.49	\$0.94
Less: Diluted EPS from income (loss) from discontinued operations	0.32	(0.06)	0.38
Diluted EPS From Continuing Operations	\$9.12	\$8.55	\$0.57
Operating Impacts			
Underlying business			
Volume ^(A)			\$—
Price, net of variable costs			0.34
Other costs			(0.46)
Currency			0.35
Facility closure			(0.08)
Company headquarters relocation income			(0.12)
Gain on exchange with joint venture partner			0.12
Total Operating Impacts			\$0.15
Other Impacts			
Equity affiliates' income			\$0.23
Interest expense			(0.12)
Other non-operating income (expense), net			0.16
Change in effective tax rate, excluding discrete items below			0.02
India Finance Act 2020			(0.06)
Tax election benefit and other			0.05
Noncontrolling interests ^(A)			0.13
Weighted average diluted shares			(0.01)
Total Other Impacts			\$0.40
Total Change in Diluted EPS From Continuing Operations			\$0.57

^(A) Despite higher sales volumes, the volume impact on diluted EPS was flat due to reduced contributions from our 60%-owned joint venture with Lu'An Clean Energy Company that we consolidate within our Industrial Gases – Asia segment. Refer to the sales discussion below for additional detail. The volume impact from the Lu'An facility is partially offset by the positive impact of lower net income being attributed to our joint venture partner within "Noncontrolling interests."

Fiscal Year Ended 30 September	2021	2020	Increase (Decrease)
Diluted EPS From Continuing Operations	\$9.12	\$8.55	\$0.57
Facility closure	0.08	—	0.08
Gain on exchange with joint venture partner	(0.12)	—	(0.12)
Company headquarters relocation income	—	(0.12)	0.12
India Finance Act 2020	—	(0.06)	0.06
Tax election benefit and other	(0.05)	—	(0.05)
Adjusted Diluted EPS From Continuing Operations	\$9.02	\$8.38	\$0.64

2022 OUTLOOK

The guidance below should be read in conjunction with the *Forward-Looking Statements* of this Annual Report on Form 10-K.

We believe our achievements in 2021 are just the beginning of our journey providing gasification, carbon capture, and hydrogen for mobility solutions to address the world's most significant energy and environmental sustainability challenges. For example, we expect our world-scale Jazan gasification project with Aramco, ACWA Power, and Air Products Qudra to begin contributing to our results in the first quarter of fiscal year 2022. We expect to continue to pursue new, high-return opportunities that are aligned with our growth strategy and to add the resources necessary for project development and execution. We remain committed to creating shareholder value through capital deployment and delivering increased dividends, as we have done for the past 39 consecutive years.

The duration and extent of ongoing global challenges, such as rising energy costs, energy consumption curtailment, and supply chain disruptions, remain uncertain. For our merchant business, we plan to continue pricing actions to recover higher energy costs. We expect to add new projects to our onsite business model, which has contractual protection from energy cost fluctuations and generates stable cash flow. We expect higher costs from planned maintenance activities on our facilities in fiscal year 2022 and higher pension expense resulting from lower expected returns on assets.

Additionally, we expect the Lu'An facility to continue operating under the interim agreement discussed below through fiscal year 2022.

In fiscal year 2022, we will also continue to focus on our other sustainability goals, including our commitment to reduce our carbon dioxide emissions intensity and advance diversity and inclusion.

On 4 November 2021, we announced the reorganization of our industrial gases segments, including the separation of our Industrial Gases – EMEA segment into two separate reporting segments: Industrial Gases – Europe and Industrial Gases – Middle East. The results of an affiliate formerly reflected in the Industrial Gases – Asia segment will now be reported in the Industrial Gases – Middle East segment. Additionally, the results of our Industrial Gases – Global operating segment will be reflected in the Corporate and other segment. Beginning with our Quarterly Report on Form 10-Q for the first quarter of fiscal year 2022, segment results will be presented on a retrospective basis to reflect the reorganization.

RESULTS OF OPERATIONS

Discussion of Consolidated Results

Fiscal Year Ended 30 September	2021	2020	\$ Change	Change
GAAP Measures				
Sales	\$10,323.0	\$8,856.3	\$1,466.7	17 %
Operating income	2,281.4	2,237.6	43.8	2 %
Operating margin	22.1 %	25.3 %		(320) bp
Equity affiliates' income	\$294.1	\$264.8	29.3	11 %
Net income	2,114.9	1,931.1	183.8	10 %
Net income margin	20.5 %	21.8 %		(130) bp
Non-GAAP Measures				
Adjusted EBITDA	\$3,883.2	\$3,619.8	263.4	7 %
Adjusted EBITDA margin	37.6 %	40.9 %		(330) bp

Sales % Change from Prior Year

Volume	5 %
Price	2 %
Energy and natural gas cost pass-through	6 %
Currency	4 %
Total Consolidated Sales Change	17 %

Sales of \$10,323.0 increased 17%, or \$1,466.7, due to higher energy and natural gas cost pass-through to customers of 6%, higher volumes of 5%, favorable currency impacts of 4%, and positive pricing of 2%. We experienced significantly higher energy and natural gas costs in the second half of fiscal year 2021, particularly in North America and Europe. Contractual provisions associated with our on-site business, which represents approximately half our total company sales, allow us to pass these costs to our customers. Positive volumes from new assets, our sale of equipment businesses, and merchant demand recovery from COVID-19 were partially offset by reduced contributions from the Lu'An gasification project discussed below. Favorable currency was primarily driven by the appreciation of the British Pound Sterling, Chinese Renminbi, Euro, and South Korean Won against the U.S. Dollar. Continued focus on pricing actions, including energy cost recovery, in our merchant businesses resulted in price improvement in each of our three regional segments.

Lu'An Clean Energy Company ("Lu'An"), a long-term onsite customer in Asia with which we have a consolidated joint venture, restarted its facility in the third quarter of fiscal year 2021 following successful completion of major maintenance work in September 2020. Our facility resumed operations, and the joint venture is supplying product at reduced charges as agreed upon with Lu'An under a short-term agreement reached in the first quarter of fiscal year 2021. As a result of this agreement, we recognized lower revenue in our Industrial Gases – Asia segment in each quarter of fiscal year 2021. We expect this short-term reduction in charges to extend through fiscal year 2022.

Cost of Sales and Gross Margin

Total cost of sales of \$7,209.3, including the facility closure discussed below, increased 23%, or \$1,351.2. The increase from the prior year was primarily due to higher energy and natural gas cost pass-through to customers of \$479, higher costs associated with sales volumes of \$433, unfavorable currency impacts of \$233, and higher costs, including power and other cost inflation, of \$183. Gross margin of 30.2% decreased 370 bp from 33.9% in the prior year, primarily due to higher energy and natural gas cost pass-through to customers, higher costs, and the reduced Lu'An contribution, partially offset by the positive impact of our pricing actions.

Facility Closure

In the second quarter of fiscal year 2021, we recorded a charge of \$23.2 (\$17.4 after-tax, or \$0.08 per share) primarily for a noncash write-down of assets associated with a contract termination in the Industrial Gases – Americas segment. This charge is reflected as "Facility closure" on our consolidated income statements for the fiscal year ended 30 September 2021 and was not recorded in segment results.

Selling and Administrative

Selling and administrative expense of \$828.4 increased 7%, or \$52.5, primarily driven by higher spending for business development resources to support our growth strategy and unfavorable currency impacts. Selling and administrative expense as a percentage of sales decreased to 8.0% from 8.8% in the prior year.

Research and Development

Research and development expense of \$93.5 increased 11%, or \$9.6, primarily due to higher product development costs in our Industrial Gases – Global segment. Research and development expense as a percentage of sales of 0.9% was flat versus the prior year.

Gain on Exchange with Joint Venture Partner

In the second quarter of fiscal year 2021, we recognized a gain of \$36.8 (\$27.3 after-tax, or \$0.12 per share) on an exchange with the Tyczka Group, a former joint venture partner in our Industrial Gases – EMEA segment. As part of the exchange, we separated our 50/50 joint venture in Germany into two separate businesses so each party could acquire a portion of the business on a 100% basis. The gain included \$12.7 from the revaluation of our previously held equity interest in the portion of the business that we retained and \$24.1 from the sale of our equity interest in the remaining business. The gain is reflected as "Gain on exchange with joint venture partner" on our consolidated income statements for the fiscal year ended 30 September 2021 and was not recorded in segment results. Refer to Note 3, *Acquisitions*, to the consolidated financial statements for additional information.

Company Headquarters Relocation Income (Expense)

In anticipation of relocating our U.S. headquarters, we sold property at our corporate headquarters located in Trexlertown, Pennsylvania, in the second quarter of fiscal year 2020. We received net proceeds of \$44.1 and recorded a gain of \$33.8 (\$25.6 after-tax, or \$0.12 per share), which is reflected on our consolidated income statements as "Company headquarters relocation income (expense)" for the fiscal year ended 30 September 2020. The gain was not recorded in the results of the Corporate and other segment.

Other Income (Expense), Net

Other income of \$52.8 decreased 19%, or \$12.6. The prior year was favorably impacted by an adjustment for a benefit plan liability due to a change in plan terms. This impact was partially offset by the settlement of a supply contract in the current year.

Operating Income and Margin

Operating income of \$2,281.4 increased 2%, or \$43.8, as favorable currency of \$96, positive pricing, net of power and fuel costs, of \$95, and a gain on an exchange with a joint venture partner of \$37 were partially offset by higher operating costs of \$127, prior year income associated with the company headquarters relocation of \$34, and a facility closure of \$23. Despite higher sales volumes, the volume impact on operating income was minimal due to reduced contributions from Lu'An. Unfavorable operating costs were driven by the addition of resources to support our growth strategy and higher planned maintenance activities.

Operating margin of 22.1% decreased 320 bp from 25.3% in the prior year, primarily due to the higher operating costs, higher energy and natural gas cost pass-through to customers, which contributed to sales but not operating income, and reduced contributions from Lu'An, partially offset by positive pricing. The positive impact from a gain on an exchange with a joint venture partner in the current year was offset by prior year income associated with the company headquarters relocation.

Equity Affiliates' Income

Equity affiliates' income of \$294.1 increased 11%, or \$29.3. Higher income from affiliates in the regional segments was partially offset by a prior year benefit of \$33.8 from the enactment of the India Finance Act 2020. Refer to Note 21, *Income Taxes*, to the consolidated financial statements for additional information.

We expect our equity affiliates' income to grow in future periods due to our investment in the Jazan Integrated Gasification and Power Company joint venture.

Interest Expense

Fiscal Year Ended 30 September	2021	2020
Interest incurred	\$170.1	\$125.2
Less: Capitalized interest	28.3	15.9
Interest expense	\$141.8	\$109.3

Interest incurred increased 36%, or \$44.9, primarily driven by a higher debt balance due to the issuance of U.S. Dollar- and Euro-denominated fixed-rate notes in the third quarter of fiscal year 2020. Capitalized interest increased \$12.4 due to a higher carrying value of projects under construction.

Other Non-Operating Income (Expense), Net

Other non-operating income of \$73.7 increased \$43.0. We recorded higher non-service pension income in 2021 due to lower interest costs and higher total assets, primarily for our U.S. pension plans. The current year also included favorable currency impacts. These factors were partially offset by lower interest income on cash and cash items due to lower interest rates.

Discontinued Operations

Income from discontinued operations, net of tax, was \$70.3 (\$0.32 per share) for the fiscal year ended 30 September 2021. This included net tax benefits of \$60.0 recorded for the release of tax reserves for uncertain tax positions, of which \$51.8 (\$0.23 per share) was recorded in the fourth quarter for liabilities associated with the 2017 sale of our former Performance Materials Division ("PMD") and \$8.2 was recorded in the third quarter for liabilities associated with our former Energy-from-Waste business. Additionally, we recorded a tax benefit from discontinued operations of \$10.3 in the first quarter, primarily from the settlement of a state tax appeal related to the gain on the sale of PMD.

In fiscal year 2020, loss from discontinued operations, net of tax, was \$14.3 (\$0.06 per share). This resulted from a pre-tax loss of \$19.0 recorded in the second quarter to increase our existing liability for retained environmental obligations associated with the sale of our former Amines business in September 2006. Refer to the Pace discussion within Note 16, *Commitments and Contingencies*, for additional information.

Net Income and Net Income Margin

Net income of \$2,114.9, including income from discontinued operations discussed above, increased 10%, or \$183.8. On a continuing operations basis, the increase was primarily driven by positive pricing, net of power and fuel costs, favorable currency impacts, higher equity affiliates' income, and a gain on an exchange with a joint venture partner, partially offset by unfavorable operating costs and a loss from a facility closure. In addition, less net income was attributable to noncontrolling interests, including our Lu'An joint venture partner, in the current year. The prior year included income associated with the company headquarters relocation and a net benefit from the India Finance Act 2020.

Net income margin of 20.5% decreased 130 bp from 21.8% in the prior year, primarily due to higher energy and natural gas cost pass-through to customers, which decreased margin by approximately 100 bp, and unfavorable net operating costs, partially offset by the impact from our pricing actions.

Adjusted EBITDA and Adjusted EBITDA Margin

Adjusted EBITDA of \$3,883.2 increased 7%, or \$263.4, primarily due to favorable currency impacts, positive pricing, net of power and fuel costs, and higher equity affiliates' income, partially offset by unfavorable operating costs. Adjusted EBITDA margin of 37.6% decreased 330 bp from 40.9% in the prior year, primarily due to higher energy and natural gas cost pass-through to customers, which decreased margin by approximately 200 bp, and the unfavorable net operating costs.

Effective Tax Rate

Our effective tax rate was 18.5% and 19.7% for the fiscal years ended 30 September 2021 and 2020, respectively. The current year rate was lower primarily due to income tax benefits of \$21.5 recorded upon expiration of the statute of limitations for tax reserves previously established for uncertain tax positions taken in prior years. This included a benefit of \$12.2 (\$0.05 per share) for release of reserves established in 2017 for a tax election related to a non-U.S. subsidiary and other previously disclosed items ("tax election benefit and other"). Refer to Note 21 *Income Taxes*, to the consolidated financial statements for additional information.

Additionally, the fiscal year 2020 effective tax rate reflected the unfavorable impact of India Finance Act 2020, which resulted in additional net income of \$13.5 (\$0.06 per share). This included an increase to equity affiliates' income of \$33.8, partially offset by an increase to our income tax provision of \$20.3 for changes in the future tax costs of repatriated earnings.

The adjusted effective tax rate was 18.9% and 19.1% for the fiscal years ended 30 September 2021 and 2020, respectively.

Segment Analysis

Industrial Gases – Americas

Fiscal Year Ended 30 September	2021	2020	\$ Change	Change
Sales	\$4,167.6	\$3,630.7	\$536.9	15 %
Operating income	1,065.5	1,012.4	53.1	5 %
Operating margin	25.6 %	27.9 %		(230) bp
Equity affiliates' income	\$112.5	\$84.3	28.2	33 %
Adjusted EBITDA	1,789.9	1,656.2	133.7	8 %
Adjusted EBITDA margin	42.9 %	45.6 %		(270) bp

Sales % Change from Prior Year

Volume	— %
Price	4 %
Energy and natural gas cost pass-through	11 %
Currency	— %
Total Industrial Gases – Americas Sales Change	15 %

Sales of \$4,167.6 increased 15%, or \$536.9, due to higher energy and natural gas cost pass-through to customers of 11% and positive pricing of 4%, as volumes and currency were flat versus the prior year. Energy and natural gas cost pass through to customers was higher in fiscal year 2021 primarily due to natural gas prices, which rose significantly in the second quarter and remained elevated throughout the year. The pricing improvement was attributable to continued focus on pricing actions in our merchant business. Volumes were flat as positive contributions from new assets, including hydrogen assets we acquired in April 2020, were offset by lower hydrogen and merchant demand. Demand for most merchant products returned to pre-pandemic levels in the second half of 2021.

Operating income of \$1,065.5 increased 5%, or \$53.1, due to higher pricing, net of power and fuel costs, of \$79 and favorable currency of \$10, partially offset by higher operating costs, including planned maintenance, of \$36. Operating margin of 25.6% decreased 230 bp from 27.9% in the prior year primarily due to higher energy and natural gas cost pass-through to customers, which negatively impacted margin by approximately 250 bp, and higher operating costs, partially offset by the impact of our pricing actions.

Equity affiliates' income of \$112.5 increased 33%, or \$28.2, primarily driven by higher income from affiliates in Mexico.

Industrial Gases – EMEA

Fiscal Year Ended 30 September	2021	2020	\$ Change	Change
Sales	\$2,444.9	\$1,926.3	\$518.6	27 %
Operating income	557.4	473.3	84.1	18 %
Operating margin	22.8 %	24.6 %		(180) bp
Equity affiliates' income	\$93.7	\$74.8	18.9	25 %
Adjusted EBITDA	880.9	744.0	136.9	18 %
Adjusted EBITDA margin	36.0 %	38.6 %		(260) bp

Sales % Change from Prior Year

Volume	12 %
Price	3 %
Energy and natural gas cost pass-through	5 %
Currency	7 %
Total Industrial Gases – EMEA Sales Change	27 %

Sales of \$2,444.9 increased 27%, or \$518.6, due to higher volumes of 12%, favorable currency impacts of 7%, higher energy and natural gas cost pass-through to customers of 5%, and positive pricing of 3%. The volume improvement was primarily driven by our base merchant business and new assets, including those from a business in Israel that we acquired in the fourth quarter of 2020. While our liquid bulk business has largely recovered from COVID-19, demand for packaged gases and hydrogen continues to be lower than pre-pandemic levels. Favorable currency impacts were primarily driven by the appreciation of the British Pound Sterling and Euro against the U.S. Dollar. Energy and natural gas cost pass-through to customers was higher primarily in the second half of the year as we experienced significantly higher natural gas and electricity costs in Europe. The pricing improvement was primarily attributable to our merchant business.

Operating income of \$557.4 increased 18%, or \$84.1, due to higher volumes of \$59, favorable currency impacts of \$31, and positive pricing, net of power and fuel costs, of \$11, partially offset by unfavorable costs of \$17. Operating margin of 22.8% decreased 180 bp from 24.6% in the prior year, primarily due to impacts from higher energy and natural gas cost pass-through to customers, which negatively impacted margin by approximately 100 bp, and unfavorable operating costs.

Equity affiliates' income of \$93.7 increased 25%, or \$18.9, primarily due to higher income from affiliates in Italy, Saudi Arabia, and South Africa.

Industrial Gases – Asia

Fiscal Year Ended 30 September	2021	2020	\$ Change	Change
Sales	\$2,920.8	\$2,716.5	\$204.3	8 %
Operating income	838.3	870.3	(32.0)	(4 %)
Operating margin	28.7 %	32.0 %		(330) bp
Equity affiliates' income	\$81.4	\$61.0	20.4	33 %
Adjusted EBITDA	1,364.1	1,330.7	33.4	3 %
Adjusted EBITDA margin	46.7 %	49.0 %		(230) bp

Sales % Change from Prior Year

Volume	— %
Price	1 %
Energy and natural gas cost pass-through	— %
Currency	7 %
Total Industrial Gases – Asia Sales Change	8 %

Sales of \$2,920.8 increased 8%, or \$204.3, due to favorable currency of 7% and positive pricing of 1%, as both volumes and energy and natural gas cost pass-through to customers were flat. Positive volume contributions from our base merchant business and new plants were offset by reduced contributions from Lu'An. The favorable currency impact was primarily attributable to the appreciation of the Chinese Renminbi and South Korean Won against the U.S. Dollar.

Operating income of \$838.3 decreased 4%, or \$32.0, primarily due to unfavorable volume mix of \$62 and higher operating costs, including inflation and product sourcing costs, of \$32, partially offset by favorable currency of \$59. Operating margin of 28.7% decreased 330 bp from 32.0% in the prior year primarily due to reduced contributions from Lu'An.

Equity affiliates' income of \$81.4 increased 33%, or \$20.4, primarily due to higher income from an affiliate in India.

Industrial Gases – Global

The Industrial Gases – Global segment includes sales of cryogenic and gas processing equipment for air separation and centralized global costs associated with management of all the Industrial Gases segments.

Fiscal Year Ended 30 September	2021	2020	\$ Change	% Change
Sales	\$511.0	\$364.9	\$146.1	40 %
Operating loss	(60.6)	(40.0)	(20.6)	(52 %)
Adjusted EBITDA	(43.2)	(19.5)	(23.7)	(122 %)

Sales of \$511.0 increased 40%, or \$146.1, due to higher sale of equipment project activity. Despite higher sales, operating loss of \$60.6 increased 52%, or \$20.6, as higher project costs and product development spending were partially offset by income from the settlement of a supply contract.

Corporate and other

The Corporate and other segment includes our LNG, turbo machinery equipment and services, and distribution sale of equipment businesses as well as corporate support functions that benefit all segments. The results of the Corporate and other segment also include income and expense that is not directly associated with the other segments, such as foreign exchange gains and losses.

Fiscal Year Ended 30 September	2021	2020	\$ Change	% Change
Sales	\$278.7	\$217.9	\$60.8	28 %
Operating loss	(132.8)	(112.2)	(20.6)	(18 %)
Adjusted EBITDA	(108.5)	(91.6)	(16.9)	(18 %)

Sales of \$278.7 increased 28%, or \$60.8, primarily due to higher project activity in our distribution sale of equipment and turbo machinery equipment and services businesses. Despite higher sales, operating loss of \$132.8 increased 18%, or \$20.6, as higher business development and corporate support costs were only partially offset by higher sale of equipment activity.

RECONCILIATIONS OF NON-GAAP FINANCIAL MEASURES

(Millions of dollars unless otherwise indicated, except for per share data)

We present certain financial measures, other than in accordance with U.S. generally accepted accounting principles ("GAAP"), on an "adjusted" or "non-GAAP" basis. On a consolidated basis, these measures include adjusted diluted earnings per share ("EPS"), adjusted EBITDA, adjusted EBITDA margin, adjusted effective tax rate, and capital expenditures. On a segment basis, these measures include adjusted EBITDA and adjusted EBITDA margin. In addition to these measures, we also present certain supplemental non-GAAP financial measures to help the reader understand the impact that certain disclosed items, or "non-GAAP adjustments," have on the calculation of our adjusted diluted EPS. For each non-GAAP financial measure, we present a reconciliation to the most directly comparable financial measure calculated in accordance with GAAP.

Our non-GAAP financial measures are not meant to be considered in isolation or as a substitute for the most directly comparable measure calculated in accordance with GAAP. We believe these non-GAAP financial measures provide investors, potential investors, securities analysts, and others with useful information to evaluate the performance of our business because such measures, when viewed together with financial results computed in accordance with GAAP, provide a more complete understanding of the factors and trends affecting our historical financial performance and projected future results.

In many cases, non-GAAP financial measures are determined by adjusting the most directly comparable GAAP measure to exclude non-GAAP adjustments that we believe are not representative of our underlying business performance. For example, we previously excluded certain expenses associated with cost reduction actions, impairment charges, and gains on disclosed transactions. The reader should be aware that we may recognize similar losses or gains in the future. Readers should also consider the limitations associated with these non-GAAP financial measures, including the potential lack of comparability of these measures from one company to another.

When applicable, the tax impact of our pre-tax non-GAAP adjustments reflects the expected current and deferred income tax impact of our non-GAAP adjustments. These tax impacts are primarily driven by the statutory tax rate of the various relevant jurisdictions and the taxability of the adjustments in those jurisdictions.

Adjusted Diluted EPS

The table below provides a reconciliation to the most directly comparable GAAP measure for each of the major components used to calculate adjusted diluted EPS from continuing operations, which we view as a key performance metric. In periods that we have non-GAAP adjustments, we believe it is important for the reader to understand the per share impact of each such adjustment because management does not consider these impacts when evaluating underlying business performance. The per share impact for each non-GAAP adjustment was calculated independently and may not sum to total adjusted diluted EPS due to rounding.

Fiscal Year Ended 30 September	Operating Income	Equity Affiliates' Income	Income Tax Provision	Net Income Attributable to Air Products	Diluted EPS
2021 GAAP	\$2,281.4	\$294.1	\$462.8	\$2,028.8	\$9.12
2020 GAAP	2,237.6	264.8	478.4	1,901.0	8.55
Change GAAP					\$0.57
% Change GAAP					7 %
2021 GAAP	\$2,281.4	\$294.1	\$462.8	\$2,028.8	\$9.12
Facility closure	23.2	—	5.8	17.4	0.08
Gain on exchange with joint venture partner	(36.8)	—	(9.5)	(27.3)	(0.12)
Tax election benefit and other	—	—	12.2	(12.2)	(0.05)
2021 Non-GAAP ("Adjusted")	\$2,267.8	\$294.1	\$471.3	\$2,006.7	\$9.02
2020 GAAP	\$2,237.6	\$264.8	\$478.4	\$1,901.0	\$8.55
Company headquarters relocation (income) expense	(33.8)	—	(8.2)	(25.6)	(0.12)
India Finance Act 2020	—	(33.8)	(20.3)	(13.5)	(0.06)
2020 Non-GAAP ("Adjusted")	\$2,203.8	\$231.0	\$449.9	\$1,861.9	\$8.38
Change Non-GAAP ("Adjusted")					\$0.64
% Change Non-GAAP ("Adjusted")					8 %

Adjusted EBITDA and Adjusted EBITDA Margin

We define adjusted EBITDA as net income less income (loss) from discontinued operations, net of tax, and excluding non-GAAP adjustments, which we do not believe to be indicative of underlying business trends, before interest expense, other non-operating income (expense), net, income tax provision, and depreciation and amortization expense. Adjusted EBITDA and adjusted EBITDA margin provide useful metrics for management to assess operating performance. Margins are calculated independently for each period by dividing each line item by consolidated sales for the respective period and may not sum to total margin due to rounding.

The tables below present consolidated sales and a reconciliation of net income on a GAAP basis to adjusted EBITDA and net income margin on a GAAP basis to adjusted EBITDA margin:

Fiscal Year Ended 30 September	2021		2020	
	\$	Margin	\$	Margin
Sales	\$10,323.0		\$8,856.3	
Net income and net income margin	\$2,114.9	20.5 %	\$1,931.1	21.8 %
Less: Income (Loss) from discontinued operations, net of tax	70.3	0.7 %	(14.3)	(0.2 %)
Add: Interest expense	141.8	1.4 %	109.3	1.2 %
Less: Other non-operating income (expense), net	73.7	0.7 %	30.7	0.3 %
Add: Income tax provision	462.8	4.5 %	478.4	5.4 %
Add: Depreciation and amortization	1,321.3	12.8 %	1,185.0	13.4 %
Add: Facility closure	23.2	0.2 %	—	— %
Less: Gain on exchange with joint venture partner	36.8	0.4 %	—	— %
Less: Company headquarters relocation income (expense)	—	— %	33.8	0.4 %
Less: India Finance Act 2020 – equity affiliate income impact	—	— %	33.8	0.4 %
Adjusted EBITDA and adjusted EBITDA margin	\$3,883.2	37.6 %	\$3,619.8	40.9 %

Fiscal Year Ended 30 September	2021 vs. 2020
Change GAAP	
Net income \$ change	\$183.8
Net income % change	10%
Net income margin change	(130) bp
Change Non-GAAP	
Adjusted EBITDA \$ change	\$263.4
Adjusted EBITDA % change	7%
Adjusted EBITDA margin change	(330) bp

The tables below present sales and a reconciliation of operating income and operating margin to adjusted EBITDA and adjusted EBITDA margin for each of our reporting segments for the fiscal years ended 30 September:

Sales	Industrial Gases—Americas	Industrial Gases—EMEA	Industrial Gases—Asia	Industrial Gases—Global	Corporate and other	Total
2021	\$4,167.6	\$2,444.9	\$2,920.8	\$511.0	\$278.7	\$10,323.0
2020	3,630.7	1,926.3	2,716.5	364.9	217.9	8,856.3
	Industrial Gases—Americas	Industrial Gases—EMEA	Industrial Gases—Asia	Industrial Gases—Global	Corporate and other	Total
2021 GAAP						
Operating income (loss)	\$1,065.5	\$557.4	\$838.3	(\$60.6)	(\$132.8)	\$2,267.8 ^(A)
Operating margin	25.6 %	22.8 %	28.7 %			
2020 GAAP						
Operating income (loss)	\$1,012.4	\$473.3	\$870.3	(\$40.0)	(\$112.2)	\$2,203.8 ^(A)
Operating margin	27.9 %	24.6 %	32.0 %			
2021 vs. 2020 Change GAAP						
Operating income/loss \$ change	\$53.1	\$84.1	(\$32.0)	(\$20.6)	(\$20.6)	
Operating income/loss % change	5 %	18 %	(4 %)	(52 %)	(18 %)	
Operating margin change	(230) bp	(180) bp	(330) bp			
2021 Non-GAAP						
Operating income (loss)	\$1,065.5	\$557.4	\$838.3	(\$60.6)	(\$132.8)	\$2,267.8 ^(A)
Add: Depreciation and amortization	611.9	229.8	444.4	10.9	24.3	1,321.3
Add: Equity affiliates' income	112.5	93.7	81.4	6.5	—	294.1 ^(A)
Adjusted EBITDA	\$1,789.9	\$880.9	\$1,364.1	(\$43.2)	(\$108.5)	\$3,883.2
Adjusted EBITDA margin	42.9 %	36.0 %	46.7 %			
2020 Non-GAAP						
Operating income (loss)	\$1,012.4	\$473.3	\$870.3	(\$40.0)	(\$112.2)	\$2,203.8 ^(A)
Add: Depreciation and amortization	559.5	195.9	399.4	9.6	20.6	1,185.0
Add: Equity affiliates' income	84.3	74.8	61.0	10.9	—	231.0 ^(A)
Adjusted EBITDA	\$1,656.2	\$744.0	\$1,330.7	(\$19.5)	(\$91.6)	\$3,619.8
Adjusted EBITDA margin	45.6 %	38.6 %	49.0 %			
2021 vs. 2020 Change Non-GAAP						
Adjusted EBITDA \$ change	\$133.7	\$136.9	\$33.4	(\$23.7)	(\$16.9)	
Adjusted EBITDA % change	8 %	18 %	3 %	(122 %)	(18 %)	
Adjusted EBITDA margin change	(270) bp	(260) bp	(230) bp			

^(A) Refer to the *Reconciliations to Consolidated Results* section below.

Reconciliations to Consolidated Results

The table below reconciles consolidated operating income as reflected on our consolidated income statements to total operating income in the table above for the fiscal years ended 30 September:

Operating Income	2021	2020
Consolidated operating income	\$2,281.4	\$2,237.6
Facility closure	23.2	—
Gain on exchange with joint venture partner	(36.8)	—
Company headquarters relocation (income) expense	—	(33.8)
Total	\$2,267.8	\$2,203.8

The table below reconciles consolidated equity affiliates' income as reflected on our consolidated income statements to total equity affiliates' income in the table above for the fiscal years ended 30 September:

Equity Affiliates' Income	2021	2020
Consolidated equity affiliates' income	\$294.1	\$264.8
India Finance Act 2020	—	(33.8)
Total	\$294.1	\$231.0

Adjusted Effective Tax Rate

The effective tax rate equals the income tax provision divided by income from continuing operations before taxes.

When applicable, the tax impact of our pre-tax non-GAAP adjustments reflects the expected current and deferred income tax impact of our non-GAAP adjustments. These tax impacts are primarily driven by the statutory tax rate of the various relevant jurisdictions and the taxability of the adjustments in those jurisdictions.

Fiscal Year Ended 30 September	2021	2020
Income tax provision	\$462.8	\$478.4
Income from continuing operations before taxes	\$2,507.4	\$2,423.8
Effective tax rate	18.5 %	19.7 %
Income tax provision	\$462.8	\$478.4
Facility closure	5.8	—
Gain on exchange with joint venture partner	(9.5)	—
Company headquarters relocation	—	(8.2)
India Finance Act 2020	—	(20.3)
Tax election benefit and other	12.2	—
Adjusted income tax provision	\$471.3	\$449.9
Income from continuing operations before taxes	\$2,507.4	\$2,423.8
Facility closure	23.2	—
Gain on exchange with joint venture partner	(36.8)	—
Company headquarters relocation (income) expense	—	(33.8)
India Finance Act 2020 – equity affiliate income impact	—	(33.8)
Adjusted income from continuing operations before taxes	\$2,493.8	\$2,356.2
Adjusted effective tax rate	18.9 %	19.1 %

Capital Expenditures

We define capital expenditures as cash flows for additions to plant and equipment, acquisitions (less cash acquired), and investment in and advances to unconsolidated affiliates. A reconciliation of cash used for investing activities to our reported capital expenditures is provided below:

Fiscal Year Ended 30 September	2021	2020
Cash used for investing activities	\$2,732.9	\$3,560.0
Proceeds from sale of assets and investments	37.5	80.3
Purchases of investments	(2,100.7)	(2,865.5)
Proceeds from investments	1,875.2	1,938.0
Other investing activities	5.8	3.9
Capital expenditures	\$2,550.7	\$2,716.7

LIQUIDITY AND CAPITAL RESOURCES

Our cash balance and cash flows from operations are our primary sources of liquidity and are generally sufficient to meet our liquidity needs. In addition, we have the flexibility to access capital through a variety of financing activities, including accessing the capital markets, drawing upon our credit facility, or alternatively, accessing the commercial paper markets. At this time, we have not utilized, nor do we expect to access, our credit facility for additional liquidity. In addition, we have considered the impacts of COVID-19 on our liquidity and capital resources and do not expect it to impact our ability to meet future liquidity needs.

As of 30 September 2021, we had \$1,590.4 of foreign cash and cash items compared to total cash and cash items of \$4,468.9. We do not expect that a significant portion of the earnings of our foreign subsidiaries and affiliates will be subject to U.S. income tax upon repatriation to the U.S. Depending on the country in which the subsidiaries and affiliates reside, the repatriation of these earnings may be subject to foreign withholding and other taxes. However, since we have significant current investment plans outside the U.S., it is our intent to permanently reinvest the majority of our foreign cash and cash items that would be subject to additional taxes outside the U.S.

Cash Flows From Operations

Fiscal Year Ended 30 September	2021	2020
Income from continuing operations attributable to Air Products	\$2,028.8	\$1,901.0
Adjustments to reconcile income to cash provided by operating activities:		
Depreciation and amortization	1,321.3	1,185.0
Deferred income taxes	94.0	165.0
Facility closure	23.2	—
Undistributed earnings of equity method investments	(138.2)	(161.9)
Gain on sale of assets and investments	(37.2)	(45.8)
Share-based compensation	44.5	53.5
Noncurrent lease receivables	98.8	91.6
Other adjustments	(116.7)	116.4
Changes in working capital accounts	16.7	(40.1)
Cash Provided by Operating Activities	\$3,335.2	\$3,264.7

For the fiscal year ended 30 September 2021, cash provided by operating activities was \$3,335.2. Other adjustments of \$116.7 included pension plan contributions of \$44.6 and pension income of \$38.9 that did not have a cash impact. The working capital accounts were a source of cash of \$16.7, primarily driven by a \$187.9 source of cash from payables and accrued liabilities, partially offset by a \$130.5 use of cash from trade receivables, less allowances. The source of cash within payables and accrued liabilities primarily resulted from higher natural gas costs, which also drove the use of cash within trade receivables as we contractually passed through these higher costs to customers.

For the fiscal year ended 30 September 2020, cash provided by operating activities was \$3,264.7. We recorded a net benefit of \$13.5 on our consolidated income statements related to a recently enacted tax law in India during the second quarter. This net benefit, which is further discussed in Note 21, *Income Taxes*, to the consolidated financial statements, increased "Undistributed earnings of unconsolidated affiliates" by \$33.8 and increased "Deferred income taxes" by \$20.3. The "Gain on sale of assets and investments" of \$45.8 includes a gain of \$33.8 related to the sale of property at our current corporate headquarters. Refer to Note 22, *Supplemental Information*, to the consolidated financial statements for additional information. The working capital accounts were a use of cash of \$40.1, primarily driven by other working capital uses of \$130.6, partially offset by a source of \$84.4 from other receivables. The use of cash within "Other working capital" was primarily due to timing of tax payments and a tax benefit as a result of the assets acquired in April 2020 from PBF Energy Inc. The source of cash within "Other receivables" was primarily driven by maturities of forward exchange contracts.

Cash Flows From Investing Activities

Fiscal Year Ended 30 September	2021	2020
Additions to plant and equipment, including long-term deposits	(\$2,464.2)	(\$2,509.0)
Acquisitions, less cash acquired	(10.5)	(183.3)
Investment in and advances to unconsolidated affiliates	(76.0)	(24.4)
Proceeds from sale of assets and investments	37.5	80.3
Purchases of investments	(2,100.7)	(2,865.5)
Proceeds from investments	1,875.2	1,938.0
Other investing activities	5.8	3.9
Cash Used for Investing Activities	(\$2,732.9)	(\$3,560.0)

For the fiscal year ended 30 September 2021, cash used for investing activities was \$2,732.9. Capital expenditures for plant and equipment, including long-term deposits, were \$2,464.2. Purchases of investments with terms greater than three months but less than one year of \$2,100.7 exceeded proceeds from investments of \$1,875.2, which resulted from maturities of time deposits and treasury securities.

For the fiscal year ended 30 September 2020, cash used for investing activities was \$3,560.0. Payments for additions to plant and equipment, including long-term deposits, were \$2,509.0. This includes the acquisition of five operating hydrogen production plants from PBF Energy Inc. in Delaware and California for approximately \$580. Additionally, acquisitions, less cash acquired, includes \$183.3 for three businesses we acquired on 1 July 2020, the largest of which was a business in Israel that primarily offers merchant gas products. Refer to Note 3, *Acquisitions*, to the consolidated financial statements for additional information. Purchases of investments of \$2,865.5 related to time deposits and treasury securities with terms greater than three months and less than one year and exceeded proceeds from investments of \$1,938.0. Proceeds from sale of assets and investments of \$80.3 included net proceeds of \$44.1 related to the sale of property at our current corporate headquarters.

Capital Expenditures

Capital expenditures is a non-GAAP financial measure that we define as cash flows for additions to plant and equipment, including long-term deposits, acquisitions (less cash acquired), and investment in and advances to unconsolidated affiliates. The components of our capital expenditures are detailed in the table below. We present a reconciliation of our capital expenditures to cash used for investing activities on page 36.

Fiscal Year Ended 30 September	2021	2020
Additions to plant and equipment, including long-term deposits	\$2,464.2	\$2,509.0
Acquisitions, less cash acquired	10.5	183.3
Investment in and advances to unconsolidated affiliates	76.0	24.4
Capital Expenditures	\$2,550.7	\$2,716.7

Capital expenditures in fiscal year 2021 totaled \$2,550.7 compared to \$2,716.7 in fiscal year 2020. The decrease of \$166.0 was primarily driven by the prior year acquisition of five operating hydrogen production plants from PBF, partially offset by lower spending for acquisitions. Additions to plant and equipment also included support capital of a routine, ongoing nature, including expenditures for distribution equipment and facility improvements.

Outlook for Investing Activities

We expect capital expenditures for fiscal year 2022 to be approximately \$4.5 to \$5 billion. In the first quarter of fiscal year 2022, we paid \$1.6 billion, including approximately \$130 from a non-controlling partner in one of our subsidiaries, for the initial investment in the Jazan gasification and power project. We expect to make an additional investment of approximately \$1 billion, which includes contribution from our non-controlling partner, for phase II of the project in 2023. Refer to Note 24, *Subsequent Events*, to the consolidated financial statements for additional information.

It is not possible, without unreasonable efforts, to reconcile our forecasted capital expenditures to future cash used for investing activities because we are unable to identify the timing or occurrence of our future investment activity, which is driven by our assessment of competing opportunities at the time we enter into transactions. These decisions, either individually or in the aggregate, could have a significant effect on our cash used for investing activities.

We anticipate capital expenditures to be funded principally with our current cash balance and cash generated from continuing operations. In addition, we intend to continue to evaluate (1) acquisitions of small- and medium-sized industrial gas companies or assets from other industrial gas companies; (2) purchases of existing industrial gas facilities from our customers to create long-term contracts under which we own and operate the plant and sell industrial gases to the customer based on a fixed fee; and (3) investment in large industrial gas projects driven by demand for more energy, cleaner energy, and emerging market growth.

Cash Flows From Financing Activities

Fiscal Year Ended 30 September	2021	2020
Long-term debt proceeds	\$178.9	\$4,895.8
Payments on long-term debt	(462.9)	(406.6)
Net increase (decrease) in commercial paper and short-term borrowings	1.0	(54.9)
Dividends paid to shareholders	(1,256.7)	(1,103.6)
Proceeds from stock option exercises	10.6	34.1
Investments by noncontrolling interests	136.6	17.1
Other financing activities	(28.4)	(97.2)
Cash (Used for) Provided by Financing Activities	(\$1,420.9)	\$3,284.7

In fiscal year 2021, cash used for financing activities was \$1,420.9 and primarily included dividend payments to shareholders of \$1,256.7 and payments on long-term debt of \$462.9, partially offset by long-term debt proceeds of \$178.9 and investments by noncontrolling interests of \$136.6. The payments on long-term debt included the repayment of a €350.0 million Eurobond (\$428) in June 2021.

In November 2021, we repaid our 3.0% Senior Note of \$400, plus interest, on its maturity date.

In fiscal year 2020, cash provided by financing activities was \$3,284.7 as we successfully accessed the debt markets in April 2020 to support opportunities for growth projects and repay upcoming debt maturities. Long-term debt proceeds of \$4,895.8 were partially offset by dividend payments to shareholders of \$1,103.6 and payments on long-term debt of \$406.6 primarily related to the repayment of a 2.0% Eurobond of €300.0 million (\$353.9) that matured on 7 August 2020. Other financing activities were a use of cash of \$97.2 and included financing charges associated with the third quarter debt issuance.

Financing and Capital Structure

Capital needs in fiscal year 2021 were satisfied with cash from operations. Total debt decreased from \$7,907.8 as of 30 September 2020 to \$7,637.2 as of 30 September 2021, primarily due to repayment of the €350 million Eurobond, partially offset by proceeds from long-term borrowings on our foreign commitments. Total debt includes related party debt of \$358.4 and \$338.5 as of 30 September 2021 and 30 September 2020, respectively, primarily associated with the Lu'An joint venture. For additional detail, refer to Note 14, *Debt*, to the consolidated financial statements.

On 31 March 2021, we entered into a five-year \$2,500 revolving credit agreement with a syndicate of banks (the "2021 Credit Agreement"), under which senior unsecured debt is available to us and certain of our subsidiaries. The 2021 Credit Agreement provides a source of liquidity and supports our commercial paper program. The only financial covenant in the 2021 Credit Agreement is a maximum ratio of total debt to capitalization (equal to total debt plus total equity) not to exceed 70%. Total debt as of 30 September 2021 and 30 September 2020, expressed as a percentage of total capitalization, was 35.2% and 38.9%, respectively. No borrowings were outstanding under the 2021 Credit Agreement as of 30 September 2021.

The 2021 Credit Agreement replaced our previous five-year \$2,300.0 revolving credit agreement, which was to have matured on 31 March 2022. No borrowings were outstanding under the previous agreement as of 30 September 2020 or at the time of its termination. No early termination penalties were incurred.

Commitments of \$296.7 are maintained by our foreign subsidiaries, \$176.2 of which was borrowed and outstanding as of 30 September 2021.

As of 30 September 2021, we are in compliance with all of the financial and other covenants under our debt agreements.

On 15 September 2011, the Board of Directors authorized the repurchase of up to \$1,000 of our outstanding common stock. We did not purchase any of our outstanding shares in fiscal years 2021 or 2020. As of 30 September 2021, \$485.3 in share repurchase authorization remains.

Dividends

Cash dividends on our common stock are paid quarterly, usually during the sixth week after the close of the fiscal quarter. We expect to continue to pay cash dividends in the future at comparable or increased levels.

The Board of Directors determines whether to declare dividends and the timing and amount based on financial condition and other factors it deems relevant. In 2021, the Board of Directors increased the quarterly dividend on our common stock to \$1.50 per share, representing a 12% increase from the previous dividend of \$1.34 per share. This is the 39th consecutive year that we have increased our quarterly dividend payment.

On 18 November 2021, the Board of Directors declared the first quarter 2022 dividend of \$1.50 per share. The dividend is payable on 14 February 2022 to shareholders of record as of 3 January 2022.

Discontinued Operations

In fiscal year 2021, cash provided by operating activities of discontinued operations of \$6.7 resulted from cash received as part of a state tax settlement related to the sale of PMD in fiscal year 2017.

PENSION BENEFITS

We and certain of our subsidiaries sponsor defined benefit pension plans and defined contribution plans that cover a substantial portion of our worldwide employees. The principal defined benefit pension plans are the U.S. salaried pension plan and the U.K. pension plan. These plans were closed to new participants in 2005, after which defined contribution plans were offered to new employees. The shift to defined contribution plans is expected to continue to reduce volatility of both plan expense and contributions.

The fair market value of plan assets for our defined benefit pension plans as of the 30 September 2021 measurement date increased to \$5,248.7 from \$4,775.1 at the end of fiscal year 2020. The projected benefit obligation for these plans was \$5,304.9 and \$5,373.5 at the end of fiscal years 2021 and 2020, respectively. The net unfunded liability decreased \$542.2 from \$598.4 to \$56.2, primarily due to favorable asset experience. Refer to Note 15, *Retirement Benefits*, to the consolidated financial statements for additional disclosures on our postretirement benefits.

Pension Expense

	2021	2020
Pension (income)/expense, including special items noted below	(\$37.3)	\$7.0
Settlements, termination benefits, and curtailments ("special items")	1.8	5.2
Weighted average discount rate – Service cost	2.3 %	2.4 %
Weighted average discount rate – Interest cost	1.8 %	2.3 %
Weighted average expected rate of return on plan assets	6.0 %	6.3 %
Weighted average expected rate of compensation increase	3.4 %	3.4 %

We recognized pension income of \$37.3 in fiscal year 2021 versus expense of \$7.0 in fiscal year 2020, primarily due to lower interest cost and higher total assets. Special items decreased from the prior year primarily due to lower pension settlement losses.

2022 Outlook

In fiscal year 2022, we expect pension impacts to range from \$5 million of income to \$5 million of expense, which includes potential settlement losses of \$5 to \$10 million, depending on the timing of retirements. This forecast reflects a lower expected estimated return on assets due to the increased percentage of fixed income investments within the plan asset portfolios and higher interest cost, partially offset by lower forecasted actuarial loss amortization. In fiscal year 2022, our expected range of pension impacts includes approximately \$80 for amortization of actuarial losses.

In fiscal year 2021, pension expense included amortization of actuarial losses of \$97.8. Net actuarial gains of \$360.8 were recognized in accumulated other comprehensive income in fiscal year 2021. Actuarial gains and losses are amortized into pension expense over prospective periods to the extent they are not offset by future gains or losses. Future changes in the discount rate and actual returns on plan assets could impact the actuarial gain or loss and resulting amortization in years beyond fiscal year 2022.

Pension Funding

Pension funding includes both contributions to funded plans and benefit payments for unfunded plans, which are primarily non-qualified plans. With respect to funded plans, our funding policy is that contributions, combined with appreciation and earnings, will be sufficient to pay benefits without creating unnecessary surpluses.

In addition, we make contributions to satisfy all legal funding requirements while managing our capacity to benefit from tax deductions attributable to plan contributions. With the assistance of third-party actuaries, we analyze the liabilities and demographics of each plan, which help guide the level of contributions. During 2021 and 2020, our cash contributions to funded plans and benefit payments for unfunded plans were \$44.6 and \$37.5, respectively.

For fiscal year 2022, cash contributions to defined benefit plans are estimated to be \$40 to \$50. The estimate is based on expected contributions to certain international plans and anticipated benefit payments for unfunded plans, which are dependent upon the timing of retirements. Actual future contributions will depend on future funding legislation, discount rates, investment performance, plan design, and various other factors. We do not expect COVID-19 to impact our contribution forecast for fiscal year 2022.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Refer to Note 1, *Major Accounting Policies*, and Note 2, *New Accounting Guidance*, to the consolidated financial statements for a description of our major accounting policies and information concerning implementation and impact of new accounting guidance.

The accounting policies discussed below are those policies that we consider to be the most critical to understanding our financial statements because they require management's most difficult, subjective, or complex judgments, often as the result of the need to make estimates about the effects of matters that are inherently uncertain. These estimates reflect our best judgment about current and/or future economic and market conditions and their effect based on information available as of the date of our consolidated financial statements. If conditions change, actual results may differ materially from these estimates. Our management has reviewed these critical accounting policies and estimates and related disclosures with the Audit and Finance Committee of our Board of Directors.

Depreciable Lives of Plant and Equipment

Plant and equipment, net at 30 September 2021 totaled \$13,254.6, and depreciation expense totaled \$1,284.1 during fiscal year 2021. Plant and equipment is recorded at cost and depreciated using the straight-line method, which deducts equal amounts of the cost of each asset from earnings every year over its estimated economic useful life.

Economic useful life is the duration of time an asset is expected to be productively employed by us, which may be less than its physical life. Assumptions on the following factors, among others, affect the determination of estimated economic useful life: wear and tear, obsolescence, technical standards, contract life, market demand, competitive position, raw material availability, and geographic location.

The estimated economic useful life of an asset is monitored to determine its appropriateness, especially when business circumstances change. For example, changes in technology, changes in the estimated future demand for products, excessive wear and tear, or unanticipated government actions may result in a shorter estimated useful life than originally anticipated. In these cases, we would depreciate the remaining net book value over the new estimated remaining life, thereby increasing depreciation expense per year on a prospective basis. Likewise, if the estimated useful life is increased, the adjustment to the useful life decreases depreciation expense per year on a prospective basis.

The regional Industrial Gases segments have numerous long-term customer supply contracts for which we construct an on-site plant adjacent to or near the customer's facility. These contracts typically have initial contract terms of 10 to 20 years. Depreciable lives of the production assets related to long-term supply contracts are generally matched to the contract lives. Extensions to the contract term of supply frequently occur prior to the expiration of the initial term. As contract terms are extended, the depreciable life of the associated production assets is adjusted to match the new contract term, as long as it does not exceed the remaining physical life of the asset.

Our regional Industrial Gases segments also have contracts for liquid or gaseous bulk supply and, for smaller customers, packaged gases. The depreciable lives of production facilities associated with these contracts are generally 15 years. These depreciable lives have been determined based on historical experience combined with judgment on future assumptions such as technological advances, potential obsolescence, competitors' actions, etc.

In addition, we may purchase assets through transactions accounted for as either an asset acquisition or a business combination. Depreciable lives are assigned to acquired assets based on the age and condition of the assets, the remaining duration of long-term supply contracts served by the assets, and our historical experience with similar assets. Management monitors its assumptions and may potentially need to adjust depreciable life as circumstances change.

Impairment of Assets

As discussed below, there were no triggering events in fiscal year 2021 that would require impairment testing for any of our asset groups, reporting units that contain goodwill, indefinite-lived intangibles assets, or equity method investments. We completed our annual impairment tests for goodwill and other indefinite-lived intangible assets and concluded there were no indications of impairment.

Impairment of Assets – Plant and Equipment

Plant and equipment meeting the held for sale criteria are reported at the lower of carrying amount or fair value less cost to sell. Plant and equipment to be disposed of other than by sale may be reviewed for impairment upon the occurrence of certain triggering events, such as unexpected contract terminations or unexpected foreign government-imposed restrictions or expropriations. Plant and equipment held for use is grouped for impairment testing at the lowest level for which there is identifiable cash flows. Impairment testing of the asset group occurs whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. Such circumstances would include: (1) a significant decrease in the market value of a long-lived asset grouping; (2) a significant adverse change in the manner in which the asset grouping is being used or in its physical condition; (3) an accumulation of costs significantly in excess of the amount originally expected for the acquisition or construction of the long-lived asset; (4) a reduction in revenues that is other than temporary; (5) a history of operating or cash flow losses associated with the use of the asset grouping; or (6) changes in the expected useful life of the long-lived assets.

If such circumstances are determined to exist, an estimate of undiscounted future cash flows produced by that asset group is compared to the carrying value to determine whether impairment exists. If an asset group is determined to be impaired, the loss is measured based on the difference between the asset group's fair value and its carrying value. An estimate of the asset group's fair value is based on the discounted value of its estimated cash flows.

The assumptions underlying the undiscounted future cash flow projections require significant management judgment. Factors that management must estimate include industry and market conditions, sales volume and prices, costs to produce, inflation, etc. The assumptions underlying the cash flow projections represent management's best estimates at the time of the impairment review and could include probability weighting of cash flow projections associated with multiple potential future scenarios. Changes in key assumptions or actual conditions that differ from estimates could result in an impairment charge. We use reasonable and supportable assumptions when performing impairment reviews and cannot predict the occurrence of future events and circumstances that could result in impairment charges.

In fiscal year 2021, there was no need to test for impairment on any of our asset groupings as no events or changes in circumstances indicated that the carrying amount of our asset groupings may not be recoverable.

Impairment of Assets – Goodwill

The acquisition method of accounting for business combinations requires us to make use of estimates and judgments to allocate the purchase price paid for acquisitions to the fair value of the net tangible and identifiable intangible assets. Goodwill represents the excess of the aggregate purchase price (plus the fair value of any noncontrolling interest and previously held equity interest in the acquiree) over the fair value of identifiable net assets of an acquired entity. Goodwill was \$911.5 as of 30 September 2021. Disclosures related to goodwill are included in Note 9, *Goodwill*, to the consolidated financial statements.

We review goodwill for impairment annually in the fourth quarter of the fiscal year and whenever events or changes in circumstances indicate that the carrying value of goodwill might not be recoverable. The tests are done at the reporting unit level, which is defined as being equal to or one level below the operating segment for which discrete financial information is available and whose operating results are reviewed by segment managers regularly. We have five reportable business segments, seven operating segments and ten reporting units, seven of which include a goodwill balance. Refer to Note 23, *Business Segment and Geographic Information*, for additional information. Reporting units are primarily based on products and subregions within each reportable segment. The majority of our goodwill is assigned to reporting units within our regional Industrial Gases segments.

As part of the goodwill impairment testing, we have the option to first assess qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying value. However, we choose to bypass the qualitative assessment and conduct quantitative testing to determine if the carrying value of the reporting unit exceeds its fair value. An impairment loss will be recognized for the amount by which the carrying value of the reporting unit exceeds its fair value, not to exceed the total amount of goodwill allocated to that reporting unit.

To determine the fair value of a reporting unit, we initially use an income approach valuation model, representing the present value of estimated future cash flows. Our valuation model uses a discrete growth period and an estimated exit trading multiple. The income approach is an appropriate valuation method due to our capital-intensive nature, the long-term contractual nature of our business, and the relatively consistent cash flows generated by our reporting units. The principal assumptions utilized in our income approach valuation model include revenue growth rates, operating profit and/or adjusted EBITDA margins, discount rate, and exit multiple. Projected revenue growth rates and operating profit and/or adjusted EBITDA assumptions are consistent with those utilized in our operating plan and/or revised forecasts and long-term financial planning process. The discount rate assumption is calculated based on an estimated market-participant risk-adjusted weighted-average cost of capital, which includes factors such as the risk-free rate of return, cost of debt, and expected equity premiums. The exit multiple is determined from comparable industry transactions and where appropriate, reflects expected long-term growth rates.

If our initial review under the income approach indicates there may be impairment, we incorporate results under the market approach to further evaluate the existence of impairment. When the market approach is utilized, fair value is estimated based on market multiples of revenue and earnings derived from comparable publicly-traded industrial gases companies and/or regional manufacturing companies engaged in the same or similar lines of business as the reporting unit, adjusted to reflect differences in size and growth prospects. When both the income and market approach are utilized, we review relevant facts and circumstances and make a qualitative assessment to determine the proper weighting. Management judgment is required in the determination of each assumption utilized in the valuation model, and actual results could differ from the estimates.

During the fourth quarter of fiscal year 2021, we conducted our annual goodwill impairment test, noting no indications of impairment. The fair value of all of our reporting units substantially exceeded their carrying value.

Due to the reorganization of our business effective as of 1 October 2021, we conducted an additional impairment test on our existing reporting units as of 30 September 2021. The fair value of all of our reporting units substantially exceeded their carrying value at 30 September 2021.

Future events that could have a negative impact on the level of excess fair value over carrying value of the reporting units include, but are not limited to: long-term economic weakness, decline in market share, pricing pressures, inability to successfully implement cost improvement measures, increases to our cost of capital, changes in the strategy of the reporting unit, and changes to the structure of our business as a result of future reorganizations or divestitures of assets or businesses. Negative changes in one or more of these factors, among others, could result in impairment charges.

Impairment of Assets – Intangible Assets

Intangible assets, net with determinable lives at 30 September 2021 totaled \$380.4 and consisted primarily of customer relationships, purchased patents and technology, and land use rights. These intangible assets are tested for impairment as part of the long-lived asset grouping impairment tests. Impairment testing of the asset group occurs whenever events or changes in circumstances indicate that the carrying value of the assets may not be recoverable. See the impairment discussion above under "*Impairment of Assets – Plant and Equipment*" for a description of how impairment losses are determined.

Indefinite-lived intangible assets at 30 September 2021 totaled \$40.3 and consisted of trade names and trademarks. Indefinite-lived intangibles are subject to impairment testing at least annually or more frequently if events or changes in circumstances indicate that potential impairment exists. The impairment test for indefinite-lived intangible assets involves calculating the fair value of the indefinite-lived intangible assets and comparing the fair value to their carrying value. If the fair value is less than the carrying value, the difference is recorded as an impairment loss. To determine fair value, we utilize the royalty savings method, a form of the income approach. This method values an intangible asset by estimating the royalties avoided through ownership of the asset.

Disclosures related to intangible assets other than goodwill are included in Note 10, *Intangible Assets*, to the consolidated financial statements.

In the fourth quarter of 2021, we conducted our annual impairment test of indefinite-lived intangibles which resulted in no impairment.

Impairment of Assets – Equity Method Investments

Investments in and advances to equity affiliates totaled \$1,649.3 at 30 September 2021. The majority of our investments are non-publicly traded ventures with other companies in the industrial gas business. Summarized financial information of equity affiliates is included in Note 7, *Summarized Financial Information of Equity Affiliates*, to the consolidated financial statements. Equity investments are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the investment may not be recoverable.

An impairment loss is recognized in the event that an other-than-temporary decline in fair value below the carrying value of an investment occurs. Management's estimate of fair value of an investment is based on the income approach and/or market approach. We utilize estimated discounted future cash flows expected to be generated by the investee under the income approach. For the market approach, we utilize market multiples of revenue and earnings derived from comparable publicly-traded industrial gases companies. Changes in key assumptions about the financial condition of an investee or actual conditions that differ from estimates could result in an impairment charge.

In fiscal year 2021, there was no need to test any of our equity affiliate investments for impairment, as no events or changes in circumstances indicated that the carrying amount of the investments may not be recoverable.

Revenue Recognition – Cost Incurred Input Method

Revenue from equipment sale contracts is generally recognized over time as we have an enforceable right to payment for performance completed to date and our performance under the contract terms does not create an asset with alternative use. We use a cost incurred input method to recognize revenue by which costs incurred to date relative to total estimated costs at completion are used to measure progress toward satisfying performance obligations. Costs incurred include material, labor, and overhead costs and represent work contributing and proportionate to the transfer of control to the customer.

Accounting for contracts using the cost incurred input method requires management judgment relative to assessing risks and their impact on the estimates of revenues and costs. Our estimates are impacted by factors such as the potential for incentives or penalties on performance, schedule delays, technical issues, labor productivity, the complexity of work performed, the cost and availability of materials, and performance of subcontractors. When adjustments in estimated total contract revenues or estimated total costs are required, any changes in the estimated profit from prior estimates are recognized in the current period for the inception-to-date effect of such change. When estimates of total costs to be incurred on a contract exceed estimates of total revenues to be earned, a provision for the entire estimated loss on the contract is recorded in the period in which the loss is determined.

In addition to the typical risks associated with underlying performance of project procurement and construction activities, our sale of equipment projects within our Industrial Gases – Global segment require monitoring of risks associated with schedule, geography, and other aspects of the contract and their effects on our estimates of total revenues and total costs to complete the contract.

Changes in estimates on projects accounted for under the cost incurred input method unfavorably impacted operating income by approximately \$19 in fiscal year 2021 as compared to a favorable impact of \$7 in fiscal year 2020. Our changes in estimates would not have significantly impacted amounts recorded in prior years.

We assess the performance of our sale of equipment projects as they progress. Our earnings could be positively or negatively impacted by changes to our forecast of revenues and costs on these projects.

Revenue Recognition – On-site Customer Contracts

For customers who require large volumes of gases on a long-term basis, we produce and supply gases under long-term contracts from large facilities that we build, own and operate on or near the customer's facilities. Certain of these on-site contracts contain complex terms and provisions such as tolling arrangements, minimum payment requirements, variable components and pricing provisions that require significant judgment to determine the amount and timing of revenue recognition.

Income Taxes

We account for income taxes under the asset and liability method. Under this method, deferred tax assets and liabilities are recognized for the tax effects of temporary differences between the financial reporting and tax bases of assets and liabilities measured using enacted tax rates in effect for the year in which the differences are expected to be recovered or settled. As of 30 September 2021, accrued income taxes, including the amount recorded as noncurrent, was \$251.0, and net deferred tax liabilities were \$1,080.7. Tax liabilities related to uncertain tax positions as of 30 September 2021 were \$140.3, excluding interest and penalties. Income tax expense for the fiscal year ended 30 September 2021 was \$462.8. Disclosures related to income taxes are included in Note 21, *Income Taxes*, to the consolidated financial statements.

Management judgment is required concerning the ultimate outcome of tax contingencies and the realization of deferred tax assets.

Actual income taxes paid may vary from estimates, depending upon changes in income tax laws, actual results of operations, and the final audit of tax returns by taxing authorities. Tax assessments may arise several years after tax returns have been filed. We believe that our recorded tax liabilities adequately provide for these assessments.

Deferred tax assets are recorded for operating losses and tax credit carryforwards. However, when we do not expect sufficient sources of future taxable income to realize the benefit of the operating losses or tax credit carryforwards, these deferred tax assets are reduced by a valuation allowance. A valuation allowance is recognized if, based on the weight of available evidence, it is considered more likely than not that some portion or all of the deferred tax asset will not be realized. The factors used to assess the likelihood of realization include forecasted future taxable income and available tax planning strategies that could be implemented to realize or renew net deferred tax assets in order to avoid the potential loss of future tax benefits. The effect of a change in the valuation allowance is reported in the income tax expense.

A 1% increase or decrease in our effective tax rate may result in a decrease or increase to net income, respectively, of approximately \$25.

Pension and Other Postretirement Benefits

The amounts recognized in the consolidated financial statements for pension and other postretirement benefits are determined on an actuarial basis utilizing numerous assumptions. The discussion that follows provides information on the significant assumptions, expense, and obligations associated with the defined benefit plans.

Actuarial models are used in calculating the expense and liability related to the various defined benefit plans. These models have an underlying assumption that the employees render service over their service lives on a relatively consistent basis; therefore, the expense of benefits earned should follow a similar pattern.

Several assumptions and statistical variables are used in the models to calculate the expense and liability related to the plans. We determine assumptions about the discount rate, the expected rate of return on plan assets, and the rate of compensation increase. Note 15, *Retirement Benefits*, to the consolidated financial statements includes disclosure of these rates on a weighted-average basis for both the U.S. and international plans. The actuarial models also use assumptions about demographic factors such as retirement age, mortality, and turnover rates. Mortality rates are based on the most recent U.S. and international mortality tables. We believe the actuarial assumptions are reasonable. However, actual results could vary materially from these actuarial assumptions due to economic events and differences in rates of retirement, mortality, and turnover.

One of the assumptions used in the actuarial models is the discount rate used to measure benefit obligations. This rate reflects the prevailing market rate for high-quality, fixed-income debt instruments with maturities corresponding to the expected timing of benefit payments as of the annual measurement date for each of the various plans. We measure the service cost and interest cost components of pension expense by applying spot rates along the yield curve to the relevant projected cash flows. The rates along the yield curve are used to discount the future cash flows of benefit obligations back to the measurement date. These rates change from year to year based on market conditions that affect corporate bond yields. A higher discount rate decreases the present value of the benefit obligations and results in lower pension expense. A 50 bp increase or decrease in the discount rate may result in a decrease or increase to pension expense, respectively, of approximately \$20 per year.

The expected rate of return on plan assets represents an estimate of the long-term average rate of return to be earned by plan assets reflecting current asset allocations. In determining estimated asset class returns, we take into account historical and future expected long-term returns and the value of active management, as well as the interest rate environment. Asset allocation is determined based on long-term return, volatility and correlation characteristics of the asset classes, the profiles of the plans' liabilities, and acceptable levels of risk. Lower returns on the plan assets result in higher pension expense. A 50 bp increase or decrease in the estimated rate of return on plan assets may result in a decrease or increase to pension expense, respectively, of approximately \$23 per year.

We use a market-related valuation method for recognizing certain investment gains or losses for our significant pension plans. Investment gains or losses are the difference between the expected return and actual return on plan assets. The expected return on plan assets is determined based on a market-related value of plan assets. This is a calculated value that recognizes investment gains and losses on equities over a five-year period from the year in which they occur and reduces year-to-year volatility. The market-related value for non-equity investments equals the actual fair value. Expense in future periods will be impacted as gains or losses are recognized in the market-related value of assets.

The expected rate of compensation increase is another key assumption. We determine this rate based on review of the underlying long-term salary increase trend characteristic of labor markets and historical experience, as well as comparison to peer companies. A 50 bp increase or decrease in the expected rate of compensation may result in an increase or decrease to pension expense, respectively, of approximately \$7 per year.

Loss Contingencies

In the normal course of business, we encounter contingencies, or situations involving varying degrees of uncertainty as to the outcome and effect on our company. We accrue a liability for loss contingencies when it is considered probable that a liability has been incurred and the amount of loss can be reasonably estimated. When only a range of possible loss can be established, the most probable amount in the range is accrued. If no amount within this range is a better estimate than any other amount within the range, the minimum amount in the range is accrued.

Contingencies include those associated with litigation and environmental matters, for which our accounting policy is discussed in Note 1, *Major Accounting Policies*, to the consolidated financial statements, and details are provided in Note 16, *Commitments and Contingencies*, to the consolidated financial statements. Significant judgment is required to determine both the probability and whether the amount of loss associated with a contingency can be reasonably estimated. These determinations are made based on the best available information at the time. As additional information becomes available, we reassess probability and estimates of loss contingencies. Revisions to the estimates associated with loss contingencies could have a significant impact on our results of operations in the period in which an accrual for loss contingencies is recorded or adjusted. For example, due to the inherent uncertainties related to environmental exposures, a significant increase to environmental liabilities could occur if a new site is designated, the scope of remediation is increased, a different remediation alternative is identified, or our proportionate share of the liability increases. Similarly, a future charge for regulatory fines or damage awards associated with litigation could have a significant impact on our net income in the period in which it is recorded.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

Our earnings, cash flows, and financial position are exposed to market risks arising from fluctuations in interest rates and foreign currency exchange rates. It is our policy to minimize our cash flow exposure to adverse changes in currency exchange rates and to manage the financial risks inherent in funding with debt capital.

We address these financial exposures through a controlled program of risk management that includes the use of derivative financial instruments. We have established counterparty credit guidelines and generally enter into transactions with financial institutions of investment grade or better, thereby minimizing the risk of credit loss. All instruments are entered into for other than trading purposes. For details on the types and use of these derivative instruments and related major accounting policies, refer to Note 1, *Major Accounting Policies*, and Note 12, *Financial Instruments*, to the consolidated financial statements. Additionally, we mitigate adverse energy price impacts through our cost pass-through contracts with customers and price increases.

Our derivative and other financial instruments consist of long-term debt, including the current portion and amounts owed to related parties; interest rate swaps; cross currency interest rate swaps; and foreign exchange-forward contracts. The net market value of these financial instruments combined is referred to below as the "net financial instrument position" and is disclosed in Note 13, *Fair Value Measurements*, to the consolidated financial statements.

Our net financial instrument position decreased from a liability of \$8,220.7 at 30 September 2020 to a liability of \$7,850.3 at 30 September 2021. The decrease was primarily due to the repayment of a €350.0 million Eurobond (\$428) on its maturity date in June 2021.

The analysis below presents the sensitivity of the market value of our financial instruments to selected changes in market rates and prices. Market values are the present values of projected future cash flows based on the market rates and prices chosen. The market values for interest rate risk and foreign currency risk are calculated by us using a third-party software model that utilizes standard pricing models to determine the present value of the instruments based on market conditions as of the valuation date, such as interest rates, spot and forward exchange rates, and implied volatilities.

Interest Rate Risk

Our debt portfolio as of 30 September 2021 and 2020, including the effect of currency and interest rate swap agreements, was composed of 89% fixed-rate debt and 11% variable-rate debt.

The sensitivity analysis related to the interest rate risk on the fixed portion of our debt portfolio assumes an instantaneous 100 bp parallel move in interest rates from the level at 30 September 2021, with all other variables held constant. A 100 bp increase in market interest rates would result in a decrease of \$587 and \$711 in the net liability position of financial instruments at 30 September 2021 and 2020, respectively. A 100 bp decrease in market interest rates would result in an increase of \$692 and \$846 in the net liability position of financial instruments at 30 September 2021 and 2020, respectively.

Based on the variable-rate debt included in our debt portfolio, including the interest rate swap agreements, a 100 bp increase in interest rates would result in an additional \$8 of interest incurred per year at 30 September 2021 and 2020. A 100 bp decline in interest rates would lower interest incurred by \$8 per year at 30 September 2021 and 2020.

Foreign Currency Exchange Rate Risk

The sensitivity analysis related to foreign currency exchange rates assumes an instantaneous 10% change in the foreign currency exchange rates from their levels at 30 September 2021 and 2020, with all other variables held constant. A 10% strengthening or weakening of the functional currency of an entity versus all other currencies would result in a decrease or increase, respectively, of \$343 and \$360 in the net liability position of financial instruments at 30 September 2021 and 2020, respectively.

The primary currency pairs for which we have exchange rate exposure are the Euro and U.S. Dollar and Chinese Renminbi and U.S. Dollar. Foreign currency debt, cross currency interest rate swaps, and foreign exchange-forward contracts are used in countries where we do business, thereby reducing our net asset exposure. Foreign exchange-forward contracts and cross currency interest rate swaps are also used to hedge our firm and highly anticipated foreign currency cash flows. Thus, there is either an asset or liability or cash flow exposure related to all of the financial instruments in the above sensitivity analysis for which the impact of a movement in exchange rates would be in the opposite direction and materially equal to the impact on the instruments in the analysis.

The majority of our sales are denominated in foreign currencies as they are derived outside the United States. Therefore, financial results will be affected by changes in foreign currency rates. The Chinese Renminbi and the Euro represent the largest exposures in terms of our foreign earnings. We estimate that a 10% reduction in either the Chinese Renminbi or the Euro versus the U.S. Dollar would lower our annual operating income by approximately \$45 and \$25, respectively.

Item 8. Financial Statements and Supplementary Data.

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MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Air Products' management is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control over financial reporting, which is defined in the following sentences, is a process designed to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles and includes those policies and procedures that:

- (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company;
- (ii) provide reasonable assurance that the transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and
- (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial statements.

Because of inherent limitations, internal control over financial reporting can only provide reasonable assurance and may not prevent or detect misstatements. Further, because of changes in conditions, the effectiveness of our internal control over financial reporting may vary over time. Our processes contain self-monitoring mechanisms, and actions are taken to correct deficiencies as they are identified.

Management has evaluated the effectiveness of its internal control over financial reporting based on criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this evaluation, management concluded that, as of 30 September 2021, the Company's internal control over financial reporting was effective.

Deloitte & Touche LLP, an independent registered public accounting firm, has issued its opinion on the Company's internal control over financial reporting as of 30 September 2021 as stated in its report which appears herein.

/s/ Seifi Ghasemi

Seifi Ghasemi
Chairman, President, and
Chief Executive Officer
18 November 2021

/s/ Melissa N. Schaeffer

Melissa N. Schaeffer
Senior Vice President and
Chief Financial Officer
18 November 2021

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholders and the Board of Directors of Air Products and Chemicals, Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Air Products and Chemicals, Inc. and subsidiaries (the "Company") as of September 30, 2021 and 2020, the related consolidated income statements, comprehensive income statements, statements of equity, and statements of cash flows, for each of the three years in the period ended September 30, 2021, and the related notes (collectively referred to as the "financial statements"). We also have audited the Company's internal control over financial reporting as of September 30, 2021, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Company as of September 30, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended September 30, 2021, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of September 30, 2021, based on criteria established in Internal Control — Integrated Framework (2013) issued by COSO.

Basis for Opinions

The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on these financial statements and an opinion on the Company's internal control over financial reporting 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 Company 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 the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the financial statements included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures to 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. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current-period audit of the financial statements that were communicated or required to be communicated to the audit committee and that (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing a separate opinion on the critical audit matters or on the accounts or disclosures to which they relate.

Revenue Recognition – On-site Customer Contracts – Refer to Notes 1 and 4 to the Financial Statements

Critical Audit Matter Description

On-site industrial gas customer contracts involve large capital investments to serve customers who require large volumes of gases and have relatively constant demand. The Company builds, owns and operates facilities on or near the customer's facilities to produce and supply the customer with gases under a long-term arrangement. Typically, these contracts have 15- to 20-year terms and contain fixed monthly charges and/or minimum purchase requirements. Revenue associated with these contracts is generally recognized over time during the period in which the Company delivers or makes available the agreed upon quantity of gases. In addition, certain on-site industrial gas contracts contain complex terms and provisions such as tolling arrangements, minimum payment requirements, pricing provisions, and variable components that are specific to a customer arrangement, including certain contracts with related parties. These arrangements may require greater judgment in determining when contractual requirements have been met, impacting the timing and amount of revenue to be recorded.

We identified revenue recognition for certain on-site industrial gas customer contracts with complex terms and provisions as a critical audit matter because of the judgments necessary for management to evaluate these contract terms, including amendments, when determining the amount of revenue to be recognized. This required a high degree of auditor judgment when performing procedures to audit management's identification and assessment of contract terms when determining the amount and timing of revenue recognition and evaluating the results of those procedures.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to revenue recognition for certain on-site industrial gas customer contracts with complex terms and provisions included the following procedures, among others:

- We tested the effectiveness of the Company's controls related to the amount and timing of revenue recognition, including controls over the evaluation of complex terms and provisions in certain on-site industrial gas customer contracts.
- We evaluated the terms included within original customer contracts and related amendments to assess the accounting for provisions such as minimum payment requirements, pricing provisions, settlement terms, and variable components that require management to apply judgment in determining revenue recognition associated with the contract.
- We tested the probability of collection of variable components, including penalties, which impacts the amount and timing of revenue which the Company expects to collect.
- We inquired of personnel who oversee operations, customer relations, and revenue recognition as to the presence of contract amendments, and interpretation of contract terms.
- We considered the nature of transactions with related parties and any potential impact on revenue recognition.
- We evaluated customer transactions and agreed the amount of revenue recognized to underlying contracts, customer invoices, and cash receipts.
- We considered customer payment history, subsequent events, write-offs of customer receivables, collectability, modification of contract terms, and other factors that could impact the amount and timing of revenue recognition.

Revenue Recognition – Cost Incurred Input Method – Refer to Notes 1 and 4 to the Financial Statements

Critical Audit Matter Description

The Company enters into sale of equipment contracts with customers for which the promised goods or services contained within the contracts are integrated with or dependent upon other goods or services for a single output to the customer. Revenue from the sale of equipment contracts is generally recognized over time as the Company has an enforceable right to payment for performance, as completed, and performance under the contract terms does not create an asset with an alternative use. The Company uses a cost incurred input method to recognize revenue by which costs incurred to date relative to total estimated costs at completion are used to measure progress toward satisfying performance obligations.

Accounting for contracts using the cost incurred input method requires a high degree of judgment to estimate total costs used to recognize revenue. Changes in estimated costs could have a significant impact on the timing of revenue recognition. Auditing these estimates requires extensive audit effort due to the complexity around the cost estimation process which involves multiple inputs and variables for sale of equipment contracts and a high degree of auditor judgment when evaluating the results of those procedures.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to complex contracts with customers for sales of equipment included the following, among others:

- We tested the effectiveness of the Company's controls related to the amount and timing of revenue recognition for sale of equipment contracts, including controls over developing the estimated costs at completion and the evaluation of changes in estimated total costs for sale of equipment contracts.
- We evaluated the appropriateness and consistency of the methods and assumptions used by management to evaluate estimated total costs and changes in estimated costs to determine if the estimated total costs at completion for sale of equipment contracts were reasonable.
- With the assistance of our professionals having expertise in accounting for sale of equipment contracts, we performed the following:
 - Evaluated management's ability to estimate total costs at completion for each selected contract by performing corroborating inquiries with the Company's project managers and personnel involved with the selected contracts, including inquiries related to the timeline for completion and estimates of future costs to complete the contract.
 - Selected a sample of estimates of future costs to complete and evaluated management's estimates of total costs at completion by performing one of the following:
 - Comparing management's estimates to documents such as work plans, customer purchase orders, third-party supplier invoices, and subcontractor agreements, or
 - Developing independent estimates of total costs to completion and comparing our estimates to management's estimates. Our independent estimates were based on information such as work plans, customer purchase orders, third-party supplier invoices, subcontractor agreements, and similar historical project experience.
 - We compared the gross margin on sale of equipment contracts to that of historical periods in order to evaluate the Company's ability to accurately estimate costs at completion.

/s/ Deloitte & Touche LLP
Philadelphia, Pennsylvania
November 18, 2021

We have served as the Company's auditor since 2018.

Air Products and Chemicals, Inc. and Subsidiaries
CONSOLIDATED INCOME STATEMENTS
(Millions of dollars, except for share and per share data)

Fiscal Year Ended 30 September	2021	2020	2019
Sales	\$10,323.0	\$8,856.3	\$8,918.9
Cost of sales	7,186.1	5,858.1	5,975.5
Facility closure	23.2	—	29.0
Selling and administrative	828.4	775.9	750.0
Research and development	93.5	83.9	72.9
Cost reduction actions	—	—	25.5
Gain on exchange with joint venture partner	36.8	—	29.1
Company headquarters relocation income (expense)	—	33.8	—
Other income (expense), net	52.8	65.4	49.3
Operating Income	2,281.4	2,237.6	2,144.4
Equity affiliates' income	294.1	264.8	215.4
Interest expense	141.8	109.3	137.0
Other non-operating income (expense), net	73.7	30.7	66.7
Income From Continuing Operations Before Taxes	2,507.4	2,423.8	2,289.5
Income tax provision	462.8	478.4	480.1
Income From Continuing Operations	2,044.6	1,945.4	1,809.4
Income (Loss) from discontinued operations, net of tax	70.3	(14.3)	—
Net Income	2,114.9	1,931.1	1,809.4
Net income attributable to noncontrolling interests of continuing operations	15.8	44.4	49.4
Net Income Attributable to Air Products	\$2,099.1	\$1,886.7	\$1,760.0
Net Income Attributable to Air Products			
Net income from continuing operations	\$2,028.8	\$1,901.0	\$1,760.0
Net income (loss) from discontinued operations	70.3	(14.3)	—
Net Income Attributable to Air Products	\$2,099.1	\$1,886.7	\$1,760.0
Per Share Data*			
Basic EPS from continuing operations	\$9.16	\$8.59	\$7.99
Basic EPS from discontinued operations	0.32	(0.06)	—
Basic EPS Attributable to Air Products	\$9.47	\$8.53	\$7.99
Diluted EPS from continuing operations	\$9.12	\$8.55	\$7.94
Diluted EPS from discontinued operations	0.32	(0.06)	—
Diluted EPS Attributable to Air Products	\$9.43	\$8.49	\$7.94
Weighted Average Common Shares (in millions)			
Basic	221.6	221.2	220.3
Diluted	222.5	222.3	221.6

*Earnings per share ("EPS") is calculated independently for each component and may not sum to total EPS due to rounding.

The accompanying notes are an integral part of these statements.

Air Products and Chemicals, Inc. and Subsidiaries
CONSOLIDATED COMPREHENSIVE INCOME STATEMENTS
(Millions of dollars)

Fiscal Year Ended 30 September	2021	2020	2019
Net Income	\$2,114.9	\$1,931.1	\$1,809.4
Other Comprehensive Income (Loss), net of tax:			
Translation adjustments, net of tax of \$2.8, (\$29.4), and \$25.1	267.3	233.4	(356.2)
Net gain (loss) on derivatives, net of tax of (\$9.0), \$23.7, and (\$1.5)	3.3	43.5	(44.1)
Pension and postretirement benefits, net of tax of \$91.4, (\$15.6), and (\$97.9)	274.3	(68.2)	(326.2)
Reclassification adjustments:			
Currency translation adjustment	—	—	(2.6)
Derivatives, net of tax of \$13.9, (\$17.7), and \$4.5	43.5	(57.7)	12.3
Pension and postretirement benefits, net of tax of \$24.4, \$27.1, and \$20.5	74.6	82.5	63.2
Total Other Comprehensive Income (Loss)	663.0	233.5	(653.6)
Comprehensive Income	2,777.9	2,164.6	1,155.8
Net Income Attributable to Noncontrolling Interests	15.8	44.4	49.4
Other Comprehensive Income (Loss) Attributable to Noncontrolling Interests	38.8	(2.0)	(19.9)
Comprehensive Income Attributable to Air Products	\$2,723.3	\$2,122.2	\$1,126.3

The accompanying notes are an integral part of these statements.

Air Products and Chemicals, Inc. and Subsidiaries
CONSOLIDATED BALANCE SHEETS
(Millions of dollars, except for share and per share data)

30 September	2021	2020
Assets		
Current Assets		
Cash and cash items	\$4,468.9	\$5,253.0
Short-term investments	1,331.9	1,104.9
Trade receivables, net	1,451.3	1,274.8
Inventories	453.9	404.8
Prepaid expenses	119.4	164.5
Other receivables and current assets	550.9	482.9
Total Current Assets	8,376.3	8,684.9
Investment in net assets of and advances to equity affiliates	1,649.3	1,432.2
Plant and equipment, net	13,254.6	11,964.7
Goodwill, net	911.5	891.5
Intangible assets, net	420.7	435.8
Noncurrent lease receivables	740.3	816.3
Other noncurrent assets	1,506.5	943.1
Total Noncurrent Assets	18,482.9	16,483.6
Total Assets	\$26,859.2	\$25,168.5
Liabilities and Equity		
Current Liabilities		
Payables and accrued liabilities	\$2,218.3	\$1,833.2
Accrued income taxes	93.9	105.8
Short-term borrowings	2.4	7.7
Current portion of long-term debt	484.5	470.0
Total Current Liabilities	2,799.1	2,416.7
Long-term debt	6,875.7	7,132.9
Long-term debt – related party	274.6	297.2
Other noncurrent liabilities	1,640.9	1,916.0
Deferred income taxes	1,180.9	962.6
Total Noncurrent Liabilities	9,972.1	10,308.7
Total Liabilities	12,771.2	12,725.4
Commitments and Contingencies - See Note 16		
Air Products Shareholders' Equity		
Common stock (par value \$1 per share; issued 2021 and 2020 - 249,455,584 shares)	249.4	249.4
Capital in excess of par value	1,115.8	1,094.8
Retained earnings	15,678.3	14,875.7
Accumulated other comprehensive loss	(1,515.9)	(2,140.1)
Treasury stock, at cost (2021 - 28,058,829 shares; 2020 - 28,438,125 shares)	(1,987.9)	(2,000.0)
Total Air Products Shareholders' Equity	13,539.7	12,079.8
Noncontrolling Interests	548.3	363.3
Total Equity	14,088.0	12,443.1
Total Liabilities and Equity	\$26,859.2	\$25,168.5

The accompanying notes are an integral part of these statements.

Air Products and Chemicals, Inc. and Subsidiaries
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Millions of dollars)

Fiscal Year Ended 30 September	2021	2020	2019
Operating Activities			
Net income	\$2,114.9	\$1,931.1	\$1,809.4
Less: Net income attributable to noncontrolling interests of continuing operations	15.8	44.4	49.4
Net income attributable to Air Products	2,099.1	1,886.7	1,760.0
(Income) Loss from discontinued operations	(70.3)	14.3	—
Income from continuing operations attributable to Air Products	2,028.8	1,901.0	1,760.0
Adjustments to reconcile income to cash provided by operating activities:			
Depreciation and amortization	1,321.3	1,185.0	1,082.8
Deferred income taxes	94.0	165.0	57.6
Tax reform repatriation	—	—	49.4
Facility closure	23.2	—	29.0
Undistributed earnings of equity method investments	(138.2)	(161.9)	(75.8)
Gain on sale of assets and investments	(37.2)	(45.8)	(24.2)
Share-based compensation	44.5	53.5	41.2
Noncurrent lease receivables	98.8	91.6	94.6
Other adjustments	(116.7)	116.4	(19.4)
Working capital changes that provided (used) cash, excluding effects of acquisitions:			
Trade receivables	(130.5)	43.2	(69.0)
Inventories	(47.2)	(5.2)	(3.0)
Other receivables	75.5	84.4	79.8
Payables and accrued liabilities	187.9	(31.9)	(41.8)
Other working capital	(69.0)	(130.6)	8.7
Cash Provided by Operating Activities	3,335.2	3,264.7	2,969.9
Investing Activities			
Additions to plant and equipment, including long-term deposits	(2,464.2)	(2,509.0)	(1,989.7)
Acquisitions, less cash acquired	(10.5)	(183.3)	(123.2)
Investment in and advances to unconsolidated affiliates	(76.0)	(24.4)	(15.7)
Proceeds from sale of assets and investments	37.5	80.3	11.1
Purchases of investments	(2,100.7)	(2,865.5)	(172.1)
Proceeds from investments	1,875.2	1,938.0	190.5
Other investing activities	5.8	3.9	(14.3)
Cash Used for Investing Activities	(2,732.9)	(3,560.0)	(2,113.4)
Financing Activities			
Long-term debt proceeds	178.9	4,895.8	—
Payments on long-term debt	(462.9)	(406.6)	(428.6)
Net increase (decrease) in commercial paper and short-term borrowings	1.0	(54.9)	3.9
Dividends paid to shareholders	(1,256.7)	(1,103.6)	(994.0)
Proceeds from stock option exercises	10.6	34.1	68.1
Investments by noncontrolling interests	136.6	17.1	—
Other financing activities	(28.4)	(97.2)	(19.9)
Cash Provided by (Used for) Financing Activities	(1,420.9)	3,284.7	(1,370.5)
Discontinued Operations			
Cash provided by operating activities	6.7	—	—
Cash provided by investing activities	—	—	—
Cash provided by financing activities	—	—	—
Cash Provided by Discontinued Operations	6.7	—	—
Effect of Exchange Rate Changes on Cash	27.8	14.9	(28.6)
Increase (Decrease) in cash and cash items	(784.1)	3,004.3	(542.6)
Cash and Cash items – Beginning of Year	5,253.0	2,248.7	2,791.3
Cash and Cash Items – End of Period	\$4,468.9	\$5,253.0	\$2,248.7

The accompanying notes are an integral part of these statements.

Air Products and Chemicals, Inc. and Subsidiaries
CONSOLIDATED STATEMENTS OF EQUITY
(Millions of dollars, except for per share data)

Fiscal Year Ended 30 September	Common Stock	Capital in Excess of Par Value	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Treasury Stock	Air Products Shareholders' Equity	Non- controlling Interests	Total Equity
Balance 30 September 2018	\$249.4	\$1,029.3	\$13,409.9	(\$1,741.9)	(\$2,089.2)	\$10,857.5	\$318.8	\$11,176.3
Net income	—	—	1,760.0	—	—	1,760.0	49.4	1,809.4
Other comprehensive income (loss)	—	—	—	(633.7)	—	(633.7)	(19.9)	(653.6)
Dividends on common stock (per share \$4.58)	—	—	(1,008.3)	—	—	(1,008.3)	—	(1,008.3)
Dividends to noncontrolling interests	—	—	—	—	—	—	(12.2)	(12.2)
Share-based compensation	—	40.7	—	—	—	40.7	—	40.7
Issuance of treasury shares for stock option and award plans	—	2.2	—	—	59.7	61.9	—	61.9
Cumulative change in accounting principle	—	—	(17.1)	—	—	(17.1)	—	(17.1)
Other equity transactions	—	(1.3)	(6.1)	—	—	(7.4)	(1.4)	(8.8)
Balance 30 September 2019	\$249.4	\$1,070.9	\$14,138.4	(\$2,375.6)	(\$2,029.5)	\$11,053.6	\$334.7	\$11,388.3
Net income	—	—	1,886.7	—	—	1,886.7	44.4	1,931.1
Other comprehensive income (loss)	—	—	—	235.5	—	235.5	(2.0)	233.5
Dividends on common stock (per share \$5.18)	—	—	(1,144.1)	—	—	(1,144.1)	—	(1,144.1)
Dividends to noncontrolling interests	—	—	—	—	—	—	(31.8)	(31.8)
Share-based compensation	—	44.2	—	—	—	44.2	—	44.2
Issuance of treasury shares for stock option and award plans	—	(14.1)	—	—	29.5	15.4	—	15.4
Investments by noncontrolling interests	—	—	—	—	—	—	17.1	17.1
Other equity transactions	—	(6.2)	(5.3)	—	—	(11.5)	0.9	(10.6)
Balance 30 September 2020	\$249.4	\$1,094.8	\$14,875.7	(\$2,140.1)	(\$2,000.0)	\$12,079.8	\$363.3	\$12,443.1
Net income	—	—	2,099.1	—	—	2,099.1	15.8	2,114.9
Other comprehensive income (loss)	—	—	—	624.2	—	624.2	38.8	663.0
Dividends on common stock (per share \$5.84)	—	—	(1,292.6)	—	—	(1,292.6)	—	(1,292.6)
Dividends to noncontrolling interests	—	—	—	—	—	—	(5.3)	(5.3)
Share-based compensation	—	43.5	—	—	—	43.5	—	43.5
Issuance of treasury shares for stock option and award plans	—	(21.5)	—	—	12.1	(9.4)	—	(9.4)
Investments by noncontrolling interests	—	—	—	—	—	—	139.8	139.8
Purchase of noncontrolling interests	—	(1.2)	—	—	—	(1.2)	(4.1)	(5.3)
Other equity transactions	—	0.2	(3.9)	—	—	(3.7)	—	(3.7)
Balance 30 September 2021	\$249.4	\$1,115.8	\$15,678.3	(\$1,515.9)	(\$1,987.9)	\$13,539.7	\$548.3	\$14,088.0

The accompanying notes are an integral part of these statements.

Air Products and Chemicals, Inc. and Subsidiaries
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Millions of dollars unless otherwise indicated, except for share and per share data)

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1. MAJOR ACCOUNTING POLICIES

Basis of Presentation and Consolidation Principles

The accompanying consolidated financial statements of Air Products and Chemicals, Inc. were prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP") and include the accounts of Air Products and Chemicals, Inc. and those of its controlled subsidiaries ("we," "our," "us," the "Company," "Air Products," or "registrant"), which are generally majority owned. Intercompany transactions and balances are eliminated in consolidation.

We consolidate all entities that we control. The general condition for control is ownership of a majority of the voting interests of an entity. Control may also exist in arrangements where we are the primary beneficiary of a variable interest entity ("VIE"). An entity that has both the power to direct the activities that most significantly impact the economic performance of a VIE and the obligation to absorb losses or receive benefits significant to the VIE is considered the primary beneficiary of that entity. We have determined that we are not a primary beneficiary of any material VIE.

The notes to the consolidated financial statements, unless otherwise indicated, are on a continuing operations basis. The results of operations and cash flows for our discontinued operations have been segregated from the results of continuing operations and segment results. The comprehensive income related to discontinued operations has not been segregated and is included in the consolidated comprehensive income statements. There were no assets and liabilities presented as discontinued operations on the consolidated balance sheets. Refer to Note 5, *Discontinued Operations*, for additional information.

Certain prior year information has been reclassified to conform to the fiscal year 2021 presentation.

Estimates and Assumptions

The preparation of the financial statements in conformity with GAAP requires management to make estimates and assumptions that affect amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

COVID-19 Risks and Uncertainties

COVID-19, which was declared a global pandemic by the World Health Organization in March 2020, continues to impact our business operations and results. There continue to be many unknowns regarding the pandemic, including the ongoing spread and severity of the virus and the pace of vaccine rollouts globally. Given the dynamic nature of these circumstances, uncertainty remains related to how the pandemic may affect our business, results of operations, and overall financial performance.

Revenue Recognition

We recognize revenue when or as performance obligations are satisfied, which occurs when control is transferred to the customer.

We determine the transaction price of our contracts based on the amount of consideration to which we expect to be entitled to receive in exchange for the goods or services provided. Our contracts within the scope of revenue guidance do not contain payment terms that include a significant financing component.

Sales returns and allowances are not a business practice in the industry.

Our sale of gas contracts are either accounted for over time during the period in which we deliver or make available the agreed upon quantity of goods or at a point in time when the customer receives and obtains control of the product, which generally occurs upon delivery. We generally recognize revenue from our sale of gas contracts based on the right to invoice practical expedient.

Our sale of equipment contracts are generally comprised of a single performance obligation as the individual promised goods or services contained within the contracts are integrated with or dependent upon other goods or services in the contract for a single output to the customer. Revenue from our sale of equipment contracts is generally recognized over time as we have an enforceable right to payment for performance completed to date and our performance under the contract terms does not create an asset with alternative use. We recognize these contracts using a cost incurred input method by which costs incurred to date relative to total estimated costs at completion are used to measure progress toward satisfying performance obligations.

Amounts billed for shipping and handling fees are classified as sales in the consolidated income statements. Shipping and handling activities for our sale of equipment contracts may be performed after the customer obtains control of the promised goods. In these cases, we have elected to apply the practical expedient to account for shipping and handling as activities to fulfill the promise to transfer the goods. For our sale of gas contracts, control generally transfers to the customer upon delivery.

Amounts billed for sales and use taxes, value-added taxes, and certain excise and other specific transactional taxes imposed on revenue-producing transactions are presented on a net basis and excluded from sales in the consolidated income statements.

For additional information, refer to Note 4, *Revenue Recognition*.

Cost of Sales

Cost of sales predominantly represents the cost of tangible products sold. These costs include labor, raw materials, plant engineering, power, depreciation, production supplies and materials packaging costs, and maintenance costs. Costs incurred for shipping and handling are also included in cost of sales.

Depreciation

Depreciation is recorded using the straight-line method, which deducts equal amounts of the cost of each asset from earnings every year over its expected economic useful life. The principal lives for major classes of plant and equipment are summarized in Note 8, *Plant and Equipment, net*.

Selling and Administrative

The principal components of selling and administrative expenses are compensation, advertising, and promotional costs.

Postemployment Benefits

We provide termination benefits to employees as part of ongoing benefit arrangements and record a liability for termination benefits when probable and estimable. These criteria are met when management, with the appropriate level of authority, approves and commits to its plan of action for termination; the plan identifies the employees to be terminated and their related benefits; and the plan is to be completed within one year. We do not provide material one-time benefit arrangements.

Fair Value Measurements

We are required to measure certain assets and liabilities at fair value, either upon initial measurement or for subsequent accounting or reporting. For example, fair value is used in the initial measurement of assets and liabilities acquired in a business combination; on a recurring basis in the measurement of derivative financial instruments; and on a nonrecurring basis when long-lived assets are written down to fair value when held for sale or determined to be impaired. Refer to Note 13, *Fair Value Measurements*, and Note 15, *Retirement Benefits*, for information on the methods and assumptions used in our fair value measurements.

Financial Instruments

We address certain financial exposures through a controlled program of risk management that includes the use of derivative financial instruments. The types of derivative financial instruments permitted for such risk management programs are specified in policies set by management. Refer to Note 12, *Financial Instruments*, for further detail on the types and use of derivative instruments into which we enter.

Major financial institutions are counterparties to all of these derivative contracts. We have established counterparty credit guidelines and generally enter into transactions with financial institutions of investment grade or better. Management believes the risk of incurring losses related to credit risk is remote, and any losses would be immaterial to the consolidated financial results, financial condition, or liquidity.

We recognize derivatives on the balance sheet at fair value. On the date the derivative instrument is entered into, we generally designate the derivative as either (1) a hedge of a forecasted transaction or of the variability of cash flows to be received or paid related to a recognized asset or liability (cash flow hedge), (2) a hedge of a net investment in a foreign operation (net investment hedge), or (3) a hedge of the fair value of a recognized asset or liability (fair value hedge).

The following details the accounting treatment of our cash flow, fair value, net investment, and non-designated hedges:

- Changes in the fair value of a derivative that is designated as and meets the cash flow hedge criteria are recorded in accumulated other comprehensive loss ("AOCL") to the extent effective and then recognized in earnings when the hedged items affect earnings.
- Changes in the fair value of a derivative that is designated as and meets all the required criteria for a fair value hedge, along with the gain or loss on the hedged asset or liability that is attributable to the hedged risk, are recorded in current period earnings.
- Changes in the fair value of a derivative and foreign currency debt that are designated as and meet all the required criteria for a hedge of a net investment are recorded as translation adjustments in AOCL.
- Changes in the fair value of a derivative that is not designated as a hedge are recorded immediately in earnings.

We formally document the relationships between hedging instruments and hedged items, as well as our risk management objective and strategy for undertaking various hedge transactions. This process includes relating derivatives that are designated as fair value or cash flow hedges to specific assets and liabilities on the balance sheet or to specific firm commitments or forecasted transactions. We also formally assess, at the inception of the hedge and on an ongoing basis, whether derivatives are highly effective in offsetting changes in fair values or cash flows of the hedged item. If it is determined that a derivative is not highly effective as a hedge, or if a derivative ceases to be a highly effective hedge, we will discontinue hedge accounting with respect to that derivative prospectively.

Foreign Currency

Since we do business in many foreign countries, fluctuations in currency exchange rates affect our financial position and results of operations.

In most of our foreign operations, the local currency is considered the functional currency. Foreign subsidiaries translate their assets and liabilities into U.S. dollars at current exchange rates in effect as of the balance sheet date. The gains or losses that result from this process are shown as translation adjustments in AOCL in the equity section of the balance sheet.

The revenue and expense accounts of foreign subsidiaries are translated into U.S. dollars at the average exchange rates that prevail during the period. Therefore, the U.S. dollar value of these items on the consolidated income statements fluctuates from period to period, depending on the value of the U.S. dollar against foreign currencies. Some transactions are made in currencies different from an entity's functional currency. Gains and losses from these foreign currency transactions, and the impact of related hedges, are generally reflected in "Other income (expense), net" on our consolidated income statements as they occur and were not material for the periods presented.

Foreign exchange gains and losses from the foreign currency remeasurement of balances associated with intercompany and third-party financing transactions, related income tax assets and liabilities, and the impact of related hedges are reflected within "Other non-operating income (expense), net" and were not material for the periods presented.

In addition, foreign currency forward points and currency swap basis differences that are excluded from the assessment of hedge effectiveness of our cash flow hedges of intercompany loans ("excluded components") are recorded within "Other non-operating income (expense), net" on a straight-line basis. Excluded components were expenses of \$31.0, \$33.5, and \$33.3 in fiscal years 2021, 2020, and 2019, respectively. In 2019, excluded components were recorded in "Interest expense" and were not restated upon adoption of accounting guidance in fiscal year 2020 on hedging activities.

Environmental Expenditures

Accruals for environmental loss contingencies are recorded when it is probable that a liability has been incurred and the amount of loss can be reasonably estimated. Remediation costs are capitalized if the costs improve our property as compared with the condition of the property when originally constructed or acquired, or if the costs prevent environmental contamination from future operations. We expense environmental costs related to existing conditions resulting from past or current operations and from which no current or future benefit is discernible. The amounts charged to income from continuing operations related to environmental matters totaled \$18.6, \$18.3, and \$14.2 in fiscal years 2021, 2020, and 2019, respectively. In addition, we recorded a pre-tax expense of \$19.0 in results from discontinued operations to increase our environmental accrual for the Pace facility in the second quarter of fiscal year 2020. Refer to the Pace discussion within Note 16, *Commitments and Contingencies*, for additional information.

The measurement of environmental liabilities is based on an evaluation of currently available information with respect to each individual site and considers factors such as existing technology, presently enacted laws and regulations, and prior experience in remediation of contaminated sites. An environmental liability related to cleanup of a contaminated site might include, for example, a provision for one or more of the following types of costs: site investigation and testing costs, remediation costs, post-remediation monitoring costs, natural resource damages, and outside legal fees. These liabilities include costs related to other potentially responsible parties to the extent that we have reason to believe such parties will not fully pay their proportionate share. They do not consider any claims for recoveries from insurance or other parties and are not discounted.

As assessments and remediation progress at individual sites, the amount of projected cost is reviewed and the liability is adjusted to reflect additional technical and legal information that becomes available. Management has an established process in place to identify and monitor our environmental exposures. An environmental accrual analysis is prepared and maintained that lists all environmental loss contingencies, even where an accrual has not been established. This analysis assists in monitoring our overall environmental exposure and serves as a tool to facilitate ongoing communication among our technical experts, environmental managers, environmental lawyers, and financial management to ensure that required accruals are recorded and potential exposures disclosed.

Given inherent uncertainties in evaluating environmental exposures, actual costs to be incurred at identified sites in future periods may vary from the estimates. Refer to Note 16, *Commitments and Contingencies*, for additional information on our environmental loss contingencies.

The accruals for environmental liabilities are reflected in the consolidated balance sheets, primarily as part of other noncurrent liabilities.

Litigation

In the normal course of business, we are involved in legal proceedings. We accrue a liability for such matters when it is probable that a liability has been incurred and the amount of loss can be reasonably estimated. When only a range of possible loss can be established, the most probable amount in the range is accrued. If no amount within this range is a better estimate than any other amount within the range, the minimum amount in the range is accrued. The accrual for a litigation loss contingency includes estimates of potential damages and other directly related costs expected to be incurred. Refer to Note 16, *Commitments and Contingencies*, for additional information on our current legal proceedings.

Share-Based Compensation

We expense the grant-date fair value of our share-based awards over the vesting period during which employees perform related services. Expense recognition is accelerated for retirement-eligible individuals who would meet the requirements for vesting of awards upon their retirement. Refer to Note 18, *Share-Based Compensation*, for additional information regarding these awards and the models and assumptions used to determine the grant-date fair value of our awards.

Income Taxes

We account for income taxes under the asset and liability method. Under this method, deferred tax assets and liabilities are recognized for the tax effects of temporary differences between the financial reporting and tax bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to be recovered or settled. A principal temporary difference results from the excess of tax depreciation over book depreciation because accelerated methods of depreciation and shorter useful lives are used for income tax purposes. The cumulative impact of a change in tax rates or regulations is included in income tax expense in the period that includes the enactment date. We recognize deferred tax assets net of existing valuation allowances to the extent we believe that these assets are more likely than not to be realized considering all available evidence.

A tax benefit for an uncertain tax position is recognized when it is more likely than not that the position will be sustained upon examination based on its technical merits. This position is measured as the largest amount of tax benefit that is greater than 50% likely of being realized. Interest and penalties related to unrecognized tax benefits are recognized as a component of income tax expense. For additional information regarding our income taxes, refer to Note 21, *Income Taxes*.

Other Non-Operating Income (Expense), net

Other non-operating income (expense), net includes interest income associated with our cash and cash items and short-term investments, certain foreign currency remeasurements and impacts from the related hedging activities discussed in the *Foreign Currency* section above, and non-service cost components of net periodic pension and postretirement benefit cost. Our non-service costs primarily include interest cost, expected return on plan assets, amortization of actuarial gains and losses, and settlements.

Cash and Cash Items

Cash and cash items include cash, time deposits, and treasury securities acquired with an original maturity of three months or less.

Short-term Investments

Short-term investments include time deposits and treasury securities with original maturities greater than three months and less than one year.

Credit Losses

We are exposed to credit losses through sales of products and services. When extending credit, we evaluate customer creditworthiness based on a combination of qualitative and quantitative factors that include, but are not limited to, the customer's credit score from external providers, financial condition, and past payment experience.

We assess allowances for credit losses on our trade receivables and lease receivable portfolios. Allowances are evaluated by portfolio on a collective basis where similar characteristics exist. A provision for customer defaults is made on a general formula basis as the risk of some default is expected but cannot yet be associated with specific customers. The assessment of the likelihood of default is based on various factors, including the length of time the receivables are past due, historical experience, existing economic conditions, and forward-looking information. When we identify specific customers with known collectability issues, the assessment for credit losses is performed on an individual basis, considering current and forward-looking information of the customer.

The use of forward-looking information considers economic conditions that may affect the customers' ability to pay. Although we historically have not experienced significant credit losses, our exposure to credit losses may increase if our customers are adversely affected by economic pressures or uncertainty associated with local or global economic recessions, disruption associated with the ongoing COVID-19 pandemic, or other customer-specific factors. We review our reserves for credit losses on a quarterly basis.

Trade receivables comprise amounts owed to us through our operating activities and are presented net of allowances for credit losses. Changes to the carrying amount of the allowance for credit losses on trade receivables are summarized below:

Balance at 30 September 2018	\$26.4
Provision for credit losses	7.7
Write-offs charged against the allowance	(6.8)
Currency translation and other	(2.5)
Balance at 30 September 2019	\$24.8
Provision for credit losses	7.7
Write-offs charged against the allowance	(8.3)
Currency translation and other	(0.3)
Balance at 30 September 2020	\$23.9
Adoption of new credit losses standard	0.5
Provision for credit losses	2.7
Write-offs charged against the allowance	(3.8)
Currency translation and other	1.8
Balance at 30 September 2021	\$25.1

In addition, our lease receivables are presented net of allowances for credit losses. As of 30 September 2021 and 2020, the credit quality of lease receivables did not require a material allowance for credit losses. For additional information on our lease arrangements, refer to Note 11, *Leases*.

Inventories

We carry inventory that is comprised of finished goods, work-in-process, raw materials and supplies. Refer to Note 6, *Inventories*, for further detail.

Inventories on our consolidated balance sheets are stated at the lower of cost or net realizable value. We determine the cost of all our inventories on a first-in, first-out basis ("FIFO"). We write down our inventories for estimated obsolescence or unmarketable inventory based upon assumptions about future demand and market conditions.

Equity Method Investments

The equity method of accounting is used when we exercise significant influence but do not have operating control, generally assumed to be 20% – 50% ownership. Under the equity method, original investments are recorded at cost and adjusted by our share of undistributed earnings or losses of these companies. We use the cumulative earnings approach for determining cash flow presentation of cash distributions received from equity method investees. Equity investments are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the investment may not be recoverable.

Plant and Equipment, net

Plant and equipment, net is stated at cost less accumulated depreciation. Construction costs, labor, and applicable overhead related to installations are capitalized. Expenditures for additions and improvements that extend the lives or increase the capacity of plant assets are capitalized. The costs of maintenance and repairs of plant and equipment are charged to expense as incurred.

Fully depreciated assets are retained in the gross plant and equipment and accumulated depreciation accounts until they are removed from service. In the case of disposals, assets and related depreciation are removed from the accounts, and the net amounts, less proceeds from disposal, are included in income. Refer to Note 8, *Plant and Equipment, net*, for further detail.

Computer Software

We capitalize costs incurred to purchase or develop software for internal use. Capitalized costs include purchased computer software packages, payments to vendors/consultants for development and implementation or modification to a purchased package to meet our requirements, payroll and related costs for employees directly involved in development, and interest incurred while software is being developed. Capitalized costs are reflected in "Plant and equipment, net" on the consolidated balance sheets and are depreciated over the estimated useful life of the software, generally a period of three to five years.

We capitalize costs incurred with the implementation of a cloud computing arrangement that is a service contract, consistent with our policy for software developed or obtained for internal use. However, the capitalized costs are reflected in "Other noncurrent assets" on our consolidated balance sheets and expensed over the term of the related hosting arrangement.

Capitalized Interest

As we build new plant and equipment, we include in the cost of these assets a portion of the interest payments we make during the year. The amount of capitalized interest was \$28.3, \$15.9, and \$13.5 in fiscal years 2021, 2020, and 2019, respectively.

Leases

As lessee, we recognize a right-of-use ("ROU") asset and lease liability on the balance sheet for all leases with a term in excess of 12 months. We determine if an arrangement contains a lease at inception. The arrangement contains a lease when there is an identifiable asset, we obtain substantially all of the economic benefits from that asset, and we direct how and for what purpose the asset is used during the term of the arrangement. If the initial term of an arrangement is 12 months or less, we have made an accounting election to not assess if these arrangements contain a lease for inclusion on our balance sheet.

ROU assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. ROU assets and lease liabilities are recognized at the commencement date based on the present value of lease payments over the lease term. Since our leases generally do not provide an implicit discount rate, we use our incremental borrowing rates based on the information available at the commencement date in determining the present value of lease payments. To determine the incremental borrowing rate, we consider our unsecured borrowings and published market rates, and then adjust those rates to assume full collateralization and to factor in the individual lease term, geography, and payment structure.

Our lease term includes periods covered by options to extend or terminate the lease when it is reasonably certain that we will exercise an option to extend or not exercise an option to terminate. Lease payments consider our practical expedient to combine amounts for lease and related non-lease components for all classes of underlying assets in which we are lessee. Fixed payments and payments associated with escalation clauses based on an index are included in the ROU asset and lease liability at commencement. Variable lease payments are excluded from the ROU assets and lease liabilities and are recognized in the period in which the obligation for those payments is incurred. Our variable lease payments primarily include the impact from escalation clauses that are not fixed or based on an index. Prepaid lease payments are included in the recognition of ROU assets. Our lease agreements do not contain any material lease incentives, residual value guarantees or restrictions or covenants.

Impairment of Long-Lived Assets

Long-lived assets are grouped for impairment testing at the lowest level for which there are identifiable cash flows that are largely independent of the cash flows of other assets and liabilities and are evaluated for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset group may not be recoverable. We assess recoverability by comparing the carrying amount of the asset group to estimated undiscounted future cash flows expected to be generated by the asset group. If an asset group is considered impaired, the impairment loss to be recognized is measured as the amount by which the asset group's carrying amount exceeds its fair value. Long-lived assets meeting the held for sale criteria are reported at the lower of carrying amount or fair value less cost to sell.

Asset Retirement Obligations

The fair value of a liability for an asset retirement obligation is recognized in the period in which it is incurred. The fair value of the liability is measured using discounted estimated cash flows and is adjusted to its present value in subsequent periods as accretion expense is recorded. The corresponding asset retirement costs are capitalized as part of the carrying amount of the related long-lived asset and depreciated over the asset's useful life. Our asset retirement obligations are primarily associated with on-site long-term supply contracts under which we have built a facility on land owned by the customer and are obligated to remove the facility at the end of the contract term. Our asset retirement obligations totaled \$269.6 and \$241.4 at 30 September 2021 and 2020, respectively. Refer to Note 16, *Commitments and Contingencies*, for further detail.

Goodwill

Business combinations are accounted for using the acquisition method. The purchase price is allocated to the assets acquired and liabilities assumed based on their estimated fair values. Any excess purchase price (plus the fair value of any noncontrolling interest and previously held equity interest in the acquiree) over the fair market value of the net assets acquired, including identified intangibles, is recorded as goodwill. Preliminary purchase price allocations are made at the date of acquisition and finalized when information about facts and circumstances that existed as of the acquisition date needed to finalize underlying estimates is obtained or when we determine that such information is not obtainable, within a maximum measurement period of one year.

Goodwill is subject to impairment testing at least annually. In addition, goodwill is tested more frequently if a change in circumstances or the occurrence of events indicates that potential impairment exists. Refer to Note 9, *Goodwill*, for further detail.

Intangible Assets

Intangible assets with determinable lives primarily consist of customer relationships, purchased patents and technology, and certain land use rights. The cost of intangible assets with determinable lives is amortized on a straight-line basis over the estimated period of economic benefit. No residual value is estimated for these intangible assets. Indefinite-lived intangible assets consist of trade names and trademarks. Indefinite-lived intangibles are subject to impairment testing at least annually. In addition, intangible assets are tested more frequently if a change in circumstances or the occurrence of events indicates that potential impairment exists.

Customer relationships are generally amortized over periods of five to twenty-five years. Purchased patents and technology and other finite-lived intangibles are generally amortized over periods of five to fifteen years. Other intangibles includes certain land use rights, which are generally amortized over a period of fifty years. Amortizable lives are adjusted whenever there is a change in the estimated period of economic benefit. Refer to Note 10, *Intangible Assets*, for further detail.

Retirement Benefits

Our retirement benefit plans are discussed in Note 15, *Retirement Benefits*. The cost of benefits we contribute to defined contribution plans is recognized in the year earned. The cost of benefits under our defined benefit and other post-retirement plans is generally recognized over the employees' service period. We use actuarial methods and assumptions in the valuation of defined benefit obligations and the determination of expense. Differences between actual and expected results or changes in the value of obligations and plan assets are recognized systematically over subsequent periods.

2. NEW ACCOUNTING GUIDANCE

Accounting Guidance Implemented in Fiscal Year 2021

Credit Losses on Financial Instruments

In June 2016, the FASB issued guidance on the measurement of credit losses, which requires measurement and recognition of expected credit losses for financial assets, including trade receivables and lease receivables, held at the reporting date based on historical experience, current conditions, and reasonable and supportable forecasts. The method to determine a loss is different from the previous guidance, which delayed recognition of a credit loss until it was probable that a loss had been incurred. We adopted this guidance on 1 October 2020 using a modified retrospective approach with an after-tax cumulative-effect adjustment of \$1.3 to retained earnings. Refer to the "Major Accounting Policies – Credit Losses" section of Note 1, *Major Accounting Policies*, for a description of our accounting policy on credit losses.

Cloud Computing Implementation Costs

In August 2018, the FASB issued guidance which aligns the capitalization requirements for implementation costs incurred in a hosting arrangement that is a service contract with the existing capitalization requirements for implementation costs incurred to develop or obtain internal-use software. We adopted this guidance prospectively at the beginning of fiscal year 2021. Eligible implementation costs previously capitalized in "Plant and equipment, net" were reclassified to "Other noncurrent assets" on our consolidated balance sheets beginning in fiscal year 2021. This guidance did not have a material impact on our consolidated financial statements upon adoption.

Simplifying the Accounting for Income Taxes

In December 2019, the FASB issued an update to simplify the accounting for income taxes and improve consistent application by clarifying or amending existing guidance. We adopted this guidance at the beginning of fiscal year 2021. This guidance did not have a material impact on our consolidated financial statements upon adoption.

New Accounting Guidance to be Implemented

Reference Rate Reform

In March 2020, the FASB issued an update to provide practical expedients and exceptions for applying GAAP to contracts, hedging relationships and other transactions affected by reference rate reform if certain criteria are met. This update is primarily applicable to our contracts and hedging relationships that reference LIBOR. The amendments may be applied to impacted contracts and hedges prospectively through 31 December 2022. We had no impacts on our hedging relationships related to reference rate reform in fiscal year 2021. We will continue to evaluate the impact this guidance could have on our consolidated financial statements.

3. ACQUISITIONS

Fiscal Year 2021

Gain on Exchange With Joint Venture Partner

As of 30 September 2020, we held a 50% ownership interest in Tyczka Industrie-Gases GmbH ("TIG"), a joint venture in Germany with the Tyczka Group that is primarily a merchant gases business. We accounted for this arrangement as an equity method investment in our Industrial Gases – EMEA segment.

Effective 23 February 2021 (the "acquisition date"), we agreed with our joint venture partner to separate TIG into two separate businesses. On the acquisition date, we acquired a portion of the business on a 100% basis, and our partner paid us \$10.8 to acquire the rest of the business. The exchange resulted in a gain of \$36.8 (\$27.3 after-tax), which is reflected as "Gain on exchange with joint venture partner" on our consolidated income statements for the fiscal year ended 30 September 2021. The gain included \$12.7 from the revaluation of our previously held equity interest in the portion of the business that we retained and \$24.1 from the sale of our equity interest in the remaining business. The gain was not recorded in segment results.

We estimated an acquisition date fair value of \$15.4 for our previously held equity interest in the acquired portion of the business using a market approach, which considered historical earnings and the application of a market-based multiple derived from comparable transactions.

We accounted for the acquisition as a business combination within our Industrial Gases – EMEA segment. As a result of the acquisition, we recognized intangible assets of \$16.7 for customer relationships, goodwill of \$14.5, and plant and equipment of \$10.3. The customer relationships have a weighted-average useful life of approximately 15 years.

The acquired assets were recorded at their estimated fair values based primarily on a preliminary purchase price allocation. We may record adjustments to these assets during the preliminary purchase price allocation period, which could be up to one year from the acquisition date.

We expect the acquisition to allow us to have more control over the business we retained and to serve customers more effectively. The results of this business did not materially impact our consolidated income statements for the periods presented.

Fiscal Year 2020

Asset Acquisition

On 17 April 2020, we acquired five operating hydrogen production plants from PBF Energy Inc. ("PBF") and commenced contractual long-term supply of hydrogen from those plants to PBF's refineries. We accounted for the transaction as an asset acquisition and recorded the aggregate purchase price of \$580 to plant and equipment on our consolidated balance sheets.

Business Combinations

We completed three acquisitions on 1 July 2020 that were accounted for as business combinations. These acquisitions had an aggregate purchase price, net of cash acquired, of \$185.4. The largest of these acquisitions was the purchase of Oxygen & Argon Works Ltd., the leading manufacturer and marketer of industrial gases in Israel, primarily offering merchant gas products. The results of this business are consolidated within our Industrial Gases – EMEA segment.

Fiscal Year 2019

As further discussed below, we completed three business combinations in fiscal year 2019.

Exchange of Equity Affiliate Investments

We previously held 50% ownership interests in High-Tech Gases (Beijing) Co., Ltd. ("High-Tech Gases") and WuXi Hi-Tech Gas Co., Ltd. ("WuXi"), both of which were joint ventures with another industrial gas company in China. We accounted for these arrangements as equity method investments in our Industrial Gases – Asia segment through 30 April 2019.

On 1 May 2019, we acquired our partner's 50% interest in WuXi in exchange for our 50% interest in High-Tech Gases. The exchange resulted in a net gain of \$29.1, of which \$15.0 resulted from the revaluation of our previously held equity interest in WuXi to its acquisition date fair value and \$14.1 resulted from the disposition of our interest in High-Tech Gases. The net gain is reflected as "Gain on exchange with joint venture partner" on our consolidated income statements in fiscal year 2019 and was not recorded in results of the Industrial Gases – Asia segment.

We revalued our previously held 50% equity interest in WuXi based on an estimated acquisition date fair value of \$27.0. We calculated this fair value using a discounted cash flow analysis under the income approach, which required estimates and assumptions regarding projected revenue growth, customer attrition rates, profit margin, and discount rate.

The acquisition of the remaining interest in WuXi was accounted for as a business combination. The results of this business are consolidated within our Industrial Gases – Asia segment.

Other Fiscal Year 2019 Business Combinations

The remaining business combinations completed in fiscal year 2019 had total consideration, net of cash acquired, of \$126.6. The largest of these business combinations was the acquisition of ACP Europe SA ("ACP"), the largest independent carbon dioxide business in Continental Europe. The results of this business are consolidated within our Industrial Gases – EMEA segment.

4. REVENUE RECOGNITION

Nature of Goods and Services

The principal activities from which we generate sales from our contracts with customers, separated between our regional industrial gases businesses and industrial gases equipment businesses, are described below with their respective revenue recognition policies. For an overall summary of these policies and discussion on payment terms and presentation, refer to Note 1, *Major Accounting Policies*.

Industrial Gases – Regional

Our regional industrial gases businesses produce and sell atmospheric gases such as oxygen, nitrogen, and argon (primarily recovered by the cryogenic distillation of air) and process gases such as hydrogen, helium, carbon dioxide, carbon monoxide, syngas, and specialty gases. We distribute gases to our sale of gas customers through different supply modes depending on various factors including the customer's volume requirements and location. Our supply modes are as follows:

- *On-site Gases*—Supply mode associated with customers who require large volumes of gases and have relatively constant demand. Gases are produced and supplied by large facilities on or near the customers' facilities or by pipeline systems from centrally located production facilities. These sale of gas contracts generally have 15- to 20- year terms. We also deliver smaller quantities of product through small on-site plants (cryogenic or non-cryogenic generators), typically via 10- to 15- year sale of gas contracts. The contracts within this supply mode generally contain fixed monthly charges and/or minimum purchase requirements with price escalation provisions that are generally based on external indices. Revenue associated with this supply mode is generally recognized over time during the period in which we deliver or make available the agreed upon quantity of goods.
- *Merchant Gases*—Supply mode associated with liquid bulk and packaged gases customers. Liquid bulk customers receive delivery of product in liquid or gaseous form by tanker or tube trailer. The product is stored, usually in its liquid state, in equipment we typically design and install at the customer's site for vaporizing into a gaseous state as needed. Packaged gases customers receive small quantities of product delivered in either cylinders or dewars. Both liquid bulk and packaged gases sales do not contain minimum purchase requirements as they are governed by contracts and/or purchase orders based on the customer's requirements. These contracts contain stated terms that are generally 5 years or less. Performance obligations associated with this supply mode are satisfied at a point in time when the customer receives and obtains control of the product, which generally occurs upon delivery.

The timing of revenue recognition for our regional industrial gases businesses is generally consistent with our right to invoice the customer. Variable components of consideration that may not be resolved within the month, such as the ability to earn an annual bonus or incur a penalty, are more relevant to on-site contracts and are considered constrained as they can be impacted by a single significant event such as a plant outage, which could occur at the end of a contract period. We consider contract modifications on an individual basis to determine appropriate accounting treatment. However, contract modifications are generally accounted for prospectively as they relate to distinct goods or services associated with future periods of performance.

We mitigate energy and natural gas price risk contractually through pricing formulas, surcharges, and cost pass-through arrangements.

Industrial Gases – Equipment

We design and manufacture equipment for air separation, hydrocarbon recovery and purification, natural gas liquefaction, and liquid helium and liquid hydrogen transport and storage. The Industrial Gases – Global and the Corporate and other segments serve our sale of equipment customers.

Our sale of equipment contracts are generally comprised of a single performance obligation as the individual promised goods or services contained within the contracts are integrated with or dependent upon other goods or services in the contract for a single output to the customer.

Revenue from our sale of equipment contracts is generally recognized over time as we have an enforceable right to payment for performance completed to date and our performance under the contract terms does not create an asset with alternative use. Otherwise, sale of equipment contracts are satisfied at the point in time the customer obtains control of the equipment, which is generally determined based on the shipping terms of the contract. For contracts recognized over time, we primarily recognize revenue using a cost incurred input method by which costs incurred to date relative to total estimated costs at completion are used to measure progress toward satisfying performance obligations. Costs incurred include material, labor, and overhead costs and represent work contributing and proportionate to the transfer of control to the customer.

Since our contracts are generally comprised of a single performance obligation, contract modifications are typically accounted for as part of the existing contract and are recognized as a cumulative adjustment for the inception-to-date effect of such change. In addition, changes in estimates on projects accounted for under the cost incurred input method are recognized as a cumulative adjustment for the inception-to-date effect of such change. Changes in estimates unfavorably impacted operating income by approximately \$19 in fiscal year 2021. Changes in estimates favorably impacted operating income by approximately \$7 and \$37 in fiscal years 2020 and 2019, respectively. Our changes in estimates would not have significantly impacted amounts recorded in prior years.

Disaggregation of Revenue

The table below presents our consolidated sales disaggregated by supply mode for each of our reporting segments. We believe this presentation best depicts the nature, timing, type of customer, and contract terms for our sales.

	Industrial Gases— Americas	Industrial Gases— EMEA	Industrial Gases— Asia	Industrial Gases— Global	Corporate and other	Total	%
2021							
On-site	\$2,469.5	\$873.1	\$1,718.8	\$—	\$—	\$5,061.4	49 %
Merchant	1,698.1	1,571.8	1,202.0	—	—	4,471.9	43 %
Sale of Equipment	—	—	—	511.0	278.7	789.7	8 %
Total	\$4,167.6	\$2,444.9	\$2,920.8	\$511.0	\$278.7	\$10,323.0	100 %
2020							
On-site	\$2,040.2	\$629.3	\$1,652.8	\$—	\$—	\$4,322.3	49 %
Merchant	1,590.5	1,297.0	1,063.7	—	—	3,951.2	45 %
Sale of Equipment	—	—	—	364.9	217.9	582.8	6 %
Total	\$3,630.7	\$1,926.3	\$2,716.5	\$364.9	\$217.9	\$8,856.3	100 %
2019							
On-site	\$2,230.6	\$728.4	\$1,622.6	\$—	\$—	\$4,581.6	52 %
Merchant	1,642.9	1,274.1	1,041.0	—	—	3,958.0	44 %
Sale of Equipment	—	—	—	261.0	118.3	379.3	4 %
Total	\$3,873.5	\$2,002.5	\$2,663.6	\$261.0	\$118.3	\$8,918.9	100 %

Remaining Performance Obligations

As of 30 September 2021, the transaction price allocated to remaining performance obligations is estimated to be approximately \$24 billion. This amount includes fixed-charge contract provisions associated with our on-site and sale of equipment supply modes. We estimate that approximately half of this revenue will be recognized over approximately the next five years and the balance thereafter.

Expected revenue associated with new on-site plants that are not yet on stream is excluded from this amount. In addition, this amount excludes consideration associated with contracts having an expected duration of less than one year, and variable consideration for which we recognize revenue at the amount to which we have the right to invoice, including pass-through costs related to energy and natural gas.

In the future, actual amounts will differ due to events outside of our control, including, but not limited to, inflationary price escalations; currency exchange rates; and amended, terminated, or renewed contracts.

Contract Balances

The table below details balances arising from contracts with customers:

30 September	Balance Sheet Location	2021	2020
Assets			
Contract assets – current	Other receivables and current assets	\$119.4	\$55.9
Contract fulfillment costs – current	Other receivables and current assets	125.5	109.9
Liabilities			
Contract liabilities – current	Payables and accrued liabilities	366.8	313.8
Contract liabilities – noncurrent	Other noncurrent liabilities	58.4	57.9

Contract assets and liabilities result from differences in timing of revenue recognition and customer invoicing. These balances are reported on the consolidated balance sheets on a contract-by-contract basis at the end of each reporting period.

Contract assets primarily relate to our sale of equipment contracts for which revenue is recognized over time. These balances represent unbilled revenue, which occurs when revenue recognized under the measure of progress exceeds the amount invoiced to our customers. Our ability to invoice the customer for contract asset balances is not only based on the passage of time, but also the achievement of certain contractual milestones.

Contract fulfillment costs primarily include deferred costs related to sale of equipment projects that cannot be inventoried and for which we expect to recognize revenue upon transfer of control at project completion or costs related to fulfilling a specific anticipated contract.

Costs to obtain a contract, or contract acquisition costs, are capitalized only after we have established a contract with the customer. We elected to apply the practical expedient to expense these costs as they are incurred if the amortization period of the asset that would have otherwise been recognized is one year or less. Our contract acquisition costs capitalized as of 30 September 2021 and 2020 were not material.

Contract liabilities include advance payments or right to consideration prior to performance under the contract. Contract liabilities are recognized as revenue when or as we perform under the contract. The increase in our contract liabilities – current balance primarily relates to new sale of equipment projects as balances associated with our sale of gas contracts are generally related to fixed charges and are relatively consistent period over period. During the fiscal year ended 30 September 2021, we recognized approximately \$240 in revenue associated with sale of equipment contracts that was included within our contract liabilities as of 30 September 2020. Advanced payments from our customers do not represent a significant financing component as these payments are intended for purposes other than financing, such as to meet working capital demands or to protect us from our customer failing to meet its obligations under the terms of the contract.

Changes in contract asset and liability balances during the fiscal year ended 30 September 2021 were not materially impacted by any other factors.

5. DISCONTINUED OPERATIONS

In fiscal year 2021, income from discontinued operations, net of tax, was \$70.3. This included net tax benefits of \$60.0 recorded upon release of tax liabilities related to uncertain tax positions for which the statute of limitations expired. Of this benefit, we recorded \$51.8 in the fourth quarter for liabilities associated with our former Performance Materials Division ("PMD") and \$8.2 in the third quarter for liabilities associated with our former Energy-from-Waste ("EfW") business. Additionally, we recorded a tax benefit of \$10.3 in the first quarter of fiscal year 2021 primarily from the settlement of a state tax appeal related to the gain on the sale of PMD in fiscal year 2017. Our consolidated statement of cash flows for the fiscal year ended 30 September 2021 includes \$6.7 received as part of the settlement.

In fiscal year 2020, loss from discontinued operations, net of tax, was \$14.3. This resulted from a pre-tax loss of \$19.0 recorded in the second quarter to increase our existing liability for retained environmental obligations associated with the sale of our former Amines business in September 2006. Refer to the Pace discussion within Note 16, *Commitments and Contingencies*, for additional information. The loss did not have an impact on our cash flows for the fiscal year ended 30 September 2020.

6. INVENTORIES

The components of inventories are as follows:

30 September	2021	2020
Finished goods	\$150.7	\$134.5
Work in process	24.0	21.3
Raw materials, supplies and other	279.2	249.0
Inventories	\$453.9	\$404.8

7. SUMMARIZED FINANCIAL INFORMATION OF EQUITY AFFILIATES

The summarized financial information below is on a combined 100% basis and has been compiled based on financial statements of the companies accounted for by the equity method. The amounts presented include the accounts of the following equity affiliates:

Abdullah Hashim Industrial Gases & Equipment Co., Ltd. (25%);	INFRA Group (40%);
Air Products South Africa (Proprietary) Limited (50%);	INOX Air Products Private Limited (50%);
Bangkok Cogeneration Company Limited (49%);	Jazan Gas Projects Company (26%);
Bangkok Industrial Gases Co., Ltd. (49%);	Kulim Industrial Gases Sdn. Bhd. (50%);
Chengdu Air & Gas Products Ltd. (50%);	Sapio Produzione Idrogeno Ossigeno S.r.l. (49%);
Helios S.p.A. (49%);	and principally, other industrial gas producers.

30 September	2021	2020
Current assets	\$2,244.6	\$1,943.5
Noncurrent assets	4,630.7	4,529.2
Current liabilities	774.0	765.3
Noncurrent liabilities	2,852.5	2,958.8

Fiscal Year Ended 30 September	2021	2020	2019
Net sales	\$3,338.1	\$2,809.1	\$2,885.6
Gross profit	1,492.9	1,212.5	1,193.4
Operating income	962.2	748.6	763.4
Net income	646.0	567.8	492.4

Dividends received from equity affiliates were \$157.3, \$107.0, and \$144.3 in fiscal years 2021, 2020, and 2019, respectively.

The investment in net assets of and advances to equity affiliates as of 30 September 2021 and 2020 included investment in foreign affiliates of \$1,648.0 and \$1,431.3, respectively.

As of 30 September 2021 and 2020, the amount of investment in companies accounted for by the equity method included equity method goodwill of \$55.3 and \$50.0, respectively.

India Finance Act 2020

Our consolidated income statements in fiscal year 2020 include a benefit of \$33.8 reflected in equity affiliates' income for our share of accumulated dividend distribution taxes released with respect to INOX Air Products Private Limited, an equity affiliate investment in our Industrial Gases – Asia segment. This benefit, which related to tax legislation passed by the Indian government, was not recorded in segment results. Refer to Note 21, *Income Taxes*, for additional information. The benefit is included in fiscal year 2020 net income in the table above on a 100% basis.

Jazan Gas Project Company

On 19 April 2015, Jazan Gas Project Company, a joint venture between Air Products and ACWA Holding, entered into a 20-year oxygen and nitrogen supply agreement to supply Aramco's oil refinery and power plant being built in Jazan, Saudi Arabia. We own 26% of the joint venture and guarantee repayment of our share of an equity bridge loan. ACWA also guarantees their share of the loan. We determined that the joint venture is a variable interest entity for which we are not the primary beneficiary. As of 30 September 2021, our consolidated balance sheets included \$94.4 reflected within "Payables and accrued liabilities" for our obligation to make equity contributions based on our proportionate share of the advances received by the joint venture under the loan.

Subsequent Event

As part of the Jazan Integrated Gasification and Power Company transaction discussed in Note 24, *Subsequent Events*, Jazan Gas Project Company sold its air separation units to Aramco in October 2021 and repaid its outstanding debt, including the equity bridge loan.

8. PLANT AND EQUIPMENT, NET

The major classes of plant and equipment are as follows:

30 September	Useful Life in years	2021	2020
Land		\$312.1	\$296.8
Buildings	30	1,083.1	997.8
Production facilities ^(A)	10 to 20	18,236.9	17,289.7
Distribution and other machinery and equipment ^(B)	5 to 25	5,111.6	4,807.7
Construction in progress		2,745.1	1,784.2
Plant and equipment, at cost		27,488.8	25,176.2
Less: Accumulated depreciation		14,234.2	13,211.5
Plant and equipment, net		\$13,254.6	\$11,964.7

^(A) Depreciable lives of production facilities related to long-term customer supply contracts are generally matched to the contract lives.

^(B) The depreciable lives for various types of distribution equipment are: 10 to 25 years for cylinders, depending on the nature and properties of the product; 20 years for tanks; generally 7.5 years for customer stations; and 5 to 15 years for tractors and trailers.

Depreciation expense was \$1,284.1, \$1,150.5, and \$1,049.7 in fiscal years 2021, 2020, and 2019, respectively.

9. GOODWILL

Changes to the carrying amount of consolidated goodwill by segment are as follows:

	Industrial Gases— Americas	Industrial Gases— EMEA	Industrial Gases— Asia	Industrial Gases— Global	Corporate and other	Total
Goodwill, net at 30 September 2019	\$156.3	\$432.3	\$178.5	\$19.6	\$10.4	\$797.1
Acquisitions	—	66.6	—	—	4.5	71.1
Currency translation and other	(3.7)	25.2	1.9	(0.1)	—	23.3
Goodwill, net at 30 September 2020	\$152.6	\$524.1	\$180.4	\$19.5	\$14.9	\$891.5
Acquisitions	—	21.0	—	—	—	21.0
Currency translation and other	(1.6)	(3.6)	3.9	0.3	—	(1.0)
Goodwill, net at 30 September 2021	\$151.0	\$541.5	\$184.3	\$19.8	\$14.9	\$911.5

In fiscal year 2021, goodwill acquired is primarily attributable to expected cost synergies and growth opportunities related to a business combination completed in the second quarter. This goodwill is not deductible for tax purposes. Refer to Note 3, *Acquisitions*, for additional information.

30 September	2021	2020	2019
Goodwill, gross	\$1,239.2	\$1,230.2	\$1,162.2
Accumulated impairment losses ^(A)	(327.7)	(338.7)	(365.1)
Goodwill, net	\$911.5	\$891.5	\$797.1

^(A) Accumulated impairment losses include the impacts of currency translation. These losses are attributable to our Latin America reporting unit ("LASA") within the Industrial Gases – Americas segment.

We review goodwill for impairment annually in the fourth quarter of the fiscal year and whenever events or changes in circumstances indicate that the carrying value of goodwill might not be recoverable. The impairment test for goodwill involves calculating the fair value of each reporting unit and comparing that value to the carrying value. If the fair value of the reporting unit is less than its carrying value, the difference is recorded as a goodwill impairment charge, not to exceed the total amount of goodwill allocated to that reporting unit. During the fourth quarter of fiscal year 2021, we conducted our annual goodwill impairment test and determined that the fair value of all our reporting units exceeded their carrying value.

10. INTANGIBLE ASSETS

The table below summarizes the major classes of our intangible assets:

30 September	2021			2020		
	Gross	Accumulated Amortization/ Impairment	Net	Gross	Accumulated Amortization/ Impairment	Net
Finite-lived:						
Customer relationships	\$552.0	(\$234.7)	\$317.3	\$538.0	(\$209.9)	\$328.1
Patents and technology	36.8	(16.9)	19.9	39.1	(16.3)	22.8
Other	80.5	(37.3)	43.2	77.6	(33.7)	43.9
Total finite-lived intangible assets	669.3	(288.9)	380.4	654.7	(259.9)	394.8
Indefinite-lived:						
Trade names and trademarks	51.2	(10.9)	40.3	52.2	(11.2)	41.0
Total Intangible Assets	\$720.5	(\$299.8)	\$420.7	\$706.9	(\$271.1)	\$435.8

The decrease in net intangible assets in fiscal year 2021 was primarily attributable to amortization, partially offset by intangible assets acquired through business combinations.

Amortization expense for intangible assets was \$37.2, \$34.5, and \$33.1 in fiscal years 2021, 2020, and 2019, respectively. Refer to Note 1, *Major Accounting Policies*, for the amortization periods for each major class of intangible assets.

The table below details the amount of amortization expense expected to be recorded for our finite-lived intangible assets in each of the next five years and thereafter:

2022	\$34.7
2023	33.2
2024	32.1
2025	30.8
2026	29.2
Thereafter	220.4
Total	\$380.4

Indefinite-lived intangible assets are subject to impairment testing at least annually or more frequently if events or changes in circumstances indicate that potential impairment exists. The impairment test for indefinite-lived intangible assets involves calculating the fair value of the indefinite-lived intangible assets and comparing the fair value to their carrying value. If the fair value is less than the carrying value, the difference is recorded as an impairment loss. During the fourth quarter of fiscal year 2021, we conducted our annual impairment test of indefinite-lived intangible assets and determined that the fair value of all our intangible assets exceeded their carrying value.

11. LEASES

Lessee Accounting

We are the lessee under various agreements for real estate, vehicles, aircraft, and other equipment that are accounted for as operating leases. Our finance leases principally relate to the right to use machinery and equipment and are not material.

Operating lease expense was \$89.5 and \$80.1 for fiscal years 2021 and 2020, respectively. These amounts exclude short-term and variable lease expenses, which were not material.

Amounts associated with operating leases and their presentation on our consolidated balance sheets are as follows:

30 September	2021	2020
Operating lease right-of-use assets		
Other noncurrent assets	\$566.2	\$376.8
Operating lease liabilities		
Payables and accrued liabilities	78.6	70.7
Other noncurrent liabilities	503.4	335.8
Total operating lease liabilities	\$582.0	\$406.5

30 September	2021	2020
Weighted-average remaining lease term in years ^(A)	17.2	15.7
Weighted-average discount rate ^(B)	1.9 %	2.1 %

^(A) Calculated on the basis of the remaining lease term and the lease liability balance for each lease as of the reporting date.

^(B) Calculated on the basis of the discount rate used to calculate the lease liability for each lease and the remaining balance of the lease payments for each lease as of the reporting date.

The following maturity analysis of our operating lease liabilities as of 30 September 2021 presents the undiscounted cash flows for each of the next five years and thereafter with a reconciliation to the lease liability recognized on our balance sheet:

	Operating Leases
2022	\$88.4
2023	71.3
2024	60.4
2025	51.1
2026	40.4
Thereafter	361.5
Total undiscounted lease payments	673.1
Imputed interest	(91.1)
Present value of lease liability recognized on balance sheet	\$582.0

The impacts associated with our operating leases on the consolidated statements of cash flows are reflected within "Other adjustments" within operating activities. This includes non-cash operating lease expense of \$89.5 and \$80.1, as well as a use of cash of \$98.8 and \$90.0 for payments on amounts included in the measurement of the lease liability for fiscal years 2021 and 2020, respectively.

We recorded \$259 and \$442 of noncash right-of-use asset additions during fiscal years 2021 and 2020, respectively.

We have additional operating leases that have not yet commenced as of 30 September 2021 having lease payments totaling approximately \$195.

Lessor Accounting

Certain contracts associated with facilities that are built to provide product to a specific customer have been accounted for as leases. As we generally control the operations and maintenance of the assets that provide the supply of gas to our customers, there have been no new arrangements that qualified as a lease in fiscal year 2021.

In cases where operating lease treatment is appropriate, there is no difference in revenue recognition over the life of the contract as compared to accounting for the contract under a sale of gas agreement. These contracts qualify for a practical expedient available to lessors to combine the lease and non-lease components and account for the combined component in accordance with the accounting treatment for the predominant component. We elected to apply this practical expedient and have accounted for the combined component as product sales under the revenue standard as we control the operations and maintenance of the assets that provide the supply of gas to our customers.

In cases where sales-type lease treatment is appropriate, revenue and expense are recognized up front for the sale of equipment component of the contract as compared to revenue recognition over the life of the arrangement under contracts not qualifying as sales-type leases. Additionally, a portion of the revenue representing interest income from the financing component of the lease receivable is reflected as sales over the life of the contract. During fiscal years 2021 and 2020, we recognized interest income of \$67.4 and \$71.2 on our lease receivables, respectively.

Our contracts generally do not have the option to extend or terminate the lease or provide the customer the right to purchase the asset at the end of the contract term. Instead, renewal of such contracts requires negotiation of mutually agreed terms by both parties. Unless the customer terminates within the required notice period, the contract will go into evergreen. Given the long-term duration of our contracts, there is no assumed residual value for the assets at the end of the lease term.

Lease receivables, net, primarily relate to sales-type leases on certain on-site assets which are collected over the contract term. As of 30 September 2021 and 2020, our lease receivables, net were \$824.7 and \$903.0, respectively. Lease receivables, net are primarily included within "Noncurrent lease receivables" on our consolidated balance sheets, with the remaining balance in "Other receivables and current assets." The majority of our leases are of high credit quality and were originated prior to fiscal year 2017. As of 30 September 2021 and 2020, the credit quality of lease receivables did not require a material allowance for credit losses.

Lease payments collected in fiscal years 2021, 2020, and 2019 were \$166.2, \$162.8, and \$171.6, respectively. These payments reduced the lease receivable balance by \$98.8, \$91.6, and \$94.6 in fiscal years 2021, 2020, and 2019, respectively.

As of 30 September 2021, minimum lease payments expected to be collected, which reconciles to lease receivables, net, were as follows:

2022	\$146.8
2023	143.1
2024	137.0
2025	131.4
2026	120.6
Thereafter	508.7
Total	1,187.6
Unearned interest income	(362.9)
Lease Receivables, net	\$824.7

12. FINANCIAL INSTRUMENTS

Currency Price Risk Management

Our earnings, cash flows, and financial position are exposed to foreign currency risk from foreign currency-denominated transactions and net investments in foreign operations. It is our policy to seek to minimize our cash flow volatility from changes in currency exchange rates. This is accomplished by identifying and evaluating the risk that our cash flows will change in value due to changes in exchange rates and by executing strategies necessary to manage such exposures. Our objective is to maintain economically balanced currency risk management strategies that provide adequate downside protection.

Forward Exchange Contracts

We enter into forward exchange contracts to reduce the cash flow exposure to foreign currency fluctuations associated with highly anticipated cash flows and certain firm commitments, such as the purchase of plant and equipment. We also enter into forward exchange contracts to hedge the cash flow exposure on intercompany loans and third-party debt. This portfolio of forward exchange contracts consists primarily of Euros and U.S. Dollars. The maximum remaining term of any forward exchange contract currently outstanding and designated as a cash flow hedge at 30 September 2021 is 3.2 years.

Forward exchange contracts are also used to hedge the value of investments in certain foreign subsidiaries and affiliates by creating a liability in a currency in which we have a net equity position. The primary currency pair in this portfolio of forward exchange contracts is Euros and U.S. Dollars.

We also utilize forward exchange contracts that are not designated as hedges. These contracts are used to economically hedge foreign currency-denominated monetary assets and liabilities, primarily working capital. The primary objective of these forward exchange contracts is to protect the value of foreign currency-denominated monetary assets and liabilities from the effects of volatility in foreign exchange rates that might occur prior to their receipt or settlement. This portfolio of forward exchange contracts consists of many different foreign currency pairs, with a profile that changes from time to time depending on our business activity and sourcing decisions.

The table below summarizes our outstanding currency price risk management instruments:

30 September	2021		2020	
	US\$ Notional	Years Average Maturity	US\$ Notional	Years Average Maturity
Forward Exchange Contracts				
Cash flow hedges	\$3,465.2	0.6	\$2,842.1	0.5
Net investment hedges	638.0	3.0	636.6	3.8
Not designated	692.6	0.1	1,685.2	0.3
Total Forward Exchange Contracts	\$4,795.8	0.8	\$5,163.9	0.8

The decrease in the notional value of forward exchange contracts that are not designated is primarily due to maturities.

We also use foreign currency-denominated debt to hedge the foreign currency exposures of our net investment in certain foreign subsidiaries. The designated foreign currency-denominated debt and related accrued interest was €1,297.5 million (\$1,502.6) at 30 September 2021 and €1,288.7 million (\$1,510.8) at 30 September 2020. The designated foreign currency-denominated debt is presented within "Long-term debt" on the consolidated balance sheets.

Debt Portfolio Management

It is our policy to identify, on a continuing basis, the need for debt capital and to evaluate the financial risks inherent in funding the Company with debt capital. Reflecting the result of this ongoing review, our debt portfolio and hedging program are managed with the intent to (1) reduce funding risk with respect to borrowings made by us to preserve our access to debt capital and provide debt capital as required for funding and liquidity purposes, and (2) manage the aggregate interest rate risk and the debt portfolio in accordance with certain debt management parameters.

Interest Rate Management Contracts

We enter into interest rate swaps to change the fixed/variable interest rate mix of our debt portfolio in order to maintain the percentage of fixed- and variable-rate debt within the parameters set by management. In accordance with these parameters, the agreements are used to manage interest rate risks and costs inherent in our debt portfolio. Our interest rate management portfolio generally consists of fixed-to-floating interest rate swaps (which are designated as fair value hedges), pre-issuance interest rate swaps and treasury locks (which hedge the interest rate risk associated with anticipated fixed-rate debt issuances and are designated as cash flow hedges), and floating-to-fixed interest rate swaps (which are designated as cash flow hedges). As of 30 September 2021, the outstanding interest rate swaps were denominated in U.S. Dollars. The notional amount of the interest rate swap agreements is equal to or less than the designated debt being hedged. When interest rate swaps are used to hedge variable-rate debt, the indices of the swaps and the debt to which they are designated are the same. It is our policy not to enter into any interest rate management contracts which lever a move in interest rates on a greater than one-to-one basis.

Cross Currency Interest Rate Swap Contracts

We enter into cross currency interest rate swap contracts when our risk management function deems necessary. These contracts may entail both the exchange of fixed- and floating-rate interest payments periodically over the life of the agreement and the exchange of one currency for another currency at inception and at a specified future date. The contracts are used to hedge either certain net investments in foreign operations or non-functional currency cash flows related to intercompany loans. The current cross currency interest rate swap portfolio consists of fixed-to-fixed swaps primarily between U.S. Dollars and Chinese Renminbi, U.S. Dollars and Indian Rupee, and U.S. Dollars and Chilean Pesos.

The table below summarizes our outstanding interest rate management contracts and cross currency interest rate swaps:

	2021				2020			
	US\$ Notional	Average Pay %	Average Receive %	Years Average Maturity	US\$ Notional	Average Pay %	Average Receive %	Years Average Maturity
30 September								
Interest rate swaps (fair value hedge)	\$200.0	LIBOR	2.76 %	0.1	\$200.0	LIBOR	2.76 %	1.1
Cross currency interest rate swaps (net investment hedge)	\$210.2	4.32 %	3.14 %	2.2	\$201.6	4.27 %	3.12 %	3.2
Cross currency interest rate swaps (cash flow hedge)	\$1,005.7	4.98 %	2.93 %	2.7	\$1,057.9	4.83 %	2.98 %	2.5
Cross currency interest rate swaps (not designated)	\$4.2	5.39 %	3.54 %	2.2	\$12.8	5.39 %	3.54 %	3.2

The table below provides the amounts recorded on the consolidated balance sheet related to cumulative basis adjustments for fair value hedges:

30 September	Carrying amounts of hedged item		Cumulative hedging adjustment, included in carrying amount	
	2021	2020	2021	2020
Current portion of long-term debt	\$400.5	\$—	\$0.5	\$—
Long-term debt	—	405.4	—	5.7

The table below summarizes the fair value and balance sheet location of our outstanding derivatives. Refer to Note 13, *Fair Value Measurements*, which defines fair value, describes the method for measuring fair value, and provides additional disclosures regarding fair value measurements.

30 September	Balance Sheet Location	2021	2020	Balance Sheet Location	2021	2020
Derivatives Designated as Hedging Instruments:						
Forward exchange contracts	Other receivables and current assets	\$35.1	\$51.1	Payables and accrued liabilities	\$57.2	\$22.5
Interest rate management contracts	Other receivables and current assets	16.0	14.7	Payables and accrued liabilities	5.2	0.4
Forward exchange contracts	Other noncurrent assets	5.5	0.8	Other noncurrent liabilities	25.2	33.0
Interest rate management contracts	Other noncurrent assets	18.1	44.3	Other noncurrent liabilities	27.5	1.7
Total Derivatives Designated as Hedging Instruments		\$74.7	\$110.9		\$115.1	\$57.6
Derivatives Not Designated as Hedging Instruments:						
Forward exchange contracts	Other receivables and current assets	\$8.7	\$31.7	Payables and accrued liabilities	\$6.4	\$28.0
Interest rate management contracts	Other noncurrent assets	—	0.7	Other noncurrent liabilities	—	—
Total Derivatives Not Designated as Hedging Instruments		\$8.7	\$32.4		\$6.4	\$28.0
Total Derivatives		\$83.4	\$143.3		\$121.5	\$85.6

The table below summarizes gains (losses) recognized in other comprehensive income during the period related to our net investment and cash flow hedging relationships:

	2021	2020
Net Investment Hedging Relationships		
Forward exchange contracts	\$11.4	(\$15.9)
Foreign currency debt	18.1	(100.2)
Cross currency interest rate swaps	(7.9)	1.9
Total Amount Recognized in OCI	21.6	(114.2)
Tax effects	(5.5)	28.2
Net Amount Recognized in OCI	\$16.1	(\$86.0)
Derivatives in Cash Flow Hedging Relationships		
Forward exchange contracts	\$12.7	\$116.6
Forward exchange contracts, excluded components	(11.7)	(15.2)
Other ^(A)	(6.7)	(34.2)
Total Amount Recognized in OCI	(5.7)	67.2
Tax effects	9.0	(23.7)
Net Amount Recognized in OCI	\$3.3	\$43.5

^(A) Other primarily includes interest rate and cross currency interest rate swaps for which excluded components are recognized in "Payables and accrued liabilities" and "Other receivables and current assets" as a component of accrued interest payable and accrued interest receivable, respectively. These excluded components are recorded in "Other non-operating income (expense), net" over the life of the cross currency interest rate swap. Other also includes the recognition of our share of gains and losses, net of tax, related to interest rate swaps held by our equity affiliates.

The table below summarizes the location and amounts recognized in income related to our cash flow and fair value hedging relationships by contract type:

	Sales		Cost of Sales		Interest Expense		Other Non-Operating Income (Expense), Net	
	2021	2020	2021	2020	2021	2020	2021	2020
Total presented in consolidated income statements that includes effects of hedging below	\$10,323.0	\$8,856.3	\$7,186.1	\$5,858.1	\$141.8	\$109.3	\$73.7	\$30.7
(Gain) Loss Effects of Cash Flow Hedging:								
Forward Exchange Contracts:								
Amount reclassified from OCI into income	(\$0.8)	(\$0.2)	(\$0.8)	(\$1.0)	\$—	\$—	\$5.2	(\$117.9)
Amount excluded from effectiveness testing recognized in earnings based on amortization approach	—	—	—	—	—	—	9.1	17.0
Other:								
Amount reclassified from OCI into income	—	—	—	—	5.6	4.2	39.1	22.5
Total (Gain) Loss Reclassified from OCI to Income	(0.8)	(0.2)	(0.8)	(1.0)	5.6	4.2	53.4	(78.4)
Tax effects	0.2	—	0.5	0.2	(2.1)	(1.4)	(12.5)	18.9
Net (Gain) Loss Reclassified from OCI to Income	(\$0.6)	(\$0.2)	(\$0.3)	(\$0.8)	\$3.5	\$2.8	\$40.9	(\$59.5)
(Gain) Loss Effects of Fair Value Hedging:								
Other:								
Hedged items	\$—	\$—	\$—	\$—	(\$5.2)	\$0.5	\$—	\$—
Derivatives designated as hedging instruments	—	—	—	—	5.2	(0.5)	—	—
Total (Gain) Loss Recognized in Income	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—

The table below summarizes the location and amounts recognized in income related to our derivatives not designated as hedging instruments by contract type:

	Other Income (Expense), Net		Other Non-Operating Income (Expense), Net	
	2021	2020	2021	2020
The Effects of Derivatives Not Designated as Hedging Instruments:				
Forward Exchange Contracts	\$2.8	(\$1.5)	(\$2.7)	\$1.1
Other	—	—	0.5	0.7
Total (Gain) Loss Recognized in Income	\$2.8	(\$1.5)	(\$2.2)	\$1.8

The amount of unrealized gains and losses related to cash flow hedges as of 30 September 2021 that are expected to be reclassified to earnings in the next twelve months is not material.

The cash flows related to all derivative contracts are reported in the operating activities section of the consolidated statements of cash flows.

Credit Risk-Related Contingent Features

Certain derivative instruments are executed under agreements that require us to maintain a minimum credit rating with both Standard & Poor's and Moody's. If our credit rating falls below this threshold, the counterparty to the derivative instruments has the right to request full collateralization on the derivatives' net liability position. The net liability position of derivatives with credit risk-related contingent features was \$53.4 and \$30.0 as of 30 September 2021 and 2020, respectively. Because our current credit rating is above the various pre-established thresholds, no collateral has been posted on these liability positions.

Counterparty Credit Risk Management

We execute financial derivative transactions with counterparties that are highly rated financial institutions, all of which are investment grade at this time. Some of our underlying derivative agreements give us the right to require the institution to post collateral if its credit rating falls below the pre-established thresholds with Standard & Poor's or Moody's. The collateral that the counterparties would be required to post was \$38.1 and \$76.5 as of 30 September 2021 and 2020, respectively. No financial institution is required to post collateral at this time, as all have credit ratings at or above threshold.

13. 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 our own assumptions about the assumptions market participants would use in pricing the asset or liability.

The methods and assumptions used to measure the fair value of financial instruments are as follows:

Short-term Investments

Short-term investments primarily include time deposits with original maturities greater than three months and less than one year. We estimated the fair value of our short-term investments, which approximates carrying value as of the balance sheet date, using Level 2 inputs within the fair value hierarchy. Level 2 measurements were based on current interest rates for similar investments with comparable credit risk and time to maturity.

Derivatives

The fair value of our interest rate management contracts and forward exchange contracts are quantified using the income approach and are based on estimates using standard pricing models. These models consider the value of future cash flows as of the balance sheet date, discounted to a present value using discount factors that match both the time to maturity and currency of the underlying instruments. These standard pricing models utilize inputs that are derived from or corroborated by observable market data such as interest rate yield curves as well as currency spot and forward rates; therefore, the fair value of our derivatives is classified as a Level 2 measurement. On an ongoing basis, we randomly test a subset of our valuations against valuations received from the transaction's counterparty to validate the accuracy of our standard pricing models. Counterparties to these derivative contracts are highly rated financial institutions.

Refer to Note 12, *Financial Instruments*, for a description of derivative instruments, including details related to the balance sheet line classifications.

Long-term Debt, Including Related Party

The fair value of our debt is based on estimates using standard pricing models that consider the value of future cash flows as of the balance sheet date, discounted to a present value using discount factors that match both the time to maturity and currency of the underlying instruments. These standard valuation models utilize observable market data such as interest rate yield curves and currency spot rates; therefore, the fair value of our debt is classified as a Level 2 measurement. We generally perform the computation of the fair value of these instruments.

The carrying values and fair values of financial instruments were as follows:

30 September	2021		2020	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Assets				
Derivatives				
Forward exchange contracts	\$49.3	\$49.3	\$83.6	\$83.6
Interest rate management contracts	34.1	34.1	59.7	59.7
Liabilities				
Derivatives				
Forward exchange contracts	\$88.8	\$88.8	\$83.5	\$83.5
Interest rate management contracts	32.7	32.7	2.1	2.1
Long-term debt, including current portion and related party	7,634.8	7,812.2	7,900.1	8,278.4

The carrying amounts reported on the consolidated balance sheets for cash and cash items, short-term investments, trade receivables, payables and accrued liabilities, accrued income taxes, and short-term borrowings approximate fair value due to the short-term nature of these instruments. Accordingly, these items have been excluded from the above table.

The following table summarizes assets and liabilities on the consolidated balance sheets that are measured at fair value on a recurring basis:

30 September	2021				2020			
	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3
Assets at Fair Value								
Derivatives								
Forward exchange contracts	\$49.3	\$—	\$49.3	\$—	\$83.6	\$—	\$83.6	\$—
Interest rate management contracts	34.1	—	34.1	—	59.7	—	59.7	—
Total Assets at Fair Value	\$83.4	\$—	\$83.4	\$—	\$143.3	\$—	\$143.3	\$—
Liabilities at Fair Value								
Derivatives								
Forward exchange contracts	\$88.8	\$—	\$88.8	\$—	\$83.5	\$—	\$83.5	\$—
Interest rate management contracts	32.7	—	32.7	—	2.1	—	2.1	—
Total Liabilities at Fair Value	\$121.5	\$—	\$121.5	\$—	\$85.6	\$—	\$85.6	\$—

14. DEBT

The table below summarizes our total outstanding debt as reflected on our consolidated balance sheets:

30 September	2021	2020
Short-term borrowings ^(A)	\$2.4	\$7.7
Current portion of long-term debt ^(B)	484.5	470.0
Long-term debt	6,875.7	7,132.9
Long-term debt – related party	274.6	297.2
Total Debt	\$7,637.2	\$7,907.8

^(A) Includes bank obligations with weighted average interest rates of 0.6% and 1.6% as of 30 September 2021 and 2020, respectively.

^(B) Includes current portion of long-term debt owed to a related party of \$83.8 and \$41.3 as of 30 September 2021 and 2020, respectively.

Total related party debt, including the current portion, was \$358.4 and \$338.5 as of 30 September 2021 and 30 September 2020, respectively. This debt primarily relates to a loan with our joint venture partner, Lu'An Clean Energy Company, which partially funded the acquisition of their assets by a consolidated joint venture in 2018.

The table below summarizes the coupon interest rates, fiscal year maturities, and carrying amounts of our long-term debt, including current portion and amounts owed to related parties:

30 September	Maturities	2021	2020
Payable in U.S. Dollars			
<u>Debentures</u>			
8.75%	2021	\$—	\$18.4
<u>Medium-term Notes (weighted average rate)</u>			
Series E 7.6%	2026	17.2	17.2
<u>Senior Notes</u>			
Note 3.0%	2022	400.0	400.0
Note 2.75%	2023	400.0	400.0
Note 3.35%	2024	400.0	400.0
Note 1.50%	2026	550.0	550.0
Note 1.85%	2027	650.0	650.0
Note 2.05%	2030	900.0	900.0
Note 2.70%	2040	750.0	750.0
Note 2.80%	2050	950.0	950.0
<u>Other (weighted average rate)</u>			
Variable-rate industrial revenue bonds 0.02%	2035 to 2050	618.9	631.9
Other 1.57%	2024 to 2032	14.4	—
Payable in Other Currencies			
Eurobonds 0.375%	2021	—	410.3
Eurobonds 1.0%	2025	347.4	351.7
Eurobonds 0.50%	2028	579.1	586.2
Eurobonds 0.80%	2032	579.1	586.2
New Taiwan Dollar 1.86%	2023 to 2028	161.8	—
Other	2023	0.3	0.6
<u>Related Party</u>			
Chinese Renminbi 5.5%	2022 to 2027	355.0	338.5
Chinese Renminbi 5.7%	2033	3.4	—
Capital Lease Obligations (weighted average rate)			
Foreign 11.6%	2022 to 2036	8.1	9.2
Total Principal Amount		7,684.7	7,950.2
Less: Unamortized discount and debt issuance costs		(50.4)	(55.8)
Less: Fair value hedge accounting adjustments ^(A)		0.5	5.7
Total Long-term Debt		7,634.8	7,900.1
Less: Current portion of long-term debt		(484.5)	(470.0)
Less: Long-term debt – related party		(274.6)	(297.2)
Long-term Debt		\$6,875.7	\$7,132.9

^(A) We entered into LIBOR-based interest rate swaps with various financial institutions to hedge a portion of the 3.0% Senior Note maturing in fiscal year 2022. These interest rate swaps have been designated as fair value hedges of the Note. Refer to Note 12, *Financial Instruments*, for additional information.

Principal maturities of long-term debt, including current portion and amounts owed to related parties, in each of the next five years and thereafter are as follows:

2022	\$484.0
2023	475.8
2024	492.5
2025	449.2
2026	662.7
Thereafter	5,120.5
Total	\$7,684.7

Cash paid for interest, net of amounts capitalized, was \$150.4, \$67.2, and \$155.9 in fiscal years 2021, 2020, and 2019, respectively.

Subsequent Event

In November 2021, we repaid the 3.0% Senior Note of \$400, plus interest, on its maturity date.

Debt Covenants

Various debt agreements to which we are a party include financial covenants and other restrictions, including restrictions pertaining to the ability to create property liens and enter into certain sale and leaseback transactions. As of 30 September 2021, we are in compliance with all the financial and other covenants under our debt agreements.

Credit Facilities

On 31 March 2021, we entered into a five-year \$2,500 revolving credit agreement with a syndicate of banks (the "2021 Credit Agreement"), under which senior unsecured debt is available to us and certain of our subsidiaries. The 2021 Credit Agreement provides a source of liquidity and supports our commercial paper program. The only financial covenant in the 2021 Credit Agreement is a maximum ratio of total debt to capitalization (equal to total debt plus total equity) not to exceed 70%. No borrowings were outstanding under the 2021 Credit Agreement as of 30 September 2021.

The 2021 Credit Agreement replaced our previous five-year \$2,300 revolving credit agreement, which was to have matured on 31 March 2022. No borrowings were outstanding under the previous agreement as of 30 September 2020 or at the time of its termination. No early termination penalties were incurred.

We have credit facilities available to certain of our foreign subsidiaries totaling \$296.7, of which \$176.2 was borrowed and outstanding as of 30 September 2021.

2020 Debt Issuance

In fiscal year 2020, we issued U.S. Dollar- and Euro-denominated fixed-rate notes with aggregate principal amounts of \$3.8 billion and €1.0 billion, respectively. Our consolidated statement of cash flows for the fiscal year ended 30 September 2020 includes long-term debt proceeds of \$4,895.8 from these issuances.

15. RETIREMENT BENEFITS

We and certain of our subsidiaries sponsor defined benefit pension plans and defined contribution plans that cover a substantial portion of our worldwide employees. The principal defined benefit pension plans are the U.S. salaried pension plan and the U.K. pension plan. These plans were closed to new participants in 2005, after which defined contribution plans were offered to new employees. The principal defined contribution plan is the Retirement Savings Plan, in which a substantial portion of the U.S. employees participate. A similar plan is offered to U.K. employees. We also provide other postretirement benefits consisting primarily of healthcare benefits to U.S. retirees who meet age and service requirements.

Defined Benefit Pension Plans

Pension benefits earned are generally based on years of service and compensation during active employment. The components of net periodic (benefit) cost for our defined benefit pension plans for fiscal years 2021, 2020, and 2019 were as follows:

Fiscal Year Ended 30 September	2021		2020		2019	
	U.S.	International	U.S.	International	U.S.	International
Service cost	\$21.3	\$23.4	\$23.4	\$23.3	\$21.4	\$19.3
Interest cost	68.9	25.2	91.2	24.8	113.4	35.8
Expected return on plan assets	(194.5)	(83.4)	(188.7)	(77.4)	(172.5)	(75.1)
Prior service cost amortization	1.2	—	1.2	—	1.1	—
Actuarial loss amortization	78.5	19.3	83.7	19.5	65.3	10.9
Settlements	1.3	0.5	5.0	0.2	6.2	0.2
Special termination benefits	—	—	—	—	0.7	0.1
Other	—	1.0	—	0.8	—	0.8
Net Periodic (Benefit) Cost	(\$23.3)	(\$14.0)	\$15.8	(\$8.8)	\$35.6	(\$8.0)

Our service costs are primarily included within "Cost of sales" and "Selling and administrative" on our consolidated income statements. The amount of service costs capitalized in fiscal years 2021, 2020 and 2019 were not material. The non-service related costs, including pension settlement losses, are presented outside operating income within "Other non-operating income (expense), net."

Certain of our pension plans provide for a lump sum benefit payment option at the time of retirement, or for corporate officers, six months after their retirement date. A participant's vested benefit is considered settled upon cash payment of the lump sum. We recognize pension settlement losses when cash payments exceed the sum of the service and interest cost components of net periodic benefit cost of the plan for the fiscal year. We recognized pension settlement losses of \$1.3, \$5.0 and \$6.2 in fiscal years 2021, 2020 and 2019, respectively, to accelerate recognition of a portion of actuarial losses deferred in accumulated other comprehensive loss associated with the U.S. supplementary pension plan.

We calculate net periodic benefit cost for a given fiscal year based on assumptions developed at the end of the previous fiscal year. The following table sets forth the weighted average assumptions used in the calculation of net periodic benefit cost:

	2021		2020		2019	
	U.S.	International	U.S.	International	U.S.	International
Discount rate – Service cost	3.0 %	1.6 %	3.3 %	1.5 %	4.3 %	2.5 %
Discount rate – Interest cost	2.1 %	1.2 %	2.9 %	1.3 %	4.0 %	2.2 %
Expected return on plan assets	6.8 %	4.7 %	7.0 %	5.0 %	7.0 %	5.3 %
Rate of compensation increase	3.5 %	3.3 %	3.5 %	3.3 %	3.5 %	3.5 %

The projected benefit obligation ("PBO") is the actuarial present value of benefits attributable to employee service rendered to date, including the effects of estimated future salary increases. The following table sets forth the weighted average assumptions used in the calculation of the PBO:

	2021		2020	
	U.S.	International	U.S.	International
Discount rate	2.9 %	1.8 %	2.7 %	1.5 %
Rate of compensation increase	3.5 %	3.3 %	3.5 %	3.3 %

The following tables reflect the change in the PBO and the change in the fair value of plan assets based on the plan year measurement date, as well as the amounts recognized in the consolidated balance sheets:

	2021		2020	
	U.S.	International	U.S.	International
Change in Projected Benefit Obligation				
Obligation at beginning of year	\$3,423.8	\$1,949.7	\$3,281.6	\$1,864.0
Service cost	21.3	23.4	23.4	23.3
Interest cost	68.9	25.2	91.2	24.8
Amendments	0.5	—	1.6	—
Actuarial (gain) loss	(17.7)	(30.9)	190.5	(11.6)
Settlements	(3.0)	(1.8)	(11.7)	(0.9)
Special termination benefits	—	—	—	—
Participant contributions	—	1.3	—	1.2
Benefits paid	(158.5)	(52.8)	(152.5)	(49.8)
Currency translation and other	—	55.5	(0.3)	98.7
Obligation at End of Year	\$3,335.3	\$1,969.6	\$3,423.8	\$1,949.7

	2021		2020	
	U.S.	International	U.S.	International
Change in Plan Assets				
Fair value at beginning of year	\$3,048.3	\$1,726.8	\$2,832.4	\$1,672.4
Actual return on plan assets	450.0	140.1	364.6	(3.1)
Company contributions	6.9	37.7	15.5	22.0
Participant contributions	—	1.3	—	1.2
Benefits paid	(158.5)	(52.8)	(152.5)	(49.8)
Settlements	(3.0)	(1.8)	(11.7)	(0.9)
Currency translation and other	—	53.7	—	85.0
Fair Value at End of Year	\$3,343.7	\$1,905.0	\$3,048.3	\$1,726.8
Funded Status at End of Year	\$8.4	(\$64.6)	(\$375.5)	(\$222.9)

	2021		2020	
	U.S.	International	U.S.	International
Amounts Recognized				
Noncurrent assets	\$90.5	\$128.7	\$26.5	\$—
Accrued liabilities	19.6	0.5	10.5	0.2
Noncurrent liabilities	62.5	192.8	391.5	222.7
Net Asset (Liability) Recognized	\$8.4	(\$64.6)	(\$375.5)	(\$222.9)

The changes in plan assets and benefit obligation that have been recognized in other comprehensive income on a pretax basis during fiscal years 2021 and 2020 consist of the following:

	2021		2020	
	U.S.	International	U.S.	International
Net actuarial (gain)/loss arising during the period	(\$273.2)	(\$87.6)	\$14.6	\$68.9
Amortization of net actuarial loss	(79.8)	(19.8)	(88.7)	(19.7)
Prior service cost arising during the period	0.5	—	1.6	—
Amortization of prior service cost	(1.2)	—	(1.2)	—
Total	(\$353.7)	(\$107.4)	(\$73.7)	\$49.2

The net actuarial gains and losses represent the actual changes in the estimated obligation and plan assets that have not yet been recognized in the consolidated income statements and are included in accumulated other comprehensive loss. Actuarial gains arising during fiscal year 2021 are primarily attributable to higher than expected return on plan assets and higher discount rates. Accumulated actuarial gains and losses that exceed a corridor are amortized over the average remaining service period of active U.S. participants, which was approximately seven years as of 30 September 2021. For U.K. participants, accumulated actuarial gains and losses that exceed a corridor are amortized over the average remaining life expectancy, which was approximately twenty-four years as of 30 September 2021.

The components recognized in accumulated other comprehensive loss on a pretax basis at 30 September consisted of the following:

	2021		2020	
	U.S.	International	U.S.	International
Net actuarial loss	\$444.7	\$535.8	\$797.7	\$643.2
Prior service cost	6.3	3.6	7.0	3.6
Net transition liability	—	0.4	—	0.4
Total	\$451.0	\$539.8	\$804.7	\$647.2

The accumulated benefit obligation ("ABO") is the actuarial present value of benefits attributed to employee service rendered to a particular date, based on current salaries. The ABO for all defined benefit pension plans was \$5,140.0 and \$5,166.5 as of 30 September 2021 and 2020, respectively.

The following table provides information on pension plans where the benefit liability exceeds the value of plan assets:

30 September	2021		2020	
	U.S.	International	U.S.	International
Pension Plans with PBO in Excess of Plan Assets:				
PBO	\$82.1	\$456.6	\$3,202.2	\$1,949.7
Fair value of plan assets	—	263.4	2,800.3	1,726.7
PBO in excess of plan assets	\$82.1	\$193.2	\$401.9	\$223.0
Pension Plans with ABO in Excess of Plan Assets:				
ABO	\$79.2	\$416.8	\$3,081.4	\$475.8
Fair value of plan assets	—	263.4	2,800.3	324.4
ABO in excess of plan assets	\$79.2	\$153.4	\$281.1	\$151.4

The tables above include several pension arrangements that are not funded because of jurisdictional practice. The ABO and PBO related to these plans as of 30 September 2021 were \$86.2 and \$91.7, respectively. As of 30 September 2021, the U.S. salaried and U.K. pension plans had plan assets in excess of both PBO and ABO resulting in a decrease to the U.S. and International balances presented above. As of 30 September 2020, the PBO of these plans exceeded the fair value of plan assets.

Pension Plan Assets

Our pension plan investment strategy is to invest in diversified portfolios to earn a long-term return consistent with acceptable risk in order to pay retirement benefits and meet regulatory funding requirements while minimizing company cash contributions over time. De-risking strategies are also employed for closed plans as funding improves, generally resulting in higher allocations to long duration bonds. The plans invest primarily in passive and actively managed equity and debt securities. Equity investments are diversified geographically and by investment style and market capitalization. Fixed income investments include sovereign, corporate and asset-backed securities generally denominated in the currency of the plan.

Asset allocation targets are established based on the long-term return, volatility and correlation characteristics of the asset classes, the profiles of the plans' liabilities, and acceptable levels of risk. Assets are routinely rebalanced through contributions, benefit payments, and otherwise as deemed appropriate. The actual and target allocations at the measurement date are as follows:

Asset Category	2021 Target Allocation		2021 Actual Allocation		2020 Actual Allocation	
	U.S.	International	U.S.	International	U.S.	International
Equity securities	20 - 35%	29 - 38%	30 %	36 %	51 %	43 %
Debt securities	61 - 76%	62 - 71%	64 %	63 %	43 %	56 %
Real estate and other	— - 10%	— %	6 %	— %	5 %	— %
Cash	— %	2 %	— %	1 %	1 %	1 %
Total			100 %	100 %	100 %	100 %

In fiscal year 2021, the 6.75% expected return for U.S. plan assets was based on a weighted average of estimated long-term returns of major asset classes and the historical performance of plan assets. In determining asset class returns, we take into account historical long-term returns and the value of active management, as well as other economic and market factors.

In fiscal year 2021, the 4.73% expected rate of return for international plan assets was based on a weighted average return for plans outside the U.S., which vary significantly in size, asset structure and expected returns. The expected asset return for the U.K. plan, which represents over 80% of the assets of our International plans, is 5.30% and was derived from expected equity and debt security returns.

The table below summarizes pension plan assets measured at fair value by asset class (see Note 13, *Fair Value Measurements*, for definition of the levels):

30 September	2021				2020			
	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3
U.S. Qualified Pension Plans								
Cash and cash equivalents	\$14.8	\$14.8	\$—	\$—	\$16.9	\$16.9	\$—	\$—
Equity securities	325.3	325.3	—	—	573.9	573.9	—	—
Equity mutual funds	243.4	243.4	—	—	213.1	213.1	—	—
Equity pooled funds	448.7	—	448.7	—	762.0	—	762.0	—
Fixed income:								
Bonds (government and corporate)	2,125.6	—	2,125.6	—	1,312.7	—	1,312.7	—
Total U.S. Qualified Pension Plans at Fair Value	\$3,157.8	\$583.5	\$2,574.3	\$—	\$2,878.6	\$803.9	\$2,074.7	\$—
Real estate pooled funds ^(A)	185.9				169.7			
Total U.S. Qualified Pension Plans	\$3,343.7				\$3,048.3			
International Pension Plans								
Cash and cash equivalents	\$16.8	\$16.8	\$—	\$—	\$13.9	\$13.9	\$—	\$—
Equity pooled funds	676.4	—	676.4	—	746.8	—	746.8	—
Fixed income pooled funds	948.5	—	948.5	—	694.1	—	694.1	—
Other pooled funds	16.7	—	16.7	—	15.5	—	15.5	—
Insurance contracts	246.6	—	—	246.6	256.5	—	—	256.5
Total International Pension Plans	\$1,905.0	\$16.8	\$1,641.6	\$246.6	\$1,726.8	\$13.9	\$1,456.4	\$256.5

^(A) Real estate pooled funds consist of funds that invest in properties. These funds generally allow for quarterly redemption with 30 days' notice. Timing for redemption could be delayed based on the priority of our request and the availability of funds. Interests in these funds are valued using the net asset value ("NAV") per share practical expedient and are not classified in the fair value hierarchy.

The table below summarizes changes in fair value of the pension plan assets classified as Level 3, which is comprised of investments in insurance contracts:

Balance at 30 September 2019	\$254.1
Actual return on plan assets:	
Assets held at end of year	2.4
Balance at 30 September 2020	\$256.5
Actual return on plan assets:	
Assets held at end of year	(7.9)
Purchases, sales, and settlements, net	(2.0)
Balance at 30 September 2021	\$246.6

The descriptions and fair value methodologies for the U.S. and International pension plan assets are as follows:

Cash and Cash Equivalents

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

Equity Securities

Equity securities are valued at the closing market price reported on a U.S. or international exchange where the security is actively traded and are therefore classified as Level 1 assets.

Equity Mutual and Pooled Funds

Shares of mutual funds are valued at the daily closing price as reported by the fund. The mutual funds are required to publish their daily NAV and to transact at that price. The mutual funds are deemed to be actively traded and are classified as Level 1 assets. Units of pooled funds are valued at the per unit NAV determined by the fund manager based on the value of the underlying traded holdings and are classified as Level 2 assets.

Corporate and Government Bonds

Corporate and government bonds are classified as Level 2 assets, as they are either valued at quoted market prices from observable pricing sources at the reporting date or valued based upon comparable securities with similar yields and credit ratings.

Fixed Income Pooled Funds

Fixed income pooled funds are classified as Level 2 assets, as they are valued at the NAV of the shares held at year end, which is determined by the fund manager based on quoted market pricing from observable pricing sources at the reporting date or valued based upon comparable securities with similar yields, credit ratings, or factors. Fixed income pooled funds may hold government bonds, index linked bonds, corporate bonds, cash and derivative instruments.

Other Pooled Funds

Other pooled funds are classified as Level 2 assets, as they are valued at the NAV of the shares held at year end, which is based on the fair value of the underlying investments.

Insurance Contracts

Insurance contracts are classified as Level 3 assets, as they are carried at contract value, which approximates the estimated fair value. The estimated fair value is based on the fair value of the underlying investment of the insurance company and discount rates that require inputs with limited observability.

Contributions and Projected Benefit Payments

Pension contributions to funded plans and benefit payments for unfunded plans for fiscal year 2021 were \$44.6. Contributions for funded plans resulted primarily from contractual and regulatory requirements. Benefit payments to unfunded plans were due primarily to the timing of retirements. We anticipate contributing \$40 to \$50 to the defined benefit pension plans in fiscal year 2022. These contributions are anticipated to be driven primarily by contractual and regulatory requirements for funded plans and benefit payments for unfunded plans, which are dependent upon timing of retirements.

Projected benefit payments, which reflect expected future service, are as follows:

	U.S.	International
2022	\$179.3	\$56.8
2023	170.4	60.2
2024	174.3	64.0
2025	178.1	64.6
2026	180.7	68.3
2027-2031	936.5	375.9

These estimated benefit payments are based on assumptions about future events. Actual benefit payments may vary significantly from these estimates.

Defined Contribution Plans

We maintain a non-leveraged employee stock ownership plan ("ESOP") which forms part of the Air Products and Chemicals, Inc. Retirement Savings Plan ("RSP"). The ESOP was established in May of 2002. The balance of the RSP is a qualified defined contribution plan including a 401(k) elective deferral component. A substantial portion of U.S. employees are eligible and participate.

We treat dividends paid on ESOP shares as ordinary dividends. Under existing tax law, we may deduct dividends which are paid with respect to shares held by the plan. Shares of our common stock in the ESOP totaled 1,941,938 as of 30 September 2021.

Our contributions to the RSP include a Company core contribution for certain eligible employees who do not receive their primary retirement benefit from the defined benefit pension plans, with the core contribution based on a percentage of pay that is dependent on years of service. For the RSP, we also make matching contributions on overall employee contributions as a percentage of the employee contribution and include an enhanced contribution for certain eligible employees that do not participate in the defined benefit pension plans. Worldwide contributions expensed to income in fiscal years 2021, 2020, and 2019 were \$53.3, \$45.6, and \$40.6, respectively.

Other Postretirement Benefits

We provide other postretirement benefits consisting primarily of healthcare benefits to certain U.S. retirees who meet age and service requirements. The healthcare benefit is a continued medical benefit until the retiree reaches age 65. Healthcare benefits are contributory, with contributions adjusted periodically. The retiree medical costs are capped at a specified dollar amount, with the retiree contributing the remainder. The cost of these benefits was not material in fiscal years 2021, 2020, and 2019. Accumulated postretirement benefit obligations as of the end of fiscal years 2021 and 2020 were \$27.4 and \$38.6, respectively, of which \$5.5 and \$7.2 were current obligations, respectively.

We recognize changes in other postretirement benefit plan obligations in other comprehensive income on a pretax basis. In fiscal years 2021 and 2020, we recognized gains that arose during the period of \$5.4 and \$1.3, respectively. There was \$1.8 net actuarial gain amortization in fiscal year 2021 and no actuarial gain amortization in 2020 as the corridor for the plan was not exceeded.

The net actuarial gain recognized in accumulated other comprehensive loss on a pretax basis was \$6.6 and \$3.0 as of 30 September 2021 and 2020, respectively.

16. COMMITMENTS AND CONTINGENCIES

Litigation

We are involved in various legal proceedings, including commercial, competition, environmental, intellectual property, regulatory, product liability, and insurance matters. We do not currently believe there are any legal proceedings, individually or in the aggregate, that are reasonably possible to have a material impact on our financial condition, results of operations, or cash flows.

In September 2010, the Brazilian Administrative Council for Economic Defense ("CADE") issued a decision against our Brazilian subsidiary, Air Products Brasil Ltda., and several other Brazilian industrial gas companies for alleged anticompetitive activities. CADE imposed a civil fine of R\$179.2 million (approximately \$33 at 30 September 2021) on Air Products Brasil Ltda. This fine was based on a recommendation by a unit of the Brazilian Ministry of Justice, following an investigation beginning in 2003, which alleged violation of competition laws with respect to the sale of industrial and medical gases. The fines are based on a percentage of our total revenue in Brazil in 2003.

We have denied the allegations made by the authorities and filed an appeal in October 2010 with the Brazilian courts. On 6 May 2014, our appeal was granted and the fine against Air Products Brasil Ltda. was dismissed. CADE has appealed that ruling and the matter remains pending. We, with advice of our outside legal counsel, have assessed the status of this matter and have concluded that, although an adverse final judgment after exhausting all appeals is possible, such a judgment is not probable. As a result, no provision has been made in the consolidated financial statements. In the event of an adverse final judgment, we estimate the maximum possible loss to be the full amount of the fine of R\$179.2 million (approximately \$33 at 30 September 2021) plus interest accrued thereon until final disposition of the proceedings.

Additionally, Winter Storm Uri, a severe winter weather storm in the U.S. Gulf Coast in February 2021, disrupted our operations and caused power and natural gas prices to spike significantly in Texas. We are currently in the early stages of litigation of a dispute regarding energy management services related to the impact of this unusual event, and other disputes may arise from such power price increases. In addition, legislative action may affect power supply and energy management charges. While it is reasonably possible that we could incur additional costs related to power supply and energy management services in Texas related to the winter storm, it is too early to estimate potential losses, if any, given significant unknowns resulting from the unusual nature of this event.

Environmental

In the normal course of business, we are involved in legal proceedings under the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA," the federal Superfund law), Resource Conservation and Recovery Act ("RCRA"), and similar state and foreign environmental laws relating to the designation of certain sites for investigation or remediation. Presently, there are 31 sites on which a final settlement has not been reached where we, along with others, have been designated a potentially responsible party by environmental authorities or are otherwise engaged in investigation or remediation, including cleanup activity at certain of our current and former manufacturing sites. We continually monitor these sites for which we have environmental exposure.

Accruals for environmental loss contingencies are recorded when it is probable that a liability has been incurred and the amount of loss can be reasonably estimated. The consolidated balance sheets at 30 September 2021 and 2020 included an accrual of \$76.7 and \$84.7, respectively, primarily as part of other noncurrent liabilities. The environmental liabilities will be paid over a period of up to 30 years. We estimate the exposure for environmental loss contingencies to range from \$76 to a reasonably possible upper exposure of \$90 as of 30 September 2021.

Actual costs to be incurred at identified sites in future periods may vary from the estimates, given inherent uncertainties in evaluating environmental exposures. Using reasonably possible alternative assumptions of the exposure level could result in an increase to the environmental accrual. Due to the inherent uncertainties related to environmental exposures, a significant increase to the reasonably possible upper exposure level could occur if a new site is designated, the scope of remediation is increased, a different remediation alternative is identified, or a significant increase in our proportionate share occurs. We do not expect that any sum we may have to pay in connection with environmental matters in excess of the amounts recorded or disclosed above would have a material adverse impact on our financial position or results of operations in any one year.

Pace

At 30 September 2021, \$39.8 of the environmental accrual was related to the Pace facility.

In 2006, we sold our Amines business, which included operations at Pace, Florida, and recognized a liability for retained environmental obligations associated with remediation activities at Pace. We are required by the Florida Department of Environmental Protection ("FDEP") and the United States Environmental Protection Agency ("USEPA") to continue our remediation efforts. We recognized a before-tax expense of \$42 in fiscal year 2006 in results from discontinued operations and recorded an environmental accrual of \$42 in continuing operations on the consolidated balance sheets.

During the second quarter of fiscal year 2020, we completed an updated cost review of the environmental remediation status at the Pace facility. The review was completed in conjunction with requirements to maintain financial assurance per the Consent Order issued by the FDEP discussed below. Based on our review, we expect ongoing activities to continue for 30 years. Additionally, we will require near-term spending to install new groundwater recovery wells and ancillary equipment, in addition to future capital to consider the extended time horizon for remediation at the site. As a result of these changes, we increased our environmental accrual for this site by \$19 in continuing operations on the consolidated balance sheets and recognized a before-tax expense of \$19 in results from discontinued operations in the second quarter of fiscal year 2020. There has been no change to the estimated exposure range related to the Pace facility in fiscal year 2021.

We have implemented many of the remedial corrective measures at the Pace facility required under 1995 Consent Orders issued by the FDEP and the USEPA. Contaminated soils have been bioremediated, and the treated soils have been secured in a lined on-site corrective action management unit. Several groundwater recovery systems have been installed to contain and remove contamination from groundwater. We completed an extensive assessment of the site to determine the efficacy of existing measures, what additional corrective measures may be needed, and whether newer remediation technologies that were not available in the 1990s might be suitable to more quickly and effectively remediate groundwater. Based on assessment results, we completed a focused feasibility study that has identified alternative approaches that may more effectively remove contaminants. We continue to review alternative remedial approaches with the FDEP and have started additional field work to support the design of an improved groundwater recovery network with the objective of targeting areas of higher contaminant concentration and avoiding areas of high groundwater iron which has proven to be a significant operability issue for the project. In the first quarter of 2015, we entered into a new Consent Order with the FDEP requiring us to continue our remediation efforts at the Pace facility, along with the completion of a cost review every 5 years. In the second quarter of fiscal year 2020, we completed an updated cost review which resulted in a change in assumptions regarding future operating costs as discussed above.

Piedmont

At 30 September 2021, \$9.5 of the environmental accrual was related to the Piedmont site.

On 30 June 2008, we sold our Elkton, Maryland, and Piedmont, South Carolina, production facilities and the related North American atmospheric emulsions and global pressure sensitive adhesives businesses. In connection with the sale, we recognized a liability for retained environmental obligations associated with remediation activities at the Piedmont site. This site is under active remediation for contamination caused by an insolvent prior owner.

We are required by the South Carolina Department of Health and Environmental Control ("SCDHEC") to address both contaminated soil and groundwater. Numerous areas of soil contamination have been addressed, and contaminated groundwater is being recovered and treated. The SCDHEC issued its final approval to the site-wide feasibility study on 13 June 2017 and the Record of Decision for the site on 27 June 2018, after which we signed a Consent Agreement Amendment memorializing our obligations to complete the cleanup of the site. Remediation has started in accordance with the design, which includes in-situ chemical oxidation treatment, as well as the installation of a soil vapor extraction system to remove volatile organic compounds from the unsaturated soils beneath the impacted areas of the plant. We estimate that source area remediation and groundwater recovery and treatment will continue through 2029. Thereafter, we expect this site to go into a state of monitored natural attenuation through 2047.

We recognized a before-tax expense of \$24 in 2008 as a component of income from discontinued operations and recorded an environmental liability of \$24 in continuing operations on the consolidated balance sheets. There have been no significant changes to the estimated exposure.

Pasadena

At 30 September 2021, \$11.2 of the environmental accrual was related to the Pasadena site.

During the fourth quarter of 2012, management committed to permanently shutting down our polyurethane intermediates ("PUI") production facility in Pasadena, Texas. In shutting down and dismantling the facility, we have undertaken certain obligations related to soil and groundwater contaminants. We have been pumping and treating groundwater to control off-site contaminant migration in compliance with regulatory requirements and under the approval of the Texas Commission on Environmental Quality ("TCEQ"). We estimate that the pump and treat system will continue to operate until 2042.

We plan to perform additional work to address other environmental obligations at the site. This additional work includes remediating, as required, impacted soils, investigating groundwater west of the former PUI facility, performing post closure care for two closed RCRA surface impoundment units, establishing engineering controls, and performing a pilot study to treat impacted soils. In 2012, we estimated the total exposure at this site to be \$13. There have been no significant changes to the estimated exposure.

Asset Retirement Obligations

Our asset retirement obligations are primarily associated with long-term on-site supply contracts under which we have built a facility on land owned by the customer and are obligated to remove the facility at the end of the contract term. The retirement of assets includes the contractually required removal of a long-lived asset from service and encompasses the sale, removal, abandonment, recycling, or disposal of the assets as required at the end of the contract term. These obligations are primarily reflected within "Other noncurrent liabilities" on the consolidated balance sheets. The timing and/or method of settlement of these obligations are conditional on a future event that may or may not be within our control.

Changes to the carrying amount of our asset retirement obligations were as follows:

Balance at 30 September 2019	\$208.2
Additional accruals	22.0
Liabilities settled	(2.8)
Accretion expense	9.5
Currency translation adjustment	4.5
Balance at 30 September 2020	\$241.4
Additional accruals	16.5
Liabilities settled	(4.1)
Accretion expense	10.5
Currency translation adjustment	5.3
Balance at 30 September 2021	\$269.6

Warranties and Guarantees

We do not expect that any sum we may have to pay in connection with warranties and guarantees will have a material adverse effect on our consolidated financial condition, liquidity, or results of operations.

Warranties

We, in the normal course of business operations, have issued product warranties related to equipment sales. Also, contracts often contain standard terms and conditions which typically include a warranty and indemnification to the buyer that the goods and services purchased do not infringe on third-party intellectual property rights. The provision for estimated future costs relating to warranties is not material to the consolidated financial statements.

Guarantees

To date, no equity contributions or payments have been made since the inception of the guarantees discussed below. The fair value of these guarantees is not material.

We are party to an equity support agreement and operations guarantee related to an air separation facility constructed in Trinidad for a venture in which we own 50%. At 30 September 2021, maximum potential payments under joint and several guarantees were \$24.0. Exposures under the guarantees decline over time and will be completely extinguished by 2024.

We guaranteed the repayment of our 25% share of an equity bridge loan that has been provided to fund equity commitments to the Jazan Gas Project Company joint venture with ACWA Holding in Saudi Arabia. ACWA also guarantees their share of the loan. As of 30 September 2021, our maximum exposure under the guarantee was approximately \$100, and payables and accrued liabilities on our consolidated balance sheets included \$94.4 for our obligation to make equity contributions.

We also have a long-term sale of equipment contract with the joint venture to engineer, procure, and construct the industrial gas facilities that will supply gases to Aramco. We provided bank guarantees to the joint venture to support our performance under the contract. As of 30 September 2021, our maximum potential payments were \$247.

Subsequent Event

As part of the Jazan Integrated Gasification and Power Company transaction discussed in Note 24, *Subsequent Events*, Jazan Gas Project Company sold its air separation units to Aramco in October 2021 and repaid its outstanding debt, including the equity bridge loan. Our bank guarantees that support performance under the sale of equipment contract remain in place.

Unconditional Purchase Obligations

We are obligated to make future payments under unconditional purchase obligations as summarized below:

2022	\$1,656
2023	540
2024	543
2025	563
2026	545
Thereafter	6,135
Total	\$9,982

Approximately \$8.3 billion of our unconditional purchase obligations relate to helium and rare gases. The majority of these obligations occur after fiscal year 2026. Helium purchases include crude feedstock supply to helium refining plants in North America as well as refined helium purchases from sources around the world. As a rare byproduct of natural gas production in the energy sector, these helium sourcing agreements are medium- to long-term and contain take-if-tendered provisions. The refined helium is distributed globally and sold as a merchant gas, primarily under medium-term requirements contracts. While contract terms in our helium sourcing contracts are generally longer than our customer sales contracts, helium is a rare gas used in applications with few or no substitutions because of its unique physical and chemical properties.

We estimate our maximum obligation for future purchases of plant and equipment to be approximately \$1.0 billion based on open purchase orders as of 30 September 2021. Although open purchase orders are considered enforceable and legally binding, the terms generally allow us the option to reschedule, cancel, or otherwise modify based on our business needs. We have disclosed this obligation in fiscal year 2022; however, timing of actual satisfaction of the obligation may vary.

Our unconditional purchase obligations also include commitments for power and natural gas supply as well as feedstock supply for numerous HyCO (hydrogen, carbon monoxide, and syngas) facilities. Our long-term sales contracts to customers are generally matched to the term of these obligations and provide recovery of price increases. As a result, we do not believe these purchase obligations would have a material effect on our financial condition or results of operations.

17. CAPITAL STOCK

Common Stock

Authorized common stock consists of 300 million shares with a par value of \$1 per share. As of 30 September 2021, 249 million shares were issued, with 221 million outstanding.

On 15 September 2011, the Board of Directors authorized the repurchase of up to \$1.0 billion of our outstanding common stock. We repurchase shares pursuant to Rules 10b5-1 and 10b-18 under the Securities Exchange Act of 1934, as amended, through repurchase agreements established with several brokers. We did not purchase any of our outstanding shares during fiscal year 2021. At 30 September 2021, \$485.3 in share repurchase authorization remains.

A summary of the changes in common shares in fiscal year 2021 is presented below:

Fiscal Year Ended 30 September	2021	2020	2019
Number of common shares outstanding, beginning of year	221,017,459	220,415,262	219,515,245
Issuance of treasury shares for stock option and award plans	379,296	602,197	900,017
Number of common shares outstanding, end of year	221,396,755	221,017,459	220,415,262

Preferred Stock

Authorized preferred stock consisted of 25 million shares with a par value of \$1 per share, of which 2.5 million were designated as Series A Junior Participating Preferred Stock. There were no preferred shares issued or outstanding as of 30 September 2021 and 2020.

18. SHARE-BASED COMPENSATION

Our outstanding share-based compensation programs include deferred stock units and stock options. During the fiscal year ended 30 September 2021, we granted market-based and time-based deferred stock units. We have not issued stock option awards since fiscal year 2015. The terms of our share-based awards are fixed at the grant date. We issue shares from treasury stock upon payout of deferred stock units and exercise of stock options.

At the annual shareholders meeting held on 28 January 2021, the shareholders approved a new Long-Term Incentive Plan ("LTIP"), which has an authorized pool of 1,500,000 shares available for future grant, plus additional shares underlying awards outstanding on the date the LTIP was adopted but that are not issued. As of 30 September 2021, there were 1,566,433 shares available for future grant under our LTIP.

Share-based compensation cost recognized on the consolidated income statements is summarized below:

	2021	2020	2019
Before-tax share-based compensation cost	\$44.5	\$55.8	\$41.2
Income tax benefit	(11.0)	(13.0)	(9.7)
After-tax share-based compensation cost	\$33.5	\$42.8	\$31.5

Before-tax share-based compensation cost relates to deferred stock units and is primarily included in "Selling and administrative" on our consolidated income statements. The amount of share-based compensation cost capitalized in fiscal years 2021, 2020, and 2019 was not material.

Deferred Stock Units

We have granted deferred stock units to executives, selected employees, and outside directors. These deferred stock units entitle the recipient to one share of common stock upon vesting, which is conditioned, for employee recipients, on continued employment during the deferral period and may be conditioned on achieving certain performance targets. We grant deferred stock unit awards with a two- to five-year deferral period that is subject to payout upon death, disability, or retirement. Deferred stock units issued to outside directors are paid after service on the Board of Directors ends at the time elected by the director (not to exceed 10 years after service ends). We generally expense the grant-date fair value of these awards on a straight-line basis over the vesting period; however, expense recognition is accelerated for retirement eligible individuals who meet the requirements for vesting upon retirement. We have elected to account for forfeitures as they occur, rather than to estimate them. Forfeitures have not been significant historically.

Market-based deferred stock units vest as long as the employee continues to be employed by the Company and upon the achievement of the performance target. The performance target, which is approved by the Compensation Committee, is our share price appreciation and dividends paid, or "total shareholder return," in relation to a defined peer group over a three-year performance period beginning 1 October of the fiscal year of grant. We granted 77,251, 80,215, and 114,929 market-based deferred stock units in fiscal years 2021, 2020, and 2019, respectively.

The fair value of market-based deferred stock units was estimated using a Monte Carlo simulation model as these equity awards are tied to a market condition. The model utilizes multiple input variables that determine the probability of satisfying the market condition stipulated in the grant and calculates the fair value of the awards. We generally expense the grant-date fair value of these awards on a straight-line basis over the vesting period. The estimated grant-date fair value of market-based deferred stock units was \$235.48, \$275.19, and \$229.61 per unit in fiscal years 2021, 2020, and 2019, respectively. The calculation of the fair value of these market-based deferred stock units used the following assumptions:

	2021	2020	2019
Expected volatility	29.9 %	17.8 %	17.5 %
Risk-free interest rate	0.2 %	1.6 %	2.8 %
Expected dividend yield	2.1 %	2.4 %	2.6 %

In addition, we granted 110,555 time-based deferred stock units at a weighted average grant-date fair value of \$282.48. In fiscal years 2020 and 2019, we granted 123,448 and 169,666 time-based deferred stock units at a weighted average grant-date fair value of \$230.92 and \$168.68, respectively.

A summary of deferred stock unit activity in fiscal year 2021 is presented below:

	Shares (000)	Weighted Average Grant-Date Fair Value
Deferred stock units outstanding at 30 September 2020	926	\$181.14
Granted	188	261.95
Paid out	(330)	185.33
Forfeited	(17)	241.55
Adjusted	87	161.64
Deferred stock units outstanding at 30 September 2021	854	\$194.12

Cash payments made for deferred stock units totaled \$5.2, \$4.8, and \$1.9 in fiscal years 2021, 2020, and 2019, respectively. As of 30 September 2021, there was \$47.0 of unrecognized compensation cost related to deferred stock units. This cost is expected to be recognized over a weighted average period of 1.5 years. The total fair value of deferred stock units paid out during fiscal years 2021, 2020, and 2019, including shares vested in prior periods, was \$88.0, \$65.4, and \$19.2, respectively.

Stock Options

We have granted awards of options to purchase common stock to executives and selected employees. The exercise price of stock options equals the market price of our stock on the date of the grant. Options generally vest incrementally over three years and remain exercisable for ten years from the date of grant. As of 30 September 2021, there was no unrecognized compensation cost as all stock option awards were fully vested.

A summary of stock option activity in fiscal year 2021 is presented below:

	Shares (000)	Weighted Average Exercise Price
Stock options outstanding and exercisable at 30 September 2020	941	\$96.95
Exercised	(140)	80.63
Stock options outstanding and exercisable at 30 September 2021	801	\$99.79

The weighted average remaining contractual term of stock options outstanding and exercisable at 30 September 2021 was 1.9 years. The aggregate intrinsic value of these stock options was \$125, which represents the amount by which our closing stock price of \$256.11 as of 30 September 2021 exceeds the exercise price multiplied by the number of in-the-money options outstanding or exercisable. The intrinsic value of stock options exercised during fiscal years 2021, 2020, and 2019 was \$29.0, \$65.7, and \$87.2, respectively.

Compensation cost is generally recognized over the stated vesting period consistent with the terms of the arrangement, which is either on a straight-line or graded-vesting basis. Expense recognition is accelerated for retirement-eligible individuals who would meet the requirements for vesting of awards upon their retirement.

Cash received from option exercises during fiscal year 2021 was \$10.6. The total tax benefit realized from stock option exercises in fiscal year 2021 was \$6.8, of which \$6.5 was the excess tax benefit.

19. ACCUMULATED OTHER COMPREHENSIVE LOSS

The table below summarizes changes in accumulated other comprehensive loss ("AOCL"), net of tax, attributable to Air Products:

	Derivatives qualifying as hedges	Foreign currency translation adjustments	Pension and postretirement benefits	Total
Balance at 30 September 2018	(\$37.6)	(\$1,009.8)	(\$694.5)	(\$1,741.9)
Other comprehensive loss before reclassifications	(44.1)	(356.2)	(326.2)	(726.5)
Amounts reclassified from AOCL	12.3	(2.6)	63.2	72.9
Net current period other comprehensive loss	(\$31.8)	(\$358.8)	(\$263.0)	(\$653.6)
Amount attributable to noncontrolling interests	(8.0)	(11.7)	(0.2)	(19.9)
Balance at 30 September 2019	(\$61.4)	(\$1,356.9)	(\$957.3)	(\$2,375.6)
Other comprehensive income (loss) before reclassifications	43.5	233.4	(68.2)	208.7
Amounts reclassified from AOCL	(57.7)	—	82.5	24.8
Net current period other comprehensive income (loss)	(\$14.2)	\$233.4	\$14.3	\$233.5
Amount attributable to noncontrolling interest	(21.1)	19.3	(0.2)	(2.0)
Balance at 30 September 2020	(\$54.5)	(\$1,142.8)	(\$942.8)	(\$2,140.1)
Other comprehensive income before reclassifications	3.3	267.3	274.3	544.9
Amounts reclassified from AOCL	43.5	—	74.6	118.1
Net current period other comprehensive income	\$46.8	\$267.3	\$348.9	\$663.0
Amount attributable to noncontrolling interest	20.6	18.3	(0.1)	38.8
Balance at 30 September 2021	(\$28.3)	(\$893.8)	(\$593.8)	(\$1,515.9)

The table below summarizes the reclassifications out of AOCL and the affected line item on the consolidated income statements:

Fiscal Year Ended 30 September	2021	2020	2019
(Gain) Loss on Cash Flow Hedges, net of tax			
Sales	(\$0.6)	(\$0.2)	\$0.4
Cost of sales	(0.3)	(0.8)	0.2
Other income (expense), net	—	—	(3.0)
Interest expense	3.5	2.8	14.7
Other non-operating income (expense), net ^(A)	40.9	(59.5)	—
Total (Gain) Loss on Cash Flow Hedges, net of tax	\$43.5	(\$57.7)	\$12.3
Currency Translation Adjustment^(B)	\$—	\$—	(\$2.6)
Pension and Postretirement Benefits, net of tax^(C)	\$74.6	\$82.5	\$63.2

^(A) The fiscal years 2021 and 2020 impacts include amortization of the excluded component and the effective portion of the related hedges.

^(B) The fiscal year 2019 impact relates to a net gain on the exchange of two equity affiliates with a joint venture partner. Refer to Note 3, *Acquisitions*, for additional information.

^(C) The components of net periodic benefit cost reclassified out of AOCL include items such as prior service cost amortization, actuarial loss amortization, and settlements and are included in "Other non-operating income (expense), net" on the consolidated income statements. Refer to Note 15, *Retirement Benefits*, for additional information.

20. EARNINGS PER SHARE

The table below details the computation of basic and diluted earnings per share ("EPS"):

Fiscal Year Ended 30 September	2021	2020	2019
Numerator			
Net income from continuing operations	\$2,028.8	\$1,901.0	\$1,760.0
Net income (loss) from discontinued operations	70.3	(14.3)	—
Net Income Attributable to Air Products	\$2,099.1	\$1,886.7	\$1,760.0
Denominator (in millions)			
Weighted average common shares — Basic	221.6	221.2	220.3
Effect of dilutive securities			
Employee stock option and other award plans	0.9	1.1	1.3
Weighted average common shares — Diluted	222.5	222.3	221.6
Per Share Data*			
Basic EPS from continuing operations	\$9.16	\$8.59	\$7.99
Basic EPS from discontinued operations	0.32	(0.06)	—
Basic EPS Attributable to Air Products	\$9.47	\$8.53	\$7.99
Diluted EPS from continuing operations	\$9.12	\$8.55	\$7.94
Diluted EPS from discontinued operations	0.32	(0.06)	—
Diluted EPS Attributable to Air Products	\$9.43	\$8.49	\$7.94

*EPS is calculated independently for each component and may not sum to total EPS due to rounding.

Diluted EPS attributable to Air Products reflects the potential dilution that could occur if stock options or other share-based awards were exercised or converted into common stock. The dilutive effect is computed using the treasury stock method, which assumes all share-based awards are exercised, and the hypothetical proceeds from exercise are used by the Company to purchase common stock at the average market price during the period. To the extent they would have been dilutive, the incremental shares, or the difference between shares assumed to be issued versus purchased, are included in the denominator of the diluted EPS calculation. There were no antidilutive outstanding share-based awards in fiscal years 2021, 2020 and 2019.

21. INCOME TAXES

The table below summarizes income from U.S. and foreign operations before taxes:

	2021	2020	2019
United States income	\$924.6	\$943.7	\$723.3
Foreign income	1,288.7	1,215.3	1,350.8
Equity affiliates' income	294.1	264.8	215.4
Income from continuing operations before taxes	\$2,507.4	\$2,423.8	\$2,289.5

The table below details the components of our income tax provision:

	2021	2020	2019
Current Tax Provision			
Federal	\$85.6	\$26.9	\$163.7
State	28.4	23.8	23.3
Foreign	254.8	262.7	235.5
Total current tax provision	368.8	313.4	422.5
Deferred Tax Provision			
Federal	54.7	108.8	9.7
State	(0.1)	(3.6)	2.4
Foreign	39.4	59.8	45.5
Total deferred tax provision	94.0	165.0	57.6
Total income tax provision	\$462.8	\$478.4	\$480.1

Cash Paid for Taxes (Net of Cash Refunds)

Income tax payments, net of refunds, were \$383.8, \$379.9, and \$324.3 in fiscal years 2021, 2020, and 2019, respectively. Fiscal year 2021 reflects an income tax refund of \$6.7 that is related to cash provided by discontinued operations.

India Finance Act 2020

On 27 March 2020, the Indian government passed Finance Act 2020 (the "India Finance Act"), which amended rules regarding the taxation of dividends declared and distributed by Indian companies. Under the India Finance Act, future dividends declared or distributed by an Indian company are no longer subject to dividend distribution tax. Instead, any non-resident recipient is subject to a withholding tax. Our income tax provision for the fiscal year ended 30 September 2020 reflected an expense of \$20.3 for estimated withholding taxes that we may incur on future dividends related to INOX Air Products Private Limited ("INOX"), an equity affiliate investment in our Industrial Gases – Asia segment. Additionally, we recorded a benefit of \$33.8 within "Equity affiliates' income" for our share of accumulated dividend distribution taxes released with respect to INOX.

U.S. Tax Cuts and Jobs Act

On 22 December 2017, the United States enacted the U.S. Tax Cuts and Jobs Act (the "Tax Act" or "Tax Reform"), which significantly changed existing U.S. tax laws, including a reduction in the federal corporate income tax rate to 21%, a deemed repatriation tax on unremitted foreign earnings, as well as other changes. Our consolidated income statements reflect a discrete net income tax expense of \$43.8 in fiscal year 2019 related to impacts of the Tax Act. The net expense included the reversal of a non-recurring \$56.2 benefit initially recorded in fiscal year 2018 related to the U.S. taxation of deemed foreign dividends, which was eliminated by regulations issued in fiscal year 2019. The reversal in 2019 was partially offset by a benefit of \$12.4 to reduce the total expected costs of the deemed repatriation tax.

As of 30 September 2021, the remaining liability for the deemed repatriation tax is \$177.7, \$157.1 of which is presented within noncurrent liabilities on our consolidated balance sheets. We are paying this obligation in installments over five remaining years.

Effective Tax Rate

The effective tax rate equals the income tax provision divided by income from continuing operations before taxes. A reconciliation of the differences between the United States federal statutory tax rate and the effective tax rate is provided below:

(Percent of income before taxes)	2021	2020	2019
U.S. federal statutory tax rate	21.0 %	21.0 %	21.0 %
State taxes, net of federal benefit	0.9	0.6	1.0
Income from equity affiliates	(2.5)	(2.3)	(2.0)
Foreign tax differentials	0.5	0.1	1.0
Tax on foreign repatriated earnings	0.7	0.9	0.1
Share-based compensation	(0.7)	(0.8)	(0.6)
Tax reform repatriation	—	—	1.9
Other	(1.4)	0.2	(1.4)
Effective Tax Rate	18.5 %	19.7 %	21.0 %

Foreign tax differentials represent the differences between foreign earnings subject to foreign tax rates that are different than the U.S. federal statutory rate and include tax holidays and incentives. Our income tax holidays relate to operations in jurisdictions that provide reduced income tax rates for certain qualifying activities and are conditional upon us meeting certain operating thresholds. The impact of these tax holidays decreased income tax expense by \$26.9 (\$0.12 per share) in fiscal year 2020, primarily related to a preferential tax rate in China that is effective until 31 December 2030. This includes the impact of remeasurement of the deferred tax assets and liabilities in 2020 due to an extension of the holiday period in China. The impact of tax holidays in fiscal years 2021 and 2019 was not material.

Tax on foreign repatriated earnings includes benefits and costs related to U.S. and foreign taxation on the current and future repatriation of foreign earnings and a U.S. benefit for related foreign tax credits. The effective tax rate in 2020 reflects impacts from the India Finance Act 2020 discussed above. In addition, the Tax Act included new provisions related to the taxation of foreign operations, known as Global Intangible Low Tax Income ("GILTI"). We have elected as an accounting policy to account for GILTI as a period cost when incurred.

Share-based compensation reflects the impact from recognition of \$17.0, \$20.0, and \$14.6 of excess tax benefits in our provision for income taxes during fiscal years 2021, 2020, and 2019, respectively.

In fiscal year 2021, other includes net tax benefits of \$21.5, including interest, resulting from the release of U.S. unrecognized tax benefits upon expiration of the statute of limitations on uncertain tax positions taken in prior years.

Deferred Tax Assets and Liabilities

The significant components of deferred tax assets and liabilities are as follows:

30 September	2021	2020
Gross Deferred Tax Assets		
Retirement benefits and compensation accruals	\$69.4	\$209.0
Tax loss carryforwards	120.9	112.6
Tax credits and other tax carryforwards	27.3	40.3
Reserves and accruals	74.5	67.0
Currency losses	30.4	30.4
Other	44.0	64.6
Valuation allowance	(97.6)	(95.0)
Deferred Tax Assets	268.9	428.9
Gross Deferred Tax Liabilities		
Plant and equipment	1,171.8	1,110.9
Unremitted earnings of foreign entities	69.1	58.7
Partnership and other investments	15.3	19.3
Intangible assets	86.2	83.6
Other	7.2	3.9
Deferred Tax Liabilities	1,349.6	1,276.4
Net Deferred Income Tax Liability	\$1,080.7	\$847.5

Deferred tax assets and liabilities are included within the consolidated balance sheets as follows:

	2021	2020
Deferred Tax Assets		
Other noncurrent assets	\$100.2	\$115.1
Deferred Tax Liabilities		
Deferred income taxes	1,180.9	962.6
Net Deferred Income Tax Liability	\$1,080.7	\$847.5

Deferred tax liabilities related to plant and equipment increased due to the impact of accelerated tax depreciation deductions in excess of book depreciation primarily in the United States. Deferred tax assets related to retirement benefits and compensation accruals are impacted by changes in plan assets and benefit obligations that have been recognized in other comprehensive income. This balance decreased primarily due to higher than expected asset returns and higher discount rates. Deferred tax assets related to tax credits and other tax carryforwards decreased primarily due to the utilization of tax credits against our income tax liabilities.

As of 30 September 2021, we had the following deferred tax assets for certain tax credits:

Jurisdiction	Gross Tax Asset	Expiration Period
U.S. State	\$2.2	2022 - 2035
U.S. Federal	2.1	2027 - 2031
Foreign	27.5	2022 - 2041; Indefinite

Of the \$27.5 foreign tax credits, \$14.2 have indefinite carryforward periods.

As of 30 September 2021, we had the following loss carryforwards:

Jurisdiction	Gross Loss Carryforward	Expiration Period
U.S. State Net Operating Loss	\$318.8	2022 - 2040
U.S. Federal Capital Loss	26.5	2025
Foreign Net Operating Loss	258.8	2022 - 2036; Indefinite
Foreign Capital Loss	221.6	Indefinite

Of the \$258.8 of foreign net operating loss carryforwards, \$111.5 have indefinite carryforward periods.

The valuation allowance was \$97.6 and \$95.0 as of 30 September 2021 and 2020, respectively. As of 30 September 2021, the balance primarily related to \$35.1 of foreign credits and loss carryforwards as well as \$55.4 related to foreign capital losses that were generated from the loss recorded on the exit from the Energy-from-Waste project in 2016. If events warrant the reversal of the valuation allowance, it would result in a reduction of tax expense. We believe it is more likely than not that future earnings and reversal of deferred tax liabilities will be sufficient to utilize our deferred tax assets, net of existing valuation allowance, as of 30 September 2021.

We record income taxes on the undistributed earnings of our foreign subsidiaries and corporate joint ventures unless those earnings are indefinitely reinvested. Such earnings may be subject to foreign withholding and other taxes. The cumulative undistributed earnings that are considered to be indefinitely reinvested in foreign subsidiaries and corporate joint ventures are included in retained earnings on the consolidated balance sheets and amounted to \$5.9 billion as of 30 September 2021. An estimated \$540.4 in additional foreign withholding and other income taxes would be due if these earnings were remitted as dividends.

Unrecognized Tax Benefits

A reconciliation of the beginning and ending amount of the unrecognized tax benefits, which excludes interest and penalties, is as follows:

	2021	2020	2019
Unrecognized tax benefits balance at beginning of year	\$237.0	\$231.7	\$233.6
Additions for tax positions of the current year	14.5	7.6	7.8
Additions for tax positions of prior years	3.5	17.7	14.2
Reductions for tax positions of prior years	(8.2)	(4.1)	(14.7)
Settlements	(3.1)	(1.2)	(1.5)
Statute of limitations expiration	(104.6)	(14.0)	(3.9)
Foreign currency translation	1.2	(0.7)	(3.8)
Unrecognized tax benefits balance at end of year	\$140.3	\$237.0	\$231.7

Of our unrecognized tax benefits as of 30 September 2021, \$73.7 would impact the effective tax rate from continuing operations if recognized.

In fiscal year 2021, reserves for unrecognized tax benefits decreased \$104.6 due to statute of limitation expirations. We released reserves of \$65.6 related to the sale of our former Performance Materials Division ("PMD"), \$8.2 associated with our former Energy-from-Waste business ("EfW"), and \$27.5 for other reserves, including those associated with a tax election benefit related to a non-U.S. subsidiary in 2017. Upon release of the reserves related to PMD and EfW, we recorded income tax benefits of \$51.8 and \$8.2, respectively, as a component of discontinued operations. The PMD reserve was net of related deferred tax assets of \$13.8. The release of other reserves of \$27.5 was net of related deferred tax assets of \$8.4 and resulted in an income tax benefit, including interest, of \$21.5.

Interest and penalties related to unrecognized tax benefits are recorded as a component of income tax expense and totaled (\$0.2), \$6.1, and \$12.0 in fiscal years 2021, 2020, and 2019, respectively. Our 2021 expense reflects a benefit from the reversal of accrued interest on reserves released during the period. Our accrued balance for interest and penalties was \$24.9 and \$25.2 as of 30 September 2021 and 2020, respectively.

Income Tax Examinations

We are currently under examination in a number of tax jurisdictions. It is reasonably possible that a change in our unrecognized tax benefits may occur in fiscal year 2022 if any of these examinations are resolved during the next twelve months. However, quantification of an estimated range cannot be made as of the date of this report.

We generally remain subject to examination in the following major tax jurisdictions for the years indicated below:

Major Tax Jurisdiction	Open Tax Years
North America	
United States – Federal	2018 - 2021
United States – State	2012 - 2021
Canada	2015 - 2021
Europe	
France	2018 - 2021
Germany	2017 - 2021
Netherlands	2016 - 2021
Spain	2015 - 2021
United Kingdom	2018 - 2021
Asia	
China	2011 - 2021
South Korea	2010 - 2021
Taiwan	2016 - 2021
Latin America	
Chile	2018 - 2021

22. SUPPLEMENTAL INFORMATION

Other Receivables and Current Assets

30 September	2021	2020
Contract assets	\$119.4	\$55.9
Contract fulfillment costs	125.5	109.9
Derivative instruments	59.8	97.5
Current lease receivables	84.4	86.7
Other	161.8	132.9
Other receivables and current assets	\$550.9	\$482.9

Other Noncurrent Assets

30 September	2021	2020
Operating lease right-of-use assets	\$566.2	\$376.8
Pension benefits	219.2	26.5
Long-term deposits on plant and equipment	200.0	100.0
Deferred tax assets	100.2	115.1
Prepaid tax	75.0	19.3
Investments other than equity method	66.9	17.0
Derivative instruments	23.6	45.8
Other	255.4	242.6
Other noncurrent assets	\$1,506.5	\$943.1

Payables and Accrued Liabilities

30 September	2021	2020
Trade creditors	\$736.8	\$546.2
Contract liabilities	366.8	313.8
Dividends payable	332.1	296.2
Accrued payroll and employee benefits	221.2	196.8
Obligation for future contribution to an equity affiliate	150.0	94.4
Current lease obligations	78.6	70.7
Derivative instruments	68.8	50.9
Pension and postretirement benefits	25.6	17.9
Other	238.4	246.3
Payables and accrued liabilities	\$2,218.3	\$1,833.2

Other Noncurrent Liabilities

30 September	2021	2020
Operating lease liabilities	\$503.4	\$335.8
Asset retirement obligations	258.0	236.2
Pension benefits	255.3	614.2
Postretirement benefits	22.1	31.4
Long-term accrued income taxes related to U.S. tax reform	157.1	190.9
Contingencies related to uncertain tax positions	111.8	138.6
Environmental liabilities	68.5	73.6
Contract liabilities	58.4	57.9
Derivative instruments	52.7	34.7
Other	153.6	202.7
Other noncurrent liabilities	\$1,640.9	\$1,916.0

Related Party Transactions

Our consolidated income statements include sales to some of our equity affiliates and joint venture partners as well as other income primarily from fees charged for use of Air Products' patents and technology. Sales to and other income from related parties totaled approximately \$225, \$335, and \$410 for the fiscal years ended 30 September 2021, 2020, and 2019, respectively. Sales agreements with related parties include terms that are consistent with those that we believe would have been negotiated at an arm's length with an independent party. As of 30 September 2021 and 2020, our consolidated balance sheets included related party trade receivables of approximately \$90 and \$95, respectively.

In addition, refer to Note 14, *Debt*, for information concerning debt owed to related parties.

Facility Closures

During the second quarter of fiscal year 2021, we recorded a charge of \$23.2 primarily for a noncash write-down of assets associated with a contract termination in the Industrial Gases – Americas segment. This charge is reflected as "Facility closure" on our consolidated income statements for the fiscal year ended 30 September 2021 and was not recorded in segment results.

In December 2018, one of our customers was subject to a government enforced shutdown due to environmental reasons. As a result, we recognized a charge of \$29.0 during the first quarter of fiscal year 2019 primarily related to the write-off of onsite assets. This charge was reflected as "Facility closure" on our consolidated income statements for the fiscal year ended 30 September 2019 and was not recorded in segment results.

Company Headquarters Relocation Income (Expense)

During the second quarter of fiscal year 2020, we sold property at our former corporate headquarters located in Trexlertown, Pennsylvania, in anticipation of relocating our U.S. headquarters. We received net proceeds of \$44.1 and recorded a gain of \$33.8, which is reflected on our consolidated income statements as "Company headquarters relocation income (expense)" for the fiscal year ended 30 September 2020. The gain was not recorded in the results of the Corporate and other segment.

Cost Reduction Actions

In fiscal year 2019, we recognized an expense of \$25.5 for severance and other benefits associated with position eliminations. These actions were taken to drive cost synergies primarily within the Industrial Gases – EMEA and the Industrial Gases – Americas segments. The charge is reflected on our consolidated income statements as "Cost reduction actions" for the fiscal year ended 30 September 2019 and was not recorded in segment results.

23. BUSINESS SEGMENT AND GEOGRAPHIC INFORMATION

Our reporting segments reflect the manner in which our chief operating decision maker reviews results and allocates resources. Except in the Industrial Gases – EMEA and Corporate and other segments, each reporting segment meets the definition of an operating segment and does not include the aggregation of multiple operating segments. Our Industrial Gases – EMEA and Corporate and other segments each include the aggregation of two operating segments that meet the aggregation criteria under GAAP.

As of 30 September 2021, our reporting segments are:

- Industrial Gases – Americas;
- Industrial Gases – EMEA (Europe, Middle East, and Africa);
- Industrial Gases – Asia;
- Industrial Gases – Global; and
- Corporate and other

On 4 November 2021, we announced the reorganization of our industrial gases segments effective 1 October 2021. Refer to Note 24, *Subsequent Events*, for additional information.

Industrial Gases – Regional

The regional Industrial Gases segments (Americas, EMEA, and Asia) include the results of our regional industrial gas businesses, which produce and sell atmospheric gases, such as oxygen, nitrogen, and argon; process gases, such as hydrogen, helium, carbon dioxide (CO₂), carbon monoxide, and syngas (a mixture of hydrogen and carbon monoxide); and specialty gases. The industrial gases business also develops, builds, and operates equipment for the production or processing of gases, such as air separation units and non-cryogenic generators.

We supply gases to diversified customers in many industries, including those in refining, chemical, gasification, metals, electronics, manufacturing, and food and beverage, through a variety of supply modes. For additional information, refer to Note 4, *Revenue Recognition*.

Electricity is the largest cost component in the production of atmospheric gases. Steam methane reformers utilize natural gas as the primary raw material, and gasifiers use liquid and solid hydrocarbons as the principal raw material for the production of hydrogen, carbon monoxide, and syngas. We mitigate energy, natural gas, and hydrocarbon price fluctuations contractually through pricing formulas, surcharges, and cost pass-through and tolling arrangements.

The regional Industrial Gases segments also include our share of the results of several joint ventures accounted for by the equity method. The largest of these joint ventures operate in China, India, Italy, Mexico, Saudi Arabia, South Africa, and Thailand.

Each of the regional Industrial Gases segments competes against global industrial gas companies as well as regional competitors. Competition is based primarily on price, reliability of supply, and the development of industrial gas applications. We derive a competitive advantage in locations where we have pipeline networks, which enable us to provide reliable and economic supply of products to larger customers.

Industrial Gases – Global

The Industrial Gases – Global segment includes activity related to the sale of cryogenic and gas processing equipment for air separation. The equipment is sold worldwide to customers in a variety of industries, including chemical and petrochemical manufacturing, oil and gas recovery and processing, and steel and primary metals processing. The Industrial Gases – Global segment also includes centralized global costs associated with management of all the Industrial Gases segments. These costs include Industrial Gases global administrative costs, product development costs, and research and development costs. We compete with a large number of firms for all the offerings included in the Industrial Gases – Global segment. Competition in the equipment business is based primarily on technological performance, service, technical know-how, price, and performance guarantees.

Corporate and other

The Corporate and other segment includes our liquefied natural gas, turbo machinery equipment and services, and distribution sale of equipment businesses as well as our corporate support functions that benefit all segments. Competition for the sale of equipment businesses is based primarily on technological performance, service, technical know-how, price, and performance guarantees.

The results of the Corporate and other segment also include income and expense that is not directly associated with the other segments, such as foreign exchange gains and losses.

In addition to assets of the global businesses included in this segment, other assets include cash and cash items, short-term investments, deferred tax assets, and financial instruments.

Customers

We do not have a homogeneous customer base or end market, and no single customer accounts for more than 10% of our consolidated revenues.

Accounting Policies

The accounting policies of the segments are the same as those described in Note 1, *Major Accounting Policies*. We evaluate the performance of segments based upon reported segment operating income.

Business Segment Information

	Industrial Gases—Americas	Industrial Gases—EMEA	Industrial Gases—Asia	Industrial Gases—Global	Corporate and other	Total
2021						
Sales	\$4,167.6	\$2,444.9	\$2,920.8	\$511.0	\$278.7	\$10,323.0 ^(A)
Operating income (loss)	1,065.5	557.4	838.3	(60.6)	(132.8)	2,267.8 ^(B)
Depreciation and amortization	611.9	229.8	444.4	10.9	24.3	1,321.3
Equity affiliates' income	112.5	93.7	81.4	6.5	—	294.1 ^(B)
Expenditures for long-lived assets	909.6	371.3	792.3	112.6	278.4	2,464.2
Investments in net assets of and advances to equity affiliates	383.8	587.4	608.1	70.0	—	1,649.3
Total assets	7,092.5	4,353.2	7,627.1	648.4	7,138.0	26,859.2
2020						
Sales	\$3,630.7	\$1,926.3	\$2,716.5	\$364.9	\$217.9	\$8,856.3 ^(A)
Operating income (loss)	1,012.4	473.3	870.3	(40.0)	(112.2)	2,203.8 ^(B)
Depreciation and amortization	559.5	195.9	399.4	9.6	20.6	1,185.0
Equity affiliates' income	84.3	74.8	61.0	10.9	—	231.0 ^(B)
Expenditures for long-lived assets	1,264.7	327.6	690.3	35.3	191.1	2,509.0
Investments in net assets of and advances to equity affiliates	310.9	535.2	539.7	46.4	—	1,432.2
Total assets	6,610.1	3,917.0	6,842.9	397.8	7,400.7	25,168.5
2019						
Sales	\$3,873.5	\$2,002.5	\$2,663.6	\$261.0	\$118.3	\$8,918.9 ^(A)
Operating income (loss)	997.7	472.4	864.2	(11.7)	(152.8)	2,169.8 ^(B)
Depreciation and amortization	505.2	189.5	361.5	8.6	18.0	1,082.8
Equity affiliates' income	84.8	69.0	58.4	3.2	—	215.4 ^(B)
Expenditures for long-lived assets	545.8	216.3	1,105.5	33.8	88.3	1,989.7

^(A) The sales information noted above relates to external customers only. All intersegment sales are eliminated in consolidation. Intersegment sales are generally transacted at market pricing. We generally do not have intersegment sales from our regional industrial gases businesses. Equipment manufactured for our regional industrial gases segments are generally transferred at cost and are not reflected as an intersegment sale.

^(B) Refer to the *Reconciliations to Consolidated Results* section below.

Reconciliations to Consolidated Results
Operating Income

The table below reconciles total operating income disclosed in the table above to consolidated operating income as reflected on our consolidated income statements:

Fiscal Year Ended 30 September	2021	2020	2019
Total	\$2,267.8	\$2,203.8	\$2,169.8
Facility closure	(23.2)	—	(29.0)
Cost reduction actions	—	—	(25.5)
Gain on exchange with joint venture partner	36.8	—	29.1
Company headquarters relocation income (expense)	—	33.8	—
Consolidated Operating Income	\$2,281.4	\$2,237.6	\$2,144.4

Equity Affiliates' Income

The table below reconciles total equity affiliates' income disclosed in the table above to consolidated equity affiliates' income as reflected on our consolidated income statements:

Fiscal Year Ended 30 September	2021	2020	2019
Total	\$294.1	\$231.0	\$215.4
India Finance Act 2020	—	33.8	—
Consolidated Equity Affiliates' Income	\$294.1	\$264.8	\$215.4

Geographic Information

Sales to External Customers

Fiscal Year Ended 30 September	2021	2020	2019
United States	\$3,895.8	\$3,359.6	\$3,351.8
China	1,828.0	1,719.7	1,730.2
Other foreign operations	4,599.2	3,777.0	3,836.9
Total	\$10,323.0	\$8,856.3	\$8,918.9

Long-Lived Assets^(A)

30 September	2021	2020	2019
United States	\$5,187.8	\$4,633.9	\$3,721.3
China	4,137.7	3,719.4	3,302.6
Other foreign operations	3,929.1	3,611.4	3,313.7
Total	\$13,254.6	\$11,964.7	\$10,337.6

^(A) Long-lived assets represents plant and equipment, net.

Geographic information is based on country of origin.

24. SUBSEQUENT EVENTS

Equity Affiliate Investment in Jazan Integrated Gasification and Power Company ("JIGPC")

On 27 October 2021, we made an initial investment of \$1.6 billion in Jazan Integrated Gasification and Power Company ("JIGPC"). JIGPC is a joint venture with Saudi Aramco Power Company (a subsidiary of Aramco), ACWA Power, and Air Products Qudra in the Jazan Economic City, Saudi Arabia. Our investment, which was made primarily in the form of shareholder loans, represents a 55% interest in the joint venture, of which 4% is attributable to the non-controlling partner of Air Products Qudra. Our \$1.6 billion investment includes approximately \$130 received from the non-controlling partner in September 2021. This cash receipt is reflected within "Investments by noncontrolling interests" on our consolidated statements of equity and cash flows for the fiscal year ended 30 September 2021.

We expect to make an additional investment in JIGPC of approximately \$1 billion in 2023.

We determined JIGPC is a variable interest entity for which we are not the primary beneficiary. Therefore, we will account for our investment in JIGPC under the equity method within the Industrial Gases – Middle East segment, a new reporting segment in fiscal year 2022 as discussed below.

JIGPC Joint Venture

On 27 September 2021, JIGPC signed definitive agreements for the acquisition of \$12 billion of assets from Aramco and related project financing for the purchase. JIGPC will complete the acquisition of the project assets, which include power blocks, gasifiers, air separation units, syngas cleanup assets, and utilities, in two phases. JIGPC will commission, operate, and maintain the project assets to supply electricity, steam, hydrogen and utilities to Aramco's refinery and terminal complex under a 25-year agreement.

The first phase was completed on 27 October 2021 and included \$7 billion of the assets. The second phase is expected to be funded and completed in 2023. JIGPC will account for the asset transfer as a financing, recording a financing receivable upon acquisition and recognizing financing income over the supply term.

Jazan Gas Project Company

Jazan Gas Project Company (“JGPC”), a joint venture between Air Products and ACWA Holding, entered into a 20-year oxygen and nitrogen supply agreement in 2015 to supply Aramco’s oil refinery and power plant in Jazan, Saudi Arabia. Air Products owns 26% of the joint venture. In October 2021, the supply agreement between JGPC and Aramco was terminated, and JGPC sold its air separation units to Aramco. We initially sold these assets to JGPC and deferred revenue and profit equal to our ownership percentage in the joint venture. With the termination of the supply agreement and sale of the air separation units complete, we will recognize the remaining deferred profit in equity affiliates’ income in the first quarter of fiscal year 2022.

Segment Reorganization

On 4 November 2021, we announced the reorganization of our industrial gases segments. Beginning in the first quarter of fiscal year 2022, we will report our results under the following five reporting segments:

- Industrial Gases – Americas;
- Industrial Gases – Asia;
- Industrial Gases – Europe;
- Industrial Gases – Middle East; and
- Corporate and other

The reorganization reflects the separation of our former Industrial Gases – EMEA segment into two separate reporting segments: Industrial Gases – Europe and Industrial Gases – Middle East. The results of an affiliate formerly reflected in the Industrial Gases – Asia segment will now be reported in the Industrial Gases – Middle East segment. Additionally, the results of our Industrial Gases – Global operating segment will be reflected in the Corporate and other segment. Except for the Corporate and other segment, each reporting segment will meet the definition of an operating segment and will not include the aggregation of multiple operating segments. Our Corporate and other segment will include the aggregation of three operating segments that meet the aggregation criteria under GAAP.

Beginning with our Quarterly Report on Form 10-Q for the first quarter of fiscal year 2022, segment results will be presented on a retrospective basis to reflect the reorganization.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

Not applicable.

Item 9A. Controls and Procedures.

Disclosure Controls and Procedures

We maintain a comprehensive set of disclosure controls and procedures (as defined in Rules 13a-15 (e) and 15d-15(e) under the Exchange Act). Under the supervision of the Chief Executive Officer and Chief Financial Officer, our management conducted an evaluation of the effectiveness of our disclosure controls and procedures as of 30 September 2021. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that, as of 30 September 2021, the disclosure controls and procedures were effective.

Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act). Management has evaluated the effectiveness of our internal control over financial reporting as of 30 September 2021 based on criteria established in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on that evaluation, management concluded that, as of 30 September 2021, our internal control over financial reporting was effective. Management's Report on Internal Control over Financial Reporting is provided under Part II, Item 8, of this Form 10-K.

There was no change in our internal control over financial reporting during the fourth quarter of fiscal year 2021 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Deloitte & Touche LLP, our independent registered public accounting firm, has audited our internal control over financial reporting as of 30 September 2021. The Report of the Independent Registered Public Accounting Firm is provided under Part II, Item 8, of this Form 10-K.

Item 9B. Other Information.

M. Scott Crocco, the Company's former Executive Vice President and Chief Financial Officer, retired from the Company effective 30 September 2021. In connection with Mr. Crocco's retirement, the Company and Mr. Crocco entered into a project bonus and release agreement (the "Agreement") on 18 November 2021. Pursuant to the Agreement, Mr. Crocco will receive a lump sum payment of \$1,775,000 in recognition of his significant contributions toward achieving the October 2021 financial closing of the Jazan gasification project. The Agreement also contains a customary release of claims arising from or relating to Mr. Crocco's service with the Company.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

The information required by this item relating to our directors and nominees is incorporated herein by reference to the section captioned "The Board of Directors" in the Proxy Statement for the Annual Meeting of Shareholders to be held on 3 February 2022. The information required by this item relating to our executive officers is set forth in Part I, Item 1 of this Form 10-K.

The information required by this item relating to our Audit and Finance Committee and our Audit and Finance Committee Financial Expert is incorporated herein by reference to the sections captioned "Board Structure—Standing Committees of the Board" in the Proxy Statement for the Annual Meeting of Shareholders to be held on 3 February 2022.

The information required by this item relating to our procedures regarding the consideration of candidates recommended by shareholders and a procedure for submission of such candidates is incorporated herein by reference to the section captioned "The Board of Directors—Selection of Directors" in the Proxy Statement for the Annual Meeting of Shareholders to be held on 3 February 2022.

The information required by this item relating to Section 16(a) Beneficial Ownership Reporting Compliance is incorporated herein by reference to the section captioned "Section 16(a) Beneficial Ownership Reporting" in the Proxy Statement for the Annual Meeting of Shareholders to be held on 3 February 2022.

We have adopted a Code of Conduct that applies to all employees, including the Chief Executive Officer, the Chief Financial Officer, and the Principal Accounting Officer. The Code of Conduct can be found at our website at www.airproducts.com/company/governance/code-of-conduct.

Item 11. Executive Compensation.

The information required by this item is incorporated herein by reference to the sections captioned "Executive Compensation" and "Compensation of Directors" in the Proxy Statement for the Annual Meeting of Shareholders to be held on 3 February 2022.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The information required by this item is incorporated herein by reference to the sections captioned "Information About Stock Ownership" and "Equity Compensation Plan Information" in the Proxy Statement for the Annual Meeting of Shareholders to be held on 3 February 2022.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The information required by this item is incorporated herein by reference to the sections captioned "The Board of Directors—Director Independence" and "Board Practices, Processes and Policies—Transactions with Related Persons" in the Proxy Statement for the Annual Meeting of Shareholders to be held on 3 February 2022.

Item 14. Principal Accountant Fees and Services.

The information required by this item is incorporated herein by reference to the section captioned "Fees of Independent Registered Public Accounting Firm" in the Proxy Statement for the Annual Meeting of Shareholders to be held on 3 February 2022.

PART IV

Item 15. Exhibits and Financial Statement Schedules.

(a) The documents below are filed as a part of this report:

(1) *Financial Statements.*

The following is a list of the Consolidated Financial Statements of Air Products and Chemicals, Inc. and its subsidiaries included in Part II, Item 8. Financial Statements and Supplementary Data:

Report of Deloitte & Touche LLP, Independent Registered Public Accounting Firm	50
Consolidated Income Statements – Fiscal Years Ended 30 September 2021, 2020, and 2019	53
Consolidated Comprehensive Income Statements – Fiscal Years Ended 30 September 2021, 2020, and 2019	54
Consolidated Balance Sheets – 30 September 2021 and 2020	55
Consolidated Statements of Cash Flows – Fiscal Years Ended 30 September 2021, 2020, and 2019	56
Consolidated Statements of Equity – Fiscal Years Ended 30 September 2021, 2020, and 2019	57

(2) *Financial Statement Schedules.*

Financial statement schedules are omitted as they are either not required or the information is otherwise included in the consolidated financial statements or notes thereto.

(3) *Exhibits.*

The exhibits filed as a part of this report as required by Item 601 of Regulation S-K are listed in the [Index to Exhibits](#) beginning on page [114](#).

Item 16. Form 10-K Summary.

None.

INDEX TO EXHIBITS

Exhibit No.	Description
(3)	Articles of Incorporation and Bylaws.
3.1	Restated Certificate of Incorporation of the Company. (Filed as Exhibit 3.2 to the Company's Annual Report on Form 10-K for the fiscal year ended 30 September 1987.)*
3.2	Amendment to the Restated Certificate of Incorporation of the Company dated 25 January 1996. (Filed as Exhibit 3.3 to the Company's Annual Report on Form 10-K for the fiscal year ended 30 September 1996.)*
3.3	Amendment to the Restated Certificate of Incorporation of the Company dated 28 January 2014. (Filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended 30 June 2014.)*
3.4	Amended and Restated Bylaws of the Company. (Filed as Exhibit 3.1 to the Company's Current Report on Form 8-K dated 26 November 2019.)*
(4)	Instruments defining the rights of security holders, including indentures. Upon request of the Securities and Exchange Commission, the Company hereby undertakes to furnish copies of the instruments with respect to its long-term debt.
4.1	Indenture, dated as of 10 January 1995, between the Company and The Bank of New York Trust, N.A. (formerly Wachovia Bank, National Association and initially First Fidelity Bank Company, National Association), as Trustee. (Filed as Exhibit 4(a) to the Company's Registration Statement on Form S-3 filed 19 January 1995, File No. 033-57357.)*
4.2	Indenture, dated as of 30 April 2020, between the Company and The Bank of New York Trust Company, N.A., as Trustee. (Filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed 30 April 2020.)*
4.3	Description of Securities.
(10)	Material Contracts.
10.1	Deferred Compensation Program for Directors, effective 7 October 2019. (Filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for quarter ended 31 December 2019.)*†
10.2	Amended and Restated Long-Term Incentive Plan of the Company effective 1 October 2014. (Filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed on 23 September 2014.)*†
10.2(a)	Form of Restricted Stock Unit Award Agreement under the Long-Term Incentive Plan of the Company, used for FY2020 awards. (Filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended 31 March 2020.)*†
10.2(b)	Form of Performance Share Award Agreement under the Long-Term Incentive Plan of the Company, used for FY2020 awards. (Filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended 31 March 2020.)*†
10.3	Air Products and Chemicals, Inc. 2021 Long-Term Incentive Plan. (Filed as Exhibit 4.5 to the Company's Registration Statement on Form S-8 (File No. 333-252722) filed on 4 February 2021.)*†
10.3(a)	Form of Restricted Stock Unit Award Agreement under the Long-Term Incentive Plan of the Company, used for FY2021 awards. (Filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended 31 December 2020.)*†
10.3(b)	Form of Performance Share Award Agreement under the Long-Term Incentive Plan of the Company, used for FY2021 awards. (Filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended 31 December 2020.)*†
10.4	Air Products and Chemicals, Inc. Retirement Savings Plan as amended and restated effective 1 November 2017 with provisions effective 1 January 2018. (Filed as Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q for the quarter ended 31 December 2017.)*†
10.4(a)	Amendment No. 1 to the Air Products and Chemicals, Inc. Retirement Savings Plan as amended and restated effective 1 November 2017 with provisions effective 1 January 2018. (Filed as Exhibit 10.6(a) to the Company's Annual Report on Form 10-K for the fiscal year ended 30 September 2018.)*†

INDEX TO EXHIBITS

Exhibit No.	Description
10.4(b)	Amendment No. 2 to the Air Products and Chemicals, Inc. Retirement Savings Plan as amended and restated effective 1 January 2019. (Filed as Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q for the quarter ended 31 December 2018.) *†
10.4(c)	Amendment No. 3 to the Air Products and Chemicals, Inc. Retirement Savings Plan as amended and restated effective 1 January 2019. (Filed as Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q for the quarter ended 31 December 2018.) *†
10.4(d)	Amendment No. 4 to the Air Products and Chemicals, Inc. Retirement Savings Plan as amended and restated effective 1 August 2019. (Filed as Exhibit 10.6D to the Company's Annual Report on Form 10-K for the fiscal year ended 30 September 2019.) *†
10.4(e)	Amendment No. 5 to the Air Products and Chemicals, Inc. Retirement Savings Plan as amended and restated effective 1 August 2019. (Filed as Exhibit 10.6E to the Company's Annual Report on Form 10-K for the fiscal year ended 30 September 2019.) *†
10.4(f)	Amendment No. 6 to the Air Products and Chemicals, Inc. Retirement Savings Plan as amended and restated effective 28 January 2021. (Filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended 31 March 2021.) *†
10.4(g)	Amendment No. 7 to the Air Products and Chemicals, Inc. Retirement Savings Plan as amended and restated effective 1 January 2020. (Filed as Exhibit 10.3 to the Company's Annual Report on Form 10-K for the fiscal year ended 31 March 2021.) *†
10.5	Supplementary Pension Plan of Air Products and Chemicals, Inc. as Amended and Restated effective 1 August 2014. (Filed as Exhibit 10.10 to the Company's Annual Report on Form 10-K for the fiscal year ended 30 September 2014.) *†
10.5(a)	Amendment No. 1 dated as of 30 September 2015 to the Supplementary Pension Plan of Air Products and Chemicals, Inc. as Amended and Restated effective 1 August 2014. (Filed as Exhibit 10.10(a) to the Company's Annual Report on Form 10-K for the fiscal year ended 30 September 2015.) *†
10.5(b)	Amendment No. 2 dated as of 30 September 2016 to the Supplementary Pension Plan of Air Products and Chemicals, Inc. as Amended and Restated effective 1 August 2014. (Filed as Exhibit 10.7(b) to the Company's Annual Report on Form 10-K for fiscal year ended 30 September 2016.) *†
10.5(c)	Amendment No. 3 dated as of 26 July 2017 to the Supplementary Pension Plan of Air Products and Chemicals, Inc. as Amended and Restated effective 1 August 2017. (Filed as Exhibit 10.7(c) to the Company's Annual Report on Form 10-K for the fiscal year ended 30 September 2017.) *†
10.6	Deferred Compensation Plan as Amended and Restated effective 1 January 2018. (Filed as Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q for the quarter ended 31 December 2017.) *†
10.7	Air Products and Chemicals, Inc. Executive Separation Program as amended effective as of 20 July 2018. (Filed as Exhibit 10.10 to the Company's Annual Report on Form 10-K for the fiscal year ended 30 September 2018.) *†
10.8	Form of Change in Control Severance Agreement for an Executive Officer. (filed as Exhibit 10.2 of the Company's Current Report on Form 8-K dated 23 September 2014.) *†
10.9	Amended and Restated Employment Agreement dated 14 November 2017, between the Company and Seifollah Ghasemi. (Filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed 14 November 2017.) *†
10.9(a)	Amendment to Employment Agreement, dated 21 May 2020, between Air Products and Chemicals, Inc. and Seifollah Ghasemi. (Filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed 21 May 2020.) *†
10.10	Senior Management Severance and Summary Plan Description effective as of 1 October 2017. (Filed as Exhibit 10.16 to the Company's Annual Report on Form 10-K for the fiscal year ended 30 September 2017.) *†

INDEX TO EXHIBITS

Exhibit No.	Description
10.11	Compensation Programs for Nonemployee Directors effective 26 November 2019. (Filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended 31 December 2019.) *†
10.12	Project Bonus and Release Agreement, dated 18 November 2021, between the Company and M. Scott Crocco. †
10.13	Revolving Credit Agreement dated as of 31 March 2021 for \$2,500,000,000. (Filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended 31 March 2021.) *
10.13(a)	Amendment to the Revolving Credit Agreement dated as of 29 September 2021.
(21)	Subsidiaries of the Registrant.
21.1	Subsidiaries of the Registrant.
(23)	Consents of Experts and Counsel.
23.1	Consent of Independent Registered Public Accounting Firm.
(24)	Power of Attorney.
24.1	Power of Attorney.
(31)	Rule 13a-14(a)/15d-14(a) Certifications.
31.1	Certification by the Principal Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification by the Principal Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
(32)	Section 1350 Certifications.
32.1	Certification by the Principal Executive Officer and Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. ††
(101)	Interactive Data Files.
101.INS	Inline XBRL Instance Document. The XBRL Instance Document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document.
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.
104	Cover Page Interactive Data File, formatted in Inline XBRL (included in Exhibit 101).

* Previously filed as indicated and incorporated herein by reference. Exhibits incorporated by reference are located in SEC File No. 001-04534 unless otherwise indicated.

† Indicated management contract or compensatory arrangement.

†† The certification attached as Exhibit 32.1 that accompanies this Annual Report on Form 10-K, is not deemed filed with the SEC and is not to be incorporated by reference into any filing of Air Products and Chemicals, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Form 10-K, irrespective of any general incorporation language contained in such filing.

Signature and Title

Date

*

18 November 2021

(Edward L. Monser)
Director

*

18 November 2021

(Matthew H. Paull)
Director

*

18 November 2021

(Wayne T. Smith)
Director

* Sean D. Major, Executive Vice President, General Counsel and Secretary, by signing his name hereto, does sign this document on behalf of the above noted individuals, pursuant to a power of attorney duly executed by such individuals, which is filed with the Securities and Exchange Commission herewith.

/s/ Sean D. Major

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

Date: 18 November 2021

AIR PRODUCTS AND CHEMICALS, INC.
DESCRIPTION OF SECURITIES REGISTERED
UNDER SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

As of November 18, 2021, Air Products and Chemicals, Inc. (the “Company”) has four classes of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”): (1) our common stock; (2) our 1.000% Euro Notes due 2025; (3) our 0.500% Euro Notes due 2028; and (4) our 0.800% Euro Notes due 2032.

Description of Common Stock

The following is a description of the general terms of the shares of our common stock. This description does not include all of the terms of our common stock and should be read together with our Restated Certificate of Incorporation, as amended (collectively, our “Certificate of Incorporation”) and our Amended and Restated Bylaws (our “Bylaws”), each of which are incorporated by reference as an exhibit to the Annual Report on Form 10-K of which this Exhibit is a part, and applicable provisions of the General Corporation Law of the State of Delaware (the “DGCL”). We encourage you to read our Certificate of Incorporation, our Bylaws and the applicable provisions of the DGCL, for additional information.

General

We are authorized to issue up to 300,000,000 shares of common stock, par value \$1.00 per share (“common stock”), and up to 25,000,000 shares of preferred stock, par value \$1.00 per share, of which 2,500,000 have been designated as Series A Junior Participating Preferred Stock. Our common stock is listed on the New York Stock Exchange under the symbol “APD.”

Voting

Each holder of common stock is entitled to one vote per share on all matters requiring a vote of the stockholders. A majority of the votes cast is required for stockholders to elect directors in uncontested elections, while in contested elections directors are elected by a plurality of the votes cast. All other matters put to a stockholder vote generally require the approval of a majority of the shares entitled to vote on the matter and present in person or represented by proxy. Stockholders do not have cumulative voting rights.

Dividends

Holders of common stock are entitled to receive dividends, in cash, securities, or property, as may from time to time be declared by our board of directors, subject to the rights of the holders of any outstanding preferred stock.

Rights Upon Liquidation

In the event of our voluntary or involuntary liquidation, dissolution, or winding up, the holders of common stock will be entitled to share equally in our assets available for distribution after payment in full of all debts and after the holders of any outstanding preferred stock have received their liquidation preferences (including accrued and unpaid dividends) in full.

Statutory Provisions

Section 203 of the DGCL prohibits a defined set of transactions between a Delaware corporation and an interested stockholder. An interested stockholder is generally defined as a person who, together with any affiliates or associates of such person, beneficially owns, directly or indirectly, 15% or more of the outstanding voting shares of a corporation. This provision may prohibit business combinations between an interested stockholder and a corporation for a period of three years after the date the interested stockholder becomes an interested stockholder. The term business combination is broadly defined to include mergers, consolidations, sales or other dispositions of assets of the corporation or of any direct or indirect majority-owned subsidiary which assets have an aggregate market value equal to 10% or more of either the aggregate market value of all the assets of the corporation determined on a consolidated basis or the aggregate market value of all the outstanding stock of the corporation, and some other transactions that would increase the interested stockholder’s proportionate share ownership in the corporation.

This prohibition is effective unless:

- the business combination or the transaction which resulted in the stockholder becoming an interested stockholder is approved by the corporation's board of directors prior to the time the interested stockholder becomes an interested stockholder;
- the interested stockholder acquired at least 85% of the voting stock of the corporation, other than stock held by directors who are also officers or by qualified employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer, in the transaction in which it becomes an interested stockholder; or
- the business combination is approved by a majority of the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock which is not owned by the interested stockholder.

Certificate of Incorporation and Bylaw Provisions

Vacancies, and newly-created directorships resulting from any increase in the size of our board, may be filled by a majority vote of all remaining directors, even if the directors then on the board do not constitute a quorum or only one director is left in office. In addition, the board of directors is authorized to issue preferred stock without stockholder approval. These provisions, together with the provisions of Section 203 of the DGCL (as discussed above), could have the effect of delaying, deferring or preventing a change in control or the removal of existing management, of deterring potential acquirers from making an offer to our stockholders and of limiting any opportunity to realize premiums over prevailing market prices for our common stock in connection therewith. This could be the case notwithstanding that a majority of our stockholders might benefit from such a change in control or offer.

In addition, our Bylaws contain a forum selection provision for the adjudication of certain disputes. Unless we consent in writing to the selection of an alternative forum, the sole and exclusive forum for (a) any derivative action or proceeding brought on our behalf; (b) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders; (c) any action asserting a claim arising pursuant to any provision of the DGCL, our Certificate of Incorporation or Bylaws; or (d) any action asserting a claim governed by the internal affairs doctrine will be the Court of Chancery of the State of Delaware, or, if the Court of Chancery of the State of Delaware does not have jurisdiction, the Superior Court of the State of Delaware, or, if the Superior Court of the State of Delaware does not have jurisdiction, the United States District Court for the District of Delaware, in each case, subject to said court having personal jurisdiction over the indispensable parties named as defendants. If any action the subject matter of which is within the scope of the foregoing is filed in a court other than a court located within the State of Delaware in the name of any stockholder, such stockholder shall be deemed to have consented to (i) the personal jurisdiction of the state and federal courts located within the State of Delaware in connection with any action brought in any such court to enforce our forum selection clause and (ii) having service of process made upon such stockholder in any such enforcement action by service upon such stockholder's counsel in such action as agent for such stockholder. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock will be deemed to have notice of and consented to the forum selection provision of our Bylaws.

As discussed above, our Certificate of Incorporation authorizes the issuance of undesignated preferred stock, in one or more classes or series. Undesignated preferred stock may enable our board of directors to render it more difficult or to discourage an attempt to obtain control of us by means of a tender offer, proxy contest, merger or otherwise, and to thereby protect the continuity of our management. The issuance of shares of preferred stock may adversely affect the rights of the holders of our common stock. For example, any preferred stock issued may rank prior to our common stock as to dividend rights, liquidation preference or both, may have full or limited voting rights and may be convertible into shares of common stock. As a result, the issuance of shares of preferred stock may discourage bids for our common stock or may otherwise adversely affect the market price of our common stock or any existing preferred stock. In some instances the preferred stock could be issued and have the effect of preventing a merger, tender offer or other takeover attempt that our board of directors opposes.

Miscellaneous

Shares of our common stock are non-assessable and not redeemable and have no sinking fund provisions or subscription, conversion or preemptive rights.

The rights, preferences and privileges of holders of our common stock are subject to the rights of the holders of shares of any series of preferred stock which we may issue.

Transfer Agent

The transfer agent for our common stock is Broadridge Corporate Issuer Solutions, Inc.

Description of Notes

The following description of our 1.000% Euro Notes due 2025 (the “2025 Notes”), our 0.500% Euro Notes due 2028 (the “2028 Notes”) and our 0.800% Euro Notes due 2032 (the “2032 Notes” and, together with the 2025 Notes and the 2028 Notes, the “Notes”) is a summary and does not purport to be complete. The description of the 2025 Notes is subject to and qualified in its entirety by reference to the Indenture, dated as of January 10, 1995, between the Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (the “1995 Indenture”), and the description of the 2028 Notes and the 2032 Notes is subject to and qualified in its entirety by reference to the Indenture, dated as of April 30, 2020, between the Company and The Bank of New York Mellon Trust Company, N.A. (the “2020 Indenture” and, together with the 1995 Indenture, the “Indentures”).

The Terms of the 2025 Notes are governed by the 1995 Indenture, as supplemented by the Officers’ Certificate, dated February 12, 2015 (the “2015 Officers’ Certificate”). The terms of the 2028 Notes and the 2032 Notes are governed by the 2020 Indenture, as supplemented by the Officer’s Certificate, dated May 5, 2020 (the “2020 Officer’s Certificate” and, together with the 2015 Officers’ Certificate, the “Certificates”). We encourage you to read the above referenced Indentures, as supplemented by the Certificates, for additional information.

General

The following table briefly summarizes certain key terms of the Notes.

	2025 Notes	2028 Notes	2032 Notes
Principal	€300,000,000	€500,000,000	€500,000,000
Interest Rate	1.000% per year	0.500% per year	0.800% per year
Issuance Date	February 12, 2015	May 5, 2020	May 5, 2020
Interest Payment Date	Annually on February 12, commencing February 12, 2016	Annually on May 5, commencing May 5, 2021	Annually on May 5, commencing May 5, 2021
Maturity Date	February 12, 2025	May 5, 2028	May 5, 2032
Trading Symbol	APD25	APD28	APD32

The Notes were issued on the dates, in the amounts and subject to the terms stated in the table above. Each series of Notes was issued in a form of one or more fully registered global securities, without coupons, in denominations of €100,000 in principal amount and integral multiples of €1,000 in excess thereof.

Each series of Notes represents our senior unsecured obligations and rank equally with our other unsecured and unsubordinated debt from time to time outstanding. The Notes will not benefit from any sinking fund.

We are permitted to issue additional Notes of each series without the consent of the holders of that series of Notes. As of November 18, 2021 no such additional Notes have been issued.

Each series of Notes is listed on The New York Stock Exchange under the bond trading symbols stated in the table above.

Interest and Principal

Each series of Notes bears interest from the date of initial issuance at the fixed rate and on the dates stated in the table above. Interest on each series of Notes is payable to the person in whose name such Note is registered at the close of business on the 15th calendar day prior to the applicable interest payment date.

Interest is computed on the basis of the actual number of days in the period for which interest is being calculated and the actual number of days from and including the last date on which interest was paid on the Notes (or the original issuance date, if no interest has been paid), to but excluding the next scheduled interest payment date. This payment convention is referred to as ACTUAL/ACTUAL (ICMA) as defined in the rulebook of the International Capital Markets Association.

If any interest payment date falls on a day that is not a business day, the interest payment will be postponed to the next day that is a business day, and no interest on such payment will accrue for the period from and after such interest payment date. If the maturity date or date fixed for redemption of any series of Notes falls on a day

that is not a business day, the payment of interest and principal shall be made on the next succeeding business day, and no interest on such payment will accrue for the period from and after the maturity date.

Optional Redemption

2025 Notes

We may redeem the 2025 Notes, in whole or in part, prior to November 12, 2024 at a redemption price equal to the greater of (i) 100% of the principal amount of the 2025 Notes being redeemed or (ii) the sum of the present values of the remaining scheduled payments of principal and interest thereon from the redemption date to the applicable maturity date (exclusive of any accrued interest) discounted to the redemption date on an annual basis (ACTUAL/ACTUAL (ICMA)) using a discount rate equal to the Comparable Government Bond Rate (as defined in the 2015 Officers' Certificate) plus 15 basis points, plus, in each case, any interest accrued but not paid to the date of redemption.

On or after November 12, 2024, the 2025 Notes will be redeemable at our option at a redemption price equal to 100% of the principal amount of the 2025 Notes being redeemed plus accrued and unpaid interest on the principal amount being redeemed to, but excluding, the redemption date.

2028 Notes

We may redeem the 2028 Notes, in whole or in part, prior to February 5, 2028 at a redemption price equal to the greater of (i) 100% of the principal amount of the 2028 Notes being redeemed or (ii) the sum of the present values of the remaining scheduled payments of principal and interest thereon that would be due if the 2028 Notes matured on February 5, 2028 (exclusive of any accrued interest) discounted to the redemption date on an annual basis (Actual/Actual (ICMA)) using a discount rate equal to the Comparable Government Bond Rate (as defined in the 2020 Officer's Certificate) plus 20 basis points, plus, in each case, any interest accrued but not paid to the date of redemption.

On or after February 5, 2028, the 2028 Notes will be redeemable at our option at a redemption price equal to 100% of the principal amount of the 2028 Notes being redeemed plus accrued and unpaid interest on the principal amount being redeemed to, but excluding, the redemption date.

2032 Notes

We may redeem the 2032 Notes, in whole or in part, prior to February 5, 2032 at a redemption price equal to the greater of (i) 100% of the principal amount of the 2032 Notes being redeemed or (ii) the sum of the present values of the remaining scheduled payments of principal and interest thereon that would be due if the 2032 Notes matured on February 5, 2032 (exclusive of any accrued interest) discounted to the redemption date on an annual basis (Actual/Actual (ICMA)) using a discount rate equal to the Comparable Government Bond Rate (as defined in the 2020 Officer's Certificate) plus 20 basis points, plus, in each case, any interest accrued but not paid to the date of redemption.

On or after February 5, 2032, the 2032 Notes will be redeemable at our option at a redemption price equal to 100% of the principal amount of the 2032 Notes being redeemed plus accrued and unpaid interest on the principal amount being redeemed to, but excluding, the redemption date.

Redemption Upon Tax Event

If, as a result of any change in, or amendment to, the laws of the United States or the official interpretation thereof that is announced or becomes effective, we become or, based upon a written opinion of independent counsel selected by us, there is a substantial probability that we will become obligated to pay certain additional amounts with respect to a series of Notes, then we may redeem, in whole, but not in part, the Notes of the affected series at a redemption price equal to 100% of their principal amount, together with accrued and unpaid interest on such Notes to, but excluding, the redemption date.

Redemption on Change of Control Triggering Event

With respect to each series of Notes, a "Change of Control Triggering Event" will be deemed to have occurred in the event of both a Change of Control and a Ratings Decline, as each term is defined in the applicable Certificate. Upon the occurrence of a Change of Control Triggering Event with respect to a series of Notes, we will

be required to make an offer (a "Change of Control Offer") to the holders of such series to repurchase all or any part of such series at a purchase price equal to 101% of the aggregate principal amount thereof, together with accrued and unpaid interest thereon to the date of repurchase.

Except as described with respect to a Change of Control Triggering Event, the Indentures do not contain any provisions that permit the holders of the Notes to require that we repurchase or redeem the Notes in the event of a takeover, recapitalization or similar transaction.

Payment of Additional Amounts

We will, subject to certain exceptions and limitations, pay additional amounts on each series of Notes as is necessary in order that the net payment of the principal of and interest on such Notes to a holder who is not a United States person, after withholding or deduction for any present or future tax, assessment or other governmental charge imposed by the United States or a taxing authority in the United States, will not be less than the amount provided in such Notes to be then due and payable.

Events of Default

An "event of default" is defined in the Indentures as being any of the following events: (i) default for 30 days in the payment of any interest on the Notes of such series; (ii) default in the payment of principal or premium, if any, due on the Notes of any series; (iii) for the 2025 Notes, default in the payment of any sinking fund installment on the securities of such series, when due or, in the case of the 2028 Notes and 2032 Notes, default for 30 days in the payment of any sinking fund installment on the securities of such series, when due; (iv) default for 90 days in the performance of any other of the covenants or agreements in the Indentures (other than those set forth exclusively in the terms of any other series of securities); or (v) certain events of bankruptcy, insolvency and reorganization.

No event of default with respect to any particular series of Notes necessarily constitutes an event of default with respect to any other series of Notes.

The trustee must give notice of a default to the holders of the series of Notes on which the default exists within 90 days unless the default is cured or waived. However, except in the case of a default in the payment of the principal of, premium on, if any, or interest on any of the securities of such series or in the making of any sinking fund payment with respect to such series, the trustee may withhold this notice if the trustee considers it in the interest of the holders of the Notes of such series to do so. The trustee may not withhold notice in the event of a payment default with regard to principal, interest or a sinking fund.

If an event of default has occurred and is continuing and (a) in the case of the 2025 Notes, the event of default is as described in clause (i), (ii) or (iii) above or (b) in the case of the 2028 Notes and the 2032 Notes, the event of default is as described in clause (i), (ii), (iii) or (iv) above, either the trustee or the holders of 25% in principal amount of the Notes of such series then outstanding may declare the principal of all such securities to be due and payable immediately.

If an event of default as described in clause (iv) or (v) above applies to the 2025 Notes, either the trustee or the holders of 25% in principal amount of all affected securities, voting as a single class, may declare the principal of all such securities to be due and payable immediately. If an event of default as described in clause (v) above applies to the 2028 Notes or 2032 Notes, then all securities issued under the 2020 Indenture shall automatically and without acceleration or other action on the part of the trustee or any holder, become immediately due and payable.

However, upon the occurrence of certain conditions specified in the applicable Indenture, past events of default may be waived by the holders of a majority of the aggregate principal amount of the affected securities, except for defaults in the payment of principal of, or any premium or interest on, such Notes or with respect to any covenant or provision which may not be amended without the approval of each holder affected.

The holders of a majority in principal amount of the Notes of each series affected, voting as a separate class, may direct the time, method and place of conducting any proceeding for any remedy available to the trustee under the respective Indenture, subject to certain limitations specified in such Indenture, provided that the holders of securities shall have offered to the trustee reasonable indemnity against costs, expenses and liabilities.

We must certify to the trustee on a yearly basis as to the absence of certain defaults.

Modification of the Indentures

Together with the trustee, and subject to the consent of the holders of (a) in the case of the 2025 Notes, at least 66 2/3% of the outstanding principal amount of the outstanding Notes of all affected series, or (b) in the case of the 2028 Notes and 2032 Notes, a majority of the outstanding principal amount of the outstanding Notes of all affected series (voting separately), we may modify the respective Indenture or any supplement to such Indenture. Without the consent of each affected Note holder, we may not: (i) extend the final maturity; (ii) reduce the principal amount or rate of interest; (iii) extend the time of payment of interest; (iv) reduce the amount payable upon redemption; (v) reduce the amount of the principal of a discounted security payable upon acceleration of the maturity of the security or in the event of bankruptcy; (vi) impair the right to institute suit to enforce payment or repayment; or (vii) change the provisions in the Indenture that relate to its modification or amendment. Notwithstanding the foregoing, the Indentures permit us, together with the trustee, to make certain specified changes to the respective Indentures without obtaining the consent of the holders of any series of Notes issued thereunder.

Discharge and Defeasance

We may discharge certain obligations to holders with respect to each series of the Notes by irrevocably depositing money or certain securities with the trustee in an amount to pay the entire indebtedness on such securities when due and by satisfying certain additional conditions set forth in the Indentures.

Trustee, Paying Agents and Security Registrar

The Bank of New York Mellon Trust Company, N.A. is the trustee under the Indentures governing the Notes. The Bank of New York Mellon, London Branch, is the paying agent for the notes in London.

We maintain deposit accounts and conduct other banking transactions with the trustee or an affiliate of the trustee in the ordinary course of business.

Governing Law

The Indentures and the Notes are governed by, and construed in accordance with, the laws of the State of New York.

Project Bonus and Release Agreement

THIS PROJECT BONUS AND RELEASE AGREEMENT (“Agreement”), dated as of November 18, 2021 (“Effective Date”), is by and between Air Products and Chemicals, Inc. (the “Company”), and M. Scott Crocco (“Crocco”).

WHEREAS, Crocco retired from the Company, effective September 30, 2021;

WHEREAS, the Company has requested that Crocco provide a customary release of claims against the Company in connection with his recent retirement from the Company;

WHEREAS, Crocco played a critical role in the Company achieving the financial close of the Jazan IGCC Project;

WHEREAS, the Management Development and Compensation Committee (the “Committee”) of the Board of Directors, has determined to reward specified current and former executives of the Company for their extraordinary efforts in achieving the financial close of the Jazan IGCC Project, a project which commenced in 2018, with the financial close occurring on October 27, 2021;

WHEREAS, in recognition of Crocco’s significant contribution to achieving the financial close of the Jazan IGCC Project and his willingness to execute a customary release of claims relating to his employment with the Company, the Compensation Committee has approved the payment to Crocco of the Milestone Bonus (as defined below); and

WHEREAS, the Company and Crocco desire to set forth their respective rights and obligations.

NOW, THEREFORE, in consideration of the covenants and conditions set forth herein and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the parties, intending to be legally bound, agree as follows:

1. **Milestone Payment.** In consideration of (a) Mr. Crocco’s extraordinary contributions to the achievement of the financial close of the Jazan IGCC Project, and (b) Crocco’s execution and non-revocation during the applicable revocation period of the release in the form attached as Exhibit A to this Agreement (such form, the “Release” and such conditions, the “Release Conditions”), the Company will pay to Crocco, within seven days following the satisfaction of the Release Conditions, a lump sum cash payment equal to \$1,775,000 (“Milestone Payment”), less applicable withholdings for federal, state and local taxes.
2. **Acknowledgement of Restrictive Covenants.** Crocco acknowledges and agrees that the restricted covenants included in the Company equity award agreements covering awards granted to Crocco will apply in accordance with their terms.
3. **Entire Agreement.** This Agreement, together with the Release and the restrictive covenants described in Section 2 of this Agreement, constitutes the entire agreement between the parties with respect to the subject matter hereof, and supersedes any and all prior agreements or understandings between the parties arising out of or relating to the matters contemplated by this Agreement.

4. Governing Law; Jurisdiction. This Agreement shall be governed by the laws of the State of Delaware, without giving effect to the conflicts of law principles thereof. Any disputes regarding this Agreement shall be brought only in the Delaware Chancery Court in Wilmington, Delaware or the US District Court for the District of Delaware.

5. Severability of Provisions. Each of the sections contained in this Agreement shall be enforceable independently of every other section in this Agreement, and the invalidity or nonenforceability of any section shall not invalidate or render unenforceable any other section contained in this Agreement.

6. Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the successors and assigns of the Company, including as a result of a merger or sale of all or substantially all of the Company's assets or similar corporate transaction. This Agreement shall not be assignable by Crocco. If Crocco shall die before all the payments required by this Agreement to be made to Crocco have been made, then all remaining payments shall be made to Crocco's estate or such person or trust as Crocco shall designate.

7. Waivers. No failure on the part of either party to exercise, and no delay in exercising, any right or remedy under this Agreement shall operate as a waiver thereof; nor shall any single or partial exercise of any right or remedy hereunder preclude any other or further exercise thereof or the exercise of any other right or remedy granted hereby or by any related document or by law.

8. Modification. No supplement, modification, or amendment of this Agreement shall be binding unless executed in writing by both Crocco and the Company.

9. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original and all of which together shall be one and the same instrument.

Remainder of page intentionally left blank.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

AIR PRODUCTS AND CHEMICALS, INC.

By: _____ /s/ Sean D. Major
Name: Sean D. Major
Title: Executive Vice President,
General Counsel and Secretary

_____/s/ M. Scott Crocco
M. Scott Crocco

Signature Page to Project Bonus and Release Agreement

THIS RELEASE (this "Release") is entered into between M. Scott Crocco ("Crocco") and Air Products and Chemicals, Inc. (the "Company"), for the benefit of the Company. Reference is made to the Project Bonus and Release Agreement (the "PBRA"), dated November 18, 2021, by and between the Company and Crocco. Capitalized terms used and not defined herein shall have the meanings provided in the PBRA. The entering into and non-revocation of this Release is a condition to Crocco's right to receive the Milestone Payment.

Accordingly, Crocco and the Company agree as follows:

1. In partial consideration for the Milestone Payment, to which Crocco is not otherwise entitled, and the sufficiency of which Crocco acknowledges, Crocco represents and agrees, as follows:

(a) Crocco, for himself, his heirs, administrators, representatives, executors, successors and assigns (collectively "Releasers"), hereby irrevocably and unconditionally releases, acquits and forever discharges and agrees not to sue the Company or any of its parents, subsidiaries, divisions, affiliates and related entities and their current and former directors, officers, and, in their official capacities as such, shareholders, trustees, employees, consultants, independent contractors, representatives, agents, servants, successors and assigns and all persons acting by, through or under or in concert with any of them (collectively "Releasees"), from all claims, rights and liabilities up to and including the date of this Release arising from or relating to Crocco's employment with (including service as a director), or termination of employment from (including termination of service as a director), the Company and its subsidiaries and affiliates, and from any and all charges, complaints, claims, liabilities, obligations, promises, agreements, controversies, damages, actions, causes of actions, suits, rights, demands, costs, losses, debts and expenses in connection with Crocco's employment and termination of employment with the Company and its subsidiaries, known or unknown, suspected or unsuspected and any claims of wrongful discharge, breach of contract, implied contract, promissory estoppel, defamation, slander, libel, tortious conduct, employment discrimination or claims under any federal, state or local employment statute, law, order or ordinance, including any rights or claims arising under Title VII of the Civil Rights Act of 1964, as amended, the Age Discrimination in Employment Act of 1967, as amended, 29 U.S.C. § 621 et seq. ("ADEA"), the Americans with Disabilities Act of 1990, as amended, the Family Medical Leave Act of 1993, as amended, the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), and the Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended, the Worker Adjustment and Retraining Notification Act of 1988, as amended. Nothing contained herein shall restrict the parties' rights to enforce the terms of this Release.

(b) To the maximum extent permitted by law, Crocco agrees that he has not filed, nor will he ever file, a lawsuit asserting any claims which are released by this Release, or to accept any benefit from any lawsuit which might be filed by another person or government entity based in whole or in part on any event, act, or omission which is the subject of this Release.

(c) This Release specifically excludes (i) Crocco's rights and the Company's obligations under the PBRA, (ii) Crocco's rights as a stockholder or equity award holder of the Company, (iii) claims which may not be released under applicable law and (iv) any indemnification or directors' and officers' liability insurance or similar rights Crocco has as a current or former officer of the Company. Nothing contained in this Release shall release Crocco from his obligations under the PBRA or any applicable restrictive covenants that continue or are to be performed following Crocco's termination of employment with the Company, and Crocco acknowledges that the Company will have available to it all remedies at law and at equity, including injunctive relief, in the event that Crocco breaches any of his obligations under the PBRCA or this Release. The covenants, representations and acknowledgments made by Crocco in this Release shall continue to have full force and effect after the execution and effectiveness of this Release and the delivery of the Milestone Payment, and this Release shall inure to the benefit

of each Releasee, and the successors and assigns of each of them, to the extent necessary to preserve the intended benefits of such provisions.

(d) The parties agree that this Release shall not affect the rights and responsibilities of the US Equal Employment Opportunity Commission (hereinafter “EEOC”) to enforce ADEA and other laws. In addition, the parties agree that this Release shall not be used to justify interfering with Crocco’s protected right to file a charge or participate in an investigation or proceeding conducted by the EEOC, the Securities and Exchange Commission (“SEC”) or other government agency to the extent he is permitted to do so by applicable law or making other disclosures that are protected under whistleblower provisions of federal law or regulation, in each case without the necessity of prior authorization from the Company or the need to notify the Company that he has done so. The parties further agree that Crocco knowingly and voluntarily waives all rights or claims (that arose prior to Crocco’s execution of this Release) the Releasers may have against the Releasees, or any of them, to receive any benefit or remedial relief (including, but not limited to, reinstatement, back pay, front pay, damages, attorneys’ fees, experts’ fees) as a consequence of any investigation or proceeding conducted by the EEOC.

2. Crocco acknowledges that the Company has specifically advised him of the right to seek the advice of an attorney concerning the terms and conditions of this Release. Crocco further acknowledges that he has been furnished with a copy of this Release, and he has been afforded twenty-one (21) calendar days in which to consider the terms and conditions set forth above prior to this Release. By executing this Release, Crocco affirmatively states that he has had sufficient and reasonable time to review this Release and to consult with an attorney concerning his legal rights prior to the final execution of this Release. Crocco further agrees that he has carefully read this Release and fully understands its terms. Crocco acknowledges that he has entered into this Release, knowingly, freely and voluntarily. Crocco understands that he may revoke this Release within seven (7) calendar days after signing this Release. Revocation of this Release must be made in writing and must be received by Sean D. Major at the Company, 7201 Hamilton Boulevard, Allentown, PA 18195, within the time period set forth above.

3. This Release covers both claims that Crocco knows about and those Crocco may not know about. Crocco expressly waives all rights afforded by any statute which limits the effect of a release with respect to unknown claims. Crocco understands the significance of Crocco’s release of unknown claims and Crocco’s waiver of statutory protection against a release of unknown claims.

4. This Release will be governed by and construed in accordance with the laws of the State of Delaware, without giving effect to any choice of law or conflicting provision or rule (whether of the State of Delaware or any other jurisdiction) that would cause the laws of any jurisdiction other than the State of Delaware to be applied. In furtherance of the foregoing, the internal law of the State of Delaware will control the interpretation and construction of this agreement, even if under such jurisdiction’s choice of law or conflict of law analysis, the substantive law of some other jurisdiction would ordinarily apply. The provisions of this Release are severable, and if any part or portion of it is found to be unenforceable, the other paragraphs shall remain fully valid and enforceable.

5. This Release shall become effective and enforceable on the eighth day following its execution by Crocco, provided he does not exercise his right of revocation as described above. If Crocco fails to sign and deliver this Release or revokes his signature, this Release will be without force or effect, and Crocco shall not be entitled to the Milestone Payment.

Date: November ____, 2021 _____
M. Scott Crocco

AMENDMENT

AMENDMENT dated as of September 29, 2021 (this “**Amendment**”), in respect of that certain Revolving Credit Agreement, dated as of March 31, 2021 (as in effect immediately prior to this Amendment, the “**Existing Credit Agreement**”), by and among Air Products and Chemicals, Inc., a Delaware corporation (the “**Parent**”), the other borrowers from time to time party thereto, the lenders from time to time party thereto (the “**Lenders**”) and Mizuho Bank, Ltd. (“**Mizuho**”), as administrative agent (in such capacity, the “**Administrative Agent**”).

RECITALS:

On and subject to the terms and conditions herein and in the Credit Agreement (as defined below) and on the Amendment Effective Date (as defined below), (i) the Parent has requested that the Lenders party hereto agree to amend certain provisions of the Existing Credit Agreement, and (ii) in order to effect the foregoing, the Lenders party hereto and the Administrative Agent are willing to enter into this Amendment and to consent to the amendments to the Existing Credit Agreement described herein.

Therefore, the parties hereto agree as follows:

Section 1. *Defined Terms; References.* Unless otherwise specifically defined herein, each term used herein which is defined in the Credit Agreement has the meaning assigned to such term in the Credit Agreement. Each reference to “hereof”, “hereunder”, “herein” and “hereby” and each other similar reference and each reference to “this Agreement” and each other similar reference contained in the Existing Credit Agreement shall, after the Amendment Effective Date, refer to the Credit Agreement as amended pursuant to this Amendment and as set out in Exhibit A hereto (the “**Credit Agreement**”).

Section 2. *Certain Amendments.* Each of the parties hereto agrees that, effective on the Amendment Effective Date, the Existing Credit Agreement shall automatically be amended by making each of the changes shown as either a ~~strikeout~~ or an [insertion](#) set forth in the pages of the Existing Credit Agreement and the Schedules and Exhibits thereto attached as Exhibit A hereto.

Section 3. *Representations of the Parent.* The Parent hereby represents and warrants that, immediately prior to and immediately after giving effect to this Amendment:

(a) the representations and warranties set forth in Sections 5.03, 5.04, 5.05, 5.07 and 5.09 of the Credit Agreement shall be true and correct in all material respects on and as of the Amendment Effective Date unless such representation is already qualified by materiality and then, in such case, the representation shall be true in all respects, both immediately before and immediately after giving effect to the Amendment;

(b) the Parent has taken all necessary corporate or other organizational action to authorize its execution and performance under this Amendment such that this Amendment constitutes valid and legally binding obligations of the Parent, subject to applicable bankruptcy, reorganization, insolvency, moratorium or similar laws affecting creditors’ rights generally and equitable principles of general application (regardless of whether enforcement is sought in a proceeding in equity or at law); and

(c) no Event of Default or Potential Event of Default has occurred and is continuing on and as of the Amendment Effective Date, both immediately before and immediately after giving effect to this Amendment.

Section 4. *Effectiveness.* This Amendment shall become effective on the date (the “**Amendment Effective Date**”) when each of the following conditions shall have been satisfied:

(a) the Administrative Agent shall have received from the Parent and the Lenders either (i) a counterpart of this Amendment signed on behalf of such party or (ii) written evidence satisfactory to the Administrative Agent (which may include telecopy or electronic transmission of a signed signature page of this Amendment) that such party has signed a counterpart of this Amendment;

(b) the Administrative Agent shall have received all fees and expenses due and payable on or prior to the Amendment Effective Date under the Credit Agreement or any other Loan Document, including, to the extent invoiced at least two Business Days prior to the Amendment Effective Date, reimbursement or payment of all out-of-pocket expenses of the Administrative Agent (including the reasonable and documented out-of-pocket fees, disbursements and other charges of counsel (which shall be limited to the reasonable fees, disbursements and other charges of Davis Polk & Wardwell LLP), as counsel to the Administrative Agent); and

(c) the Administrative Agent shall have received a certificate signed by the Treasurer, the Assistant Treasurer or a Vice President of Parent, certifying that the representations and warranties set forth in Section 3 of this Amendment shall be true and correct in all material respects.

Section 5. *Governing Law*. THIS AMENDMENT SHALL BE CONSTRUED IN ACCORDANCE WITH AND GOVERNED BY THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO CHOICE OF LAW PRINCIPLES (OTHER THAN SECTION 5-1401 OF THE NEW YORK GENERAL OBLIGATION LAW AND SUCCESSOR PROVISIONS THERETO).

Section 6. *Counterparts*. This Amendment may be executed in any number of counterparts and by the different parties hereto on separate counterparts each of which, when so executed, shall be deemed an original, but all such counterparts shall constitute but one and the same instrument. Delivery by fax or other electronic transmission of an executed counterpart of a signature page to this Amendment shall be effective as delivery of an original executed counterpart of this Amendment and the words “execution,” “execute,” “signed,” “signature,” and words of like import in or related to any document to be signed in connection with this Amendment shall be deemed to include electronic signatures, the electronic matching of assignment terms and contract formations on electronic platforms approved by the Administrative Agent, or the keeping of records in electronic form, each of which shall be of the same legal effect, validity or enforceability as a manually executed signature or the use of a paper based recordkeeping system, as the case may be, to the extent and as provided for in any applicable law, including the Federal Electronic Signatures in Global and National Commerce Act, the New York State Electronic Signatures and Records Act, or any other similar state laws based on the Uniform Electronic Transactions Act. The Administrative Agent may, in its discretion, require that any such documents and signatures executed electronically or delivered by fax or other electronic transmission be confirmed by a manually-signed original thereof; provided that the failure to request or deliver the same shall not limit the effectiveness of any document or signature executed electronically or delivered by fax or other electronic transmission.

Section 7. *Waiver of Jury Trial*. Each party hereto waives the right to trial by jury in any action, suit or proceeding by any person arising from or relating to this Amendment or any other Loan Document or any statement, course of conduct, act, omission or event occurring in connection herewith or therewith (collectively, “**Related Litigation**”). In addition, each Borrower hereby irrevocably and unconditionally:

(a) Agrees that any Related Litigation by any Issuer or Lender or Administrative Agent may be brought in any state or federal court of competent jurisdiction sitting in New York county, New York, and submits to the jurisdiction of such courts (but nothing herein shall affect the right of the Parent or any Administrative Agent or any Issuer, Lender or Borrower to bring any action, suit or proceeding in any other forum);

(b) Waives any objection which it may have at any time to the laying of venue of any related litigation brought in any such court, waives any claim that any such related litigation has been brought in

an inconvenient forum, and waives any right to object, with respect to any related litigation brought in any such court, that such court does not have jurisdiction over such Borrower; and

(c) Consents and agrees to service of any summons, complaint or other legal process in any related litigation by registered or certified U.S. mail, postage prepaid, to such Borrower at the address for notices pursuant to Section 12.05 of the Credit Agreement, and consents and agrees that such service shall constitute in every respect valid and effective service (but nothing herein shall affect the validity or effectiveness of process served in any other manner permitted by law).

Section 8. *Miscellaneous*. On and after the Amendment Effective Date, each reference in the Existing Credit Agreement to the Existing Credit Agreement, “hereunder”, “herein” or words of like import referring thereto, and each reference in the other Loan Documents to the Existing Credit Agreement, “thereunder”, “thereof” or words of like import referring thereto, shall mean and be a reference to the Credit Agreement. Except as specifically amended by this Amendment, the Existing Credit Agreement and the other Loan Documents shall remain in full force and effect and are hereby ratified and confirmed (including all Obligations and Guarantee Obligations thereunder), and this Amendment shall not be considered a novation. The execution, delivery and performance of this Amendment shall not constitute a waiver of any provision of, or operate as a waiver of any right, power or remedy of the Administrative Agent or any Lender under, the Credit Agreement or any of the other Loan Documents. This Amendment shall constitute a “Loan Document” for all purposes of the Credit Agreement and the other Loan Documents.

[SIGNATURE PAGES FOLLOW]

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be duly executed and delivered by their respective authorized officers as of the day and year first above written.

AIR PRODUCTS AND CHEMICALS, INC., as Parent

By: /s/ Karen L. Harwick
Name: Karen L. Harwick
Title: Assistant Treasurer

MIZUHO BANK, LTD.,
as Administrative Agent, Swingline Lender and a Lender

By: /s/ Donna DeMagistris
Name: Donna DeMagistris
Title: Authorized Signatory

BNP PARISBAS, as Lender

By: /s/ Michael R. Hoffman
Name: Michael R. Hoffman
Title: Director

By: /s/ Emma Petersen
Name: Emma Petersen
Title: Director

CITIBANK, N.A., as Lender

By: /s/ David Jaffe
Name: David Jaffe
Title: Vice President

DEUTSCHE BANK AG NEW YORK BRANCH, as Lender and Issuer

By: /s/ Ming K. Chu
Name: Ming K. Chu
Title: Director

By: /s/ Marko Lukin
Name: Marko Lukin
Title: Vice President

HSBC BANK USA, NATIONAL ASSOCIATION, as Lender

By: /s/ Adam Hendley
Name: Adam Hendley
Title: Director

BANCO SANTANDER, S.A., NEW YORK BRANCH, as Lender

By: /s/ Andres Barbosa
Name: Andres Barbosa
Title: Managing Director

By: /s/ Rita Walz-Cuccioli
Name: Rita Walz-Cuccioli
Title: Executive Director

BANK OF AMERICA, N.A., as Lender

By: /s/ James K.G. Campbell
Name: James K.G. Campbell
Title: Director

BARCLAYS BANK PLC, as Lender

By: /s/ May Huang
Name: May Huang
Title: Assistant Vice President

JPMORGAN CHASE BANK, N.A., as Lender

By: /s/ Will Price
Name: Will Price
Title: Vice President

MUFG BANK, LTD., as Lender

By: /s/ Victor Pierzchalski
Name: Victor Pierzchalski
Title: Authorized Signatory

SUMITOMO MITSUI BANKING CORPORATION, as Lender

By: /s/ Jun Ashley
Name: Jun Ashley
Title: Director

CREDIT AGRICOLE CORPORATE AND INVESTMENT BANK, as Lender

By: /s/ Michael Willis
Name: Michael Willis
Title: Managing Director

By: /s/ Ting Lee
Name: Ting Lee
Title: Director

ING BANK N.V., DUBLIN BRANCH, as Lender

By: /s/ Cormac Langford
Name: Cormac Langford
Title: Director

By: /s/ Sean Hassett
Name: Sean Hassett
Title: Director

INTESA SANPAOLO BANK - NEW YORK BRANCH, as Lender

By: /s/ Neil Derfler
Name: Neil Derfler
Title: Global Relationship Manager

By: /s/ Alessandro Toigo
Name: Alessandro Toigo
Title: Head of Corporate

THE BANK OF NOVA SCOTIA, as Lender

By: /s/ Alex Franks
Name: Alex Franks
Title: Director

THE TORONTO-DOMINION BANK, NEW YORK BRANCH, as Lender

By: /s/ Maria Macchiaroli
Name: Maria Macchiaroli
Title: Authorized Signatory

Conformed Credit Agreement

[see attached]

~~Deal CUSIP Number: 009160AN2~~

~~Revolving Facility CUSIP Number: 009160AP7~~

\$2,500,000,000

REVOLVING CREDIT AGREEMENT

by and among

AIR PRODUCTS AND CHEMICALS, INC.,

The Other Borrowers parties hereto from time to time,

The Lenders parties hereto from time to time,

and

MIZUHO BANK, LTD.,

as Administrative Agent

Dated as of

March 31, 2021

MIZUHO BANK, LTD.,
as Sustainability Structuring Agent

MIZUHO BANK, LTD.,
BNP PARIBAS SECURITIES CORP.,
CITIBANK, N.A.,
DEUTSCHE BANK SECURITIES INC.
and
HSBC SECURITIES (USA) INC.,
as Joint Lead Arrangers and Book Runners

BNP PARIBAS,
CITIBANK, N.A.,
DEUTSCHE BANK SECURITIES, INC.
and
HSBC BANK USA, N.A.,
as Co-Syndication Agents

and

BANCO SANTANDER, S.A., NEW YORK BRANCH,
BANK OF AMERICA, N.A.,
BARCLAYS BANK PLC,
JPMORGAN CHASE BANK, N.A.,
MUFG BANK, LTD. (f/k/a THE BANK OF TOKYO-MITSUBISHI UFJ, LTD.)
and
SUMITOMO MITSUI BANKING CORPORATION,
as Co-Documentation Agents

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REVOLVING CREDIT AGREEMENT, dated as of March 31, 2021, by and among AIR PRODUCTS AND CHEMICALS, INC., a Delaware corporation (the “Parent”), the other borrowers parties hereto from time to time (the “Other Borrowers”, as defined further below), the lenders parties hereto from time to time (the “Lenders”, as defined further below) and MIZUHO BANK, LTD., as Administrative Agent for the Lenders hereunder.

R E C I T A L S:

A. The Parent has requested the Lenders to make financial accommodations to it and certain of its Subsidiaries in the aggregate Dollar Equivalent Amount of \$2,500,000,000, the proceeds of which will be used for the general corporate purposes of the Parent and its Subsidiaries.

B. The Lenders are willing to extend such financial accommodations on the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the mutual covenants and undertakings herein contained, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

Article I

DEFINITIONS; CONSTRUCTION

Section 1.01 Certain Definitions. In addition to other words and terms defined elsewhere in this Agreement, as used herein the following words and terms shall have the following meanings, respectively, unless the context hereof otherwise clearly requires:

“Absolute Rate” shall have the meaning set forth in Section 3.02(c)(ii)(D) hereof.

“Absolute Rate Auction” shall mean a solicitation of Competitive Bid Loan Quotes setting forth Absolute Rates pursuant to Article III hereof.

“Absolute Rate Loan” or “Absolute Rate Loans” shall mean any or all Competitive Bid Loans the interest rates of which are determined on the basis of Absolute Rates pursuant to an Absolute Rate Auction.

“Administrative Agent” shall mean Mizuho in its capacity as Administrative Agent and any successor Administrative Agent hereunder appointed in accordance with Section 11.10.

“Administrative Agent’s Office” or “Office” shall mean as set forth in Schedule III.

“Affected Financial Institution” shall mean (a) any EEA Financial Institution or (b) any UK Financial Institution.

“Affected Lender” shall have the meaning set forth in Section 2.06(d)(ii) hereof.

“Affiliate” of a specified Person shall mean any Person which directly or indirectly controls, or is controlled by, or is under common control with, such specified Person. For purposes of the preceding sentence, “control” of a Person means the possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of such Person, whether through the ownership of voting securities, by contract or otherwise.

“Agent Parties” shall have the meaning set forth in Section 12.19 hereof.

“Agents” shall mean the Administrative Agent and the Co-Syndication Agents.

“Agreement” shall mean this credit agreement, as it may be amended or modified and in effect from time to time.

“Anti-Corruption Laws” shall mean all laws, rules and regulations of any jurisdiction applicable to the Parent or any of its Subsidiaries from time to time prohibiting bribery or corruption.

“Applicable Margin” shall mean (a) for Base Rate Loans, the amount designated as the “Applicable Margin for Base Rate Loans” on the Applicable Pricing Grid set forth on Schedule I hereto and (b) for Euro-Rate Loans, CDOR Loans, SONIA Loans and Swingline Loans, the amount designated as the “Applicable Margin for Euro-Rate Loans, CDOR Loans, SONIA Loans and Swingline Loans” on the Applicable Pricing Grid set forth on Schedule I hereto, in each case as adjusted by the ESG Adjustment Amount.

“Arranger Fee Letter” shall mean the Arranger Fee Letter dated March 1, 2021 among the Parent, BNP Paribas, BNP Paribas Securities Corp., Citibank, N.A., Deutsche Bank AG New York Branch, Deutsche Bank Securities Inc., HSBC Bank USA, N.A. and HSBC Securities (USA) Inc.

“Approved Fund” shall mean any Fund that is administered or managed by (i) a Lender, (ii) an Affiliate of a Lender or (iii) an entity or an Affiliate of an entity that administers or manages a Lender; provided, however, that no Fund shall be an “Approved Fund” with respect to any proposed assignment hereunder unless at the time of such assignment either (a) its senior unsecured long-term debt securities without third-party credit enhancement are rated at least BBB by S&P or Baa2 by Moody’s or (b) its senior unsecured short-term debt securities without third-party credit enhancement are rated at least A-2 by S&P or P-2 by Moody’s.

“Assignee Lender” shall have the meaning set forth in Section 12.14(c) hereof.

“Assignment Agreement” shall have the meaning set forth in Section 12.14(c) hereof.

“Assignor Lender” shall have the meaning set forth in Section 12.14(c) hereof.

“Available Tenor” shall mean, as of any date of determination and with respect to the then-current Benchmark, as applicable, any tenor for such Benchmark or payment period for interest calculated with reference to such Benchmark, as applicable, that is or may be used for determining the length of an Interest Period pursuant to this Agreement as of such date and not

including, for the avoidance of doubt, any tenor for such Benchmark that is then-removed from the definition of “Interest Period” pursuant to clause (E) of Section 2.06(d)(v).

“Bail-In Action” shall mean the exercise of any Write-Down and Conversion Powers by the applicable Resolution Authority in respect of any liability of an Affected Financial Institution

“Bail-In Legislation” shall mean, (a) with respect to any EEA Member Country implementing Article 55 of Directive 2014/59/EU of the European Parliament and of the Council of the European Union, the implementing law, regulation rule or requirement for such EEA Member Country from time to time which is described in the EU Bail-In Legislation Schedule and (b) with respect to the United Kingdom, Part I of the United Kingdom Banking Act 2009 (as amended from time to time) and any other law, regulation or rule applicable in the United Kingdom relating to the resolution of unsound or failing banks, investment firms or other financial institutions or their affiliates (other than through liquidation, administration or other insolvency proceedings).

“Bankruptcy Event” shall mean, with respect to any Person, such Person becomes the subject of a bankruptcy or insolvency proceeding, or has had a receiver, conservator, trustee, administrator, custodian, assignee for the benefit of creditors or similar Person charged with the reorganization or liquidation of its business appointed for it, or, in the good faith determination of the Administrative Agent, has taken any action in furtherance of, or indicating its consent to, approval of, or acquiescence in, any such proceeding or appointment; provided that a Bankruptcy Event shall not result solely by virtue of any ownership interest, or the acquisition of any ownership interest, in such Person by a Governmental Authority or instrumentality thereof; provided, further, that such ownership interest does not result in or provide such Person with immunity from the jurisdiction of courts within the United States or from the enforcement of judgments or writs of attachment on its assets or permit such Person (or such Governmental Authority or instrumentality) to reject, repudiate, disavow or disaffirm any contracts or agreements (such as this Agreement) made by such Person.

“Base Rate” shall mean for any day the greatest of (a) the Prime Rate in effect on such day, (b) 0.50% plus the Federal Funds Effective Rate in effect on such day and (c) the Euro-Rate for a one month Funding Period commencing on such day plus 1.0% per annum; provided that, for the avoidance of doubt, the Euro-Rate used in determining the Base Rate for any day shall be as of 11:00 a.m. (London time) on such day (or if such day is not a Business Day, the immediately preceding Business Day). If for any reason the Administrative Agent shall have determined (which determination shall be conclusive absent manifest error) that it is unable after due inquiry to ascertain the Federal Funds Effective Rate or the Euro-Rate for any reason, including the inability of the Administrative Agent to obtain sufficient quotations in accordance with the terms hereof, the Base Rate shall be determined without regard to clause (b) or (c), as the case may be, of the first sentence of this definition until the circumstances giving rise to such inability no longer exist. Any change in the Base Rate due to a change in the Prime Rate, the Federal Funds Effective Rate or the Euro-Rate shall be effective on the effective date of such change in the Prime Rate, the Federal Funds Effective Rate or the Euro-Rate, respectively. Notwithstanding the foregoing, in no event shall the Base Rate be less than zero.

“Base Rate Loan” shall mean any Loan, which bears interest at a rate based on the Base Rate Option.

“Base Rate Option” shall have the meaning set forth in Section 2.06(a)(i) hereof.

“Base Rate Portion” of any Loan or Loans shall mean at any time the portion, including the whole, of such Loan or Loans bearing interest at such time (a) under the Base Rate Option or (b) in accordance with Section 4.05(b)(ii)(A) hereof. If no Loan or Loans is specified, “Base Rate Portion” shall refer to the Base Rate Portion of all Loans outstanding at such time.

“Benchmark” shall mean, initially, the LIBO-Rate (including USD LIBOR), SONIA, CDOR or Euro-Rate, as applicable; provided that if a Benchmark Transition Event, a Term SOFR Transition Event or an Early Opt-in Election, as applicable, and its related Benchmark Replacement Date have occurred with respect to ~~USD LIBOR or the~~ then-current Benchmark, then “Benchmark” shall mean the applicable Benchmark Replacement to the extent that such Benchmark Replacement has replaced such prior benchmark rate pursuant to clause (A) or (B) of Section 2.06(d)(v).

“Benchmark Replacement” shall mean, for any Available Tenor, the first alternative set forth in the order below that can be determined by the Administrative Agent for the applicable Benchmark Replacement Date; provided that, in the case of any Loan denominated in a Designated Currency other than Dollars, “Benchmark Replacement” shall mean the alternative set forth in (3) below:

- (1) for the Dollar Denominated Benchmark only, the sum of: (a) Term SOFR and (b) the related Benchmark Replacement Adjustment;
- (2) for the Dollar Denominated Benchmark only, the sum of: (a) the applicable Daily Simple ~~SOFR~~ and (b) the related Benchmark Replacement Adjustment;
- (3) the sum of: (a) the alternate benchmark rate that has been selected by the Administrative Agent and the Parent as the replacement for the then-current Benchmark for the applicable Corresponding Tenor giving due consideration to (i) any selection or recommendation of a replacement benchmark rate or the mechanism for determining such a rate by the Relevant Governmental Body or (ii) any evolving or then-prevailing market convention for determining a benchmark rate as a replacement for the then-current Benchmark for syndicated credit facilities denominated in the applicable Designated Currency at such time and (b) the related Benchmark Replacement Adjustment;

provided that, in the case of clause (1), such Unadjusted Benchmark Replacement is displayed on a screen or other information service that publishes such rate from time to time as selected by the Administrative Agent in its reasonable discretion; provided further that, solely with respect to a Loan denominated in Dollars, notwithstanding anything to the contrary in this Agreement or in any other Loan Document, upon the occurrence of a Term SOFR Transition Event, and the delivery of a Term SOFR Notice, on the applicable Benchmark Replacement Date the “Benchmark Replacement” shall revert to and shall be deemed to be the sum of (a) Term SOFR

and (b) the related Benchmark Replacement Adjustment, as set forth in clause (1) of this definition (subject to the first proviso above). If the Benchmark Replacement as determined pursuant to clause (1), (2) or (3) above would be less than the Floor, the Benchmark Replacement will be deemed to be the Floor for the purposes of this Agreement and the other Loan Documents.

“Benchmark Replacement Adjustment” shall mean, with respect to any replacement of the then- current Benchmark with an Unadjusted Benchmark Replacement for any applicable Interest Period and Available Tenor for any setting of such Unadjusted Benchmark Replacement:

- (1) for purposes of clauses (1) and (2) of the definition of “Benchmark Replacement,” the first alternative set forth in the order below that can be determined by the Administrative Agent:
 - (a) the spread adjustment, or method for calculating or determining such spread adjustment, (which may be a positive or negative value or zero) as of the Reference Time such Benchmark Replacement is first set for such Interest Period that has been selected or recommended by the Relevant Governmental Body for the replacement of such Benchmark with the applicable Unadjusted Benchmark Replacement for the applicable Corresponding Tenor;
 - (b) the spread adjustment (which may be a positive or negative value or zero) as of the Reference Time such Benchmark Replacement is first set for such Interest Period that would apply to the fallback rate for a derivative transaction referencing the ISDA Definitions to be effective upon an index cessation event with respect to such Benchmark for the applicable Corresponding Tenor; and
- (2) for purposes of clause (3) of the definition of “Benchmark Replacement,” the spread adjustment, or method for calculating or determining such spread adjustment, (which may be a positive or negative value or zero) that has been selected by the Administrative Agent and the Parent for the applicable Corresponding Tenor giving due consideration to (i) any selection or recommendation of a spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of such Benchmark with the applicable Unadjusted Benchmark Replacement by the Relevant Governmental Body on the applicable Benchmark Replacement Date or (ii) any evolving or then-prevailing market convention for determining a spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of such Benchmark with the applicable Unadjusted Benchmark Replacement for syndicated credit facilities denominated in the applicable Designated Currency at such time;

provided that, in the case of clause (1) above, such adjustment is displayed on a screen or other information service that publishes such Benchmark Replacement Adjustment from time to time as selected by the Administrative Agent in its reasonable discretion.

“Benchmark Replacement Conforming Changes” shall mean, with respect to any Benchmark Replacement, any technical, administrative or operational changes (including changes to the definition of “Base Rate,” the definition of “Business Day,” the definition of “Interest Period,” timing and frequency of determining rates and making payments of interest, timing of borrowing requests or prepayment, conversion or continuation notices, length of lookback periods, the applicability of breakage provisions, and other technical, administrative or operational matters) that the Administrative Agent reasonably decides may be appropriate to reflect the adoption and implementation of such Benchmark Replacement and to permit the administration thereof by the Administrative Agent in a manner substantially consistent with market practice (or, if the Administrative Agent decides that adoption of any portion of such market practice is not administratively feasible or if the Administrative Agent determines that no market practice for the administration of such Benchmark Replacement exists, in such other manner of administration as the Administrative Agent decides is reasonably necessary in connection with the administration of this Agreement and the other Loan Documents).

“Benchmark Replacement Date” shall mean, with respect to any Benchmark, the earliest to occur of the following events with respect to such then-current Benchmark:

- (1) in the case of clause (1) or (2) of the definition of “Benchmark Transition Event,” the later of (a) the date of the public statement or publication of information referenced therein and (b) the date on which the administrator of such Benchmark (or the published component used in the calculation thereof) permanently or indefinitely ceases to provide all Available Tenors of such Benchmark (or such component thereof);
- (2) in the case of clause (3) of the definition of “Benchmark Transition Event,” the date of the public statement or publication of information referenced therein;
- (3) in the case of a Term SOFR Transition Event, the date that is thirty (30) days after the date a Term SOFR Notice is provided to the Lenders and the Borrower pursuant to clause (b) of this Section titled “Benchmark Replacement Setting”; or
- (4) in the case of an Early Opt-in Election, the sixth (6th) Business Day after the date notice of such Early Opt-in Election is provided to the Lenders, so long as the Administrative Agent has not received, by 5:00 p.m. (New York City time) on the fifth (5th) Business Day after the date notice of such Early Opt-in Election is provided to the Lenders, written notice of objection to such Early Opt-in Election from Lenders comprising the Required Lenders.

For the avoidance of doubt, (i) if the event giving rise to the Benchmark Replacement Date occurs on the same day as, but earlier than, the Reference Time in respect of any determination, the Benchmark Replacement Date will be deemed to have occurred prior to the Reference Time for such determination and (ii) the “Benchmark Replacement Date” will be deemed to have occurred in the case of clause (1) or (2) with respect to any Benchmark upon the occurrence of the applicable event or events set forth therein with respect to all then-current

Available Tenors of such Benchmark (or the published component used in the calculation thereof).

“Benchmark Transition Event” shall mean, with respect to any Benchmark, the occurrence of one or more of the following events with respect to the then-current Benchmark:

- (1) a public statement or publication of information by or on behalf of the administrator of such Benchmark (or the published component used in the calculation thereof) announcing that such administrator has ceased or will cease to provide all Available Tenors of such Benchmark (or such component thereof), permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide any Available Tenor of such Benchmark (or such component thereof);
- (2) a public statement or publication of information by (i) the regulatory supervisor for the administrator of such Benchmark (or the published component used in the calculation thereof), an insolvency official with jurisdiction over the administrator for such Benchmark (or such component), a resolution authority with jurisdiction over the administrator for such Benchmark (or such component) or a court or an entity with similar insolvency or resolution authority over the administrator for such Benchmark (or such component) or (ii) solely with respect to the Dollar Denominated Benchmark, the Board of Governors of the Federal Reserve System or the Federal Reserve Bank of New York, in each case which states that the administrator of such Benchmark (or such component) has ceased or will cease to provide all Available Tenors of such Benchmark (or such component thereof) permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide any Available Tenor of such Benchmark (or such component thereof); or
- (3) a public statement or publication of information by the regulatory supervisor for the administrator of such Benchmark (or the published component used in the calculation thereof) announcing that all Available Tenors of such Benchmark (or such component thereof) are no longer representative.

For the avoidance of doubt, a “Benchmark Transition Event” will be deemed to have occurred with respect to any Benchmark if a public statement or publication of information set forth above has occurred with respect to each then-current Available Tenor of such Benchmark (or the published component used in the calculation thereof).

“Benchmark Unavailability Period”, with respect to any Benchmark, shall mean the period (if any) (x) beginning at the time that a Benchmark Replacement Date pursuant to clauses (1) or (2) of that definition has occurred if, at such time, no Benchmark Replacement has replaced such then-current Benchmark for all purposes hereunder and under any Loan Document in accordance with Section 2.06(d)(v) and (y) ending at the time that a Benchmark

Replacement has replaced such then-current Benchmark for all purposes hereunder and under any Loan Document in accordance with Section 2.06(d)(v).

“Beneficial Ownership Certification” shall mean a certification regarding beneficial ownership or control as required by the Beneficial Ownership Regulation.

“Beneficial Ownership Regulation” shall mean 31 C.F.R. § 1010.230.

“Benefit Plan” means any of (a) an “employee benefit plan” (as defined in ERISA) that is subject to Title I of ERISA, (b) a “plan” as defined in and subject to Section 4975 of the Code or (c) any Person whose assets include (for purposes of ERISA Section 3(42) or otherwise for purposes of Title I of ERISA or Section 4975 of the Code) the assets of any such “employee benefit plan” or “plan”.

“Borrower Accession Instrument” shall mean a Borrower Accession Instrument substantially in the form of Exhibit F hereto or such other form that may be approved by the Administrative Agent.

“Borrowers” shall mean the Parent and the Other Borrowers and “Borrower” shall mean one of them.

“Borrowing” shall mean, on any day, the making of (a) a Loan or Loans which are either all Base Rate Loans or all of the same Funding Period or Interest Period, as applicable, or (b) a Swingline Loan.

“Business Day” shall mean a day of the year on which banks are not required or authorized to close in New York, New York; provided, that in the case of matters relating to the Euro-Rate Portion of Revolving Credit Loans, to LIBOR-based Loans, to Absolute Rate Loans denominated in a currency other than Dollars, to SONIA Loans or to Swingline Loans, in each case, “Business Day” shall also include days on which dealings are carried on in the London interbank market (or, with respect to any Revolving Credit Loans which are denominated in Euro, a day upon which such clearing system as is determined by the Administrative Agent to be suitable for clearing or settlement of the Euro is open for business) and banks are open for business in London and in the country of issue of the relevant currency; provided, further, when used with respect to the CDOR Option or a CDOR Loan, Business Day shall also exclude any day of the year on which banks are required or authorized to close in Toronto, Canada; provided, further, when used with respect to the SONIA Option or a SONIA Loan, Business Day shall also exclude any day of the year on which banks are required or authorized to close in London.

“Capital Lease Obligations” of any Person shall mean the obligations of such Person to pay rent or other amounts under any lease of (or other arrangement conveying the right to use) real or personal property, or a combination thereof, which obligations are required to be classified and accounted for as capital leases on a balance sheet of such Person under GAAP, and the amount of such obligations shall be the capitalized amount thereof determined in accordance with GAAP; provided that all obligations of any Person that are or would have been treated as operating leases (including for avoidance of doubt, any network lease or any operating indefeasible right of use) for purposes of GAAP immediately prior to the issuance by the Financial Accounting Standards Board on February 25, 2016 of an Accounting Standards Update

(the “ASU”) shall continue to be accounted for as operating leases for purposes of all financial definitions and calculations for purpose of this Agreement and the other Loan Documents (whether or not such operating lease obligations were in effect on such date) notwithstanding the fact that such obligations are required in accordance with the ASU (on a prospective or retroactive basis or otherwise) to be treated as Capital Lease Obligations in the financial statements to be delivered pursuant to Section 5.01.

“Change of Control” shall mean the occurrence of either of the following:

(a) a “person” (as such term is used in Sections 13(d) and 14(d)(2) of the Securities and Exchange Act of 1934, as in effect on the date hereof) or group of persons (as so used), other than (i) any holding company as to which the Parent is or becomes a wholly-owned Subsidiary so long as the beneficial ownership (as determined pursuant to Rule 13d-3 under the Securities and Exchange Act of 1934) of such holding company and, indirectly, the Parent, is, immediately after the Parent shall become such a wholly-owned Subsidiary of such Person, substantially identical to that of the Parent immediately prior to the Parent becoming such a wholly-owned Subsidiary of such Person (any such Person, a “Parent Holding Company”) or (ii) a trustee of an employee benefit plan sponsored solely by the Parent and/or a Parent Holding Company, is or becomes the “beneficial owner” (as determined pursuant to Rule 13d-3 under the Securities and Exchange Act of 1934), directly or indirectly, of equity interests of the Parent representing more than 45% of the aggregate ordinary voting power of the Parent’s then-outstanding voting equity interests; or

(b) during any period of two consecutive years, the occupation of a majority of the seats (other than vacant seats) on the board of directors of the Parent by directors who were not (i) directors of the Parent at the beginning of such period, (ii) appointed by directors who were directors at the beginning of such period or by directors so appointed or (iii) nominated or approved for election to the board of directors of the Parent by directors described in the preceding clause (i) or (ii).

“CDOR” shall mean, for the relevant CDOR Funding Period, the Canadian deposit offered rate which, in turn means on any day, the sum of (x) the annual rate of interest determined with reference to the arithmetic average of the discount rate quotations of all institutions listed in respect of the relevant CDOR Funding Period for Canadian Dollar-denominated bankers’ acceptances displayed and identified as such on the “Reuters Screen CDOR Page” as defined in the International Swap Dealer Association, Inc. definitions, as modified and amended from time to time, as of 10:00 a.m. Toronto local time on such day and, if such day is not a Business Day, then on the immediately preceding Business Day (as adjusted by the Administrative Agent after 10:00 a.m. Toronto local time to reflect any error in the posted rate of interest or in the posted average annual rate of interest) plus (y) 0.10% per annum; provided that if such rates are not available on the Reuters Screen CDOR Page on any particular day, then the Canadian deposit offered rate component of such rate on that day shall be calculated as the cost of funds quoted by the Administrative Agent to raise Canadian Dollars for the applicable CDOR Funding Period as of 10:00 a.m. Toronto local time on such day for commercial loans or other extensions of credit to businesses of comparable credit risk; or if such day is not a Business Day, then as quoted by the Administrative Agent on the immediately

preceding Business Day. Notwithstanding the foregoing, in no event shall the CDOR be less than zero.

“CDOR Funding Period” shall have the meaning set forth in Section 2.06(b) hereof.

“CDOR Loan” shall mean any Loan, which bears interest at a rate based on the CDOR Option.

“CDOR Option” shall have the meaning set forth in Section 2.06(a)(iii) hereof.

“CDOR Portion” of any Loan or Loans shall mean at any time the portion, including the whole, of such Loan or Loans bearing interest under the CDOR Option or at a rate calculated by reference to the CDOR under Section 4.05(b)(i) hereof. If no Loan or Loans is specified, “CDOR Portion” shall refer to the CDOR Portion of all Loans outstanding at such time.

“Closing Date” shall mean the date on which the last of the conditions set forth in Section 6.01 hereof has been satisfied.

“Code” shall mean the Internal Revenue Code of 1986, as amended, or any successor thereto.

“Commitment” of a Lender shall mean the Revolving Credit Commitment and the Swingline Commitment of such Lender.

“Commitment Fee” shall have the meaning set forth in Section 2.05(a) hereof.

“Commitment Percentage” shall mean, with respect to any Lender, the percentage of the Total Revolving Credit Commitment represented by such Lender’s Revolving Credit Committed Amount; provided that for purposes of Section 4.12 when a Defaulting Lender shall exist, “Commitment Percentage” shall mean the percentage of the Total Revolving Credit Commitment (disregarding any Defaulting Lender’s Revolving Credit Commitment) represented by such Lender’s Revolving Credit Committed Amount. If the Revolving Credit Commitments have terminated or expired, the Commitment Percentage of any Lender shall be the percentage of the Total Revolving Credit Exposure (disregarding any Defaulting Lender’s Revolving Credit Exposure, for purposes of Section 4.12) represented by such Lender’s Revolving Credit Exposure.

“Commitment Termination Date” shall mean the earlier of (a) the Revolving Credit Maturity Date and (b) the date of termination in whole of the Revolving Credit Commitments pursuant to Section 2.05(c) or Section 9.02.

“Communications” shall have the meaning set forth in Section 12.19 hereof.

“Competitive Bid Borrowing” shall have the meaning set forth in Section 3.02(a) hereof.

“Competitive Bid Expiration Date” shall mean March 31, 2026, or such later date as may be established as the Competitive Bid Expiration Date pursuant to Section 4.01 hereof.

“Competitive Bid Loan” or “Competitive Bid Loans” shall mean any or all loans provided for by Article III hereof.

“Competitive Bid Loan Maturity Date” shall have the meaning set forth in Section 3.03 hereof.

“Competitive Bid Loan Quote” shall mean an offer in accordance with Section 3.02(c) hereof by a Lender to make a Competitive Bid Loan.

“Competitive Bid Loan Quote Request” shall have the meaning set forth in Section 3.02(a) hereof.

“Competitive Bid Notes” shall mean the promissory notes of each Borrower executed and delivered pursuant to Section 2.02 and any promissory note issued in substitution therefor pursuant to Sections 4.10(b) or 12.14(c) hereof, together with all extensions, renewals, refinancings or refundings thereof in whole or part.

“Competitive Bid Register” shall have the meaning set forth in Section 3.06 hereof.

“Consolidated Book Net Worth” shall mean at any date the sum of (a) the Parent’s total equity (including total Parent’s shareholders’ equity and noncontrolling interests) as reported on the Parent’s most recently published consolidated balance sheet, plus (b) redeemable noncontrolling interest identified as Commitments and Contingencies on the Parent’s most recently published consolidated balance sheet.

“Consolidated Subsidiary” shall mean a direct or indirect Subsidiary or joint venture of the Parent that is consolidated on the Parent’s most recently published consolidated balance sheet.

“Consolidated Total Debt” shall mean, at any date, the aggregate principal amount of all Indebtedness that would be reflected at such date as short-term borrowings, current portion of long-term debt or long-term debt on a consolidated balance sheet of the Parent and its Subsidiaries prepared in accordance with GAAP, excluding Limited Recourse Debt of any Project Finance Subsidiary.

“Contractual Currency” shall have the meaning set forth in Section 12.15(a) hereof.

“Corresponding Tenor” with respect to any Available Tenor, shall mean, as applicable, either a tenor (including overnight) or an interest payment period having approximately the same length (disregarding business day adjustment) as such Available Tenor.

“Co-Syndication Agents” shall mean BNP Paribas, Citibank, N.A., Deutsche Bank Securities Inc. and HSBC Bank USA, N.A. each in its capacity as syndication agent for the credit facility provided for in this Agreement.

“Credit Event” shall mean and include each of the making of a Loan, the issuance of a Letter of Credit and the Modification of a Letter of Credit.

“Daily Simple SOFR” shall mean, for any day, (a) with respect to Dollars, SOFR, and (b) with respect to Sterling, SONIA, in each case, with the conventions for this rate ~~(which will include a lookback)~~ being established by the Administrative Agent in accordance with the conventions for this rate selected or recommended by the Relevant Governmental Body ~~for determining “Daily Simple SOFR” for syndicated business loans;~~ provided, that in each case, if the Administrative Agent decides that any such convention is not administratively feasible for the Administrative Agent, then the Administrative Agent may establish another convention in its reasonable discretion.

“Defaulting Lender” shall mean any Lender that has (a) failed, within three Business Days of the date required to be funded or paid, to (i) fund any portion of its Loans or (ii) fund any portion of its participations in Letters of Credit, unless, in the case of clause (i) above, such Lender notifies the Administrative Agent in writing that such failure is the result of such Lender’s reasonable determination that a condition precedent to funding (specifically identified and including the particular default, if any) has not been satisfied, (b) notified the Parent, the Administrative Agent or any Lender in writing that it does not intend to comply with any of its funding obligations under this Agreement or has made a public statement to the effect that it does not intend to comply with its funding obligations under this Agreement or generally under other agreements in which it commits to extend credit, (c) failed, within three Business Days after request by the Administrative Agent (which request has been made based on the Administrative Agent’s reasonable belief that such Lender may not fulfill its funding obligation and a copy of which request has been sent to the Parent), to confirm that it will comply with the terms of this Agreement relating to its obligations to fund prospective Loans and participations in then outstanding Letters of Credit; provided that any such Lender shall cease to be a Defaulting Lender under this clause (c) upon receipt of such confirmation by the Administrative Agent, (d) otherwise failed to pay over to the Administrative Agent or any other Lender any other amount required to be paid by it hereunder within three Business Days of the date when due, unless the subject of a good faith dispute, (e) (i) been adjudicated as, or has been determined by any Governmental Authority having regulatory authority over such Person or its assets to be, insolvent or has a parent company that has been adjudicated as, or has been determined by any Governmental Authority having regulatory authority over such Person or its assets to be, insolvent or (ii) become the subject of a bankruptcy or insolvency proceeding, or has had a receiver, conservator, trustee or custodian appointed for it, or has taken any action in furtherance of, or indicating its consent to, approval of or acquiescence in any such proceeding or appointment or has a parent company that has become the subject of a bankruptcy or insolvency proceeding, or has had a receiver, conservator, trustee or custodian appointed for it, or has taken any action in furtherance of, or indicating its consent to, approval of or acquiescence in any such proceeding or appointment (unless in the case of any Lender referred to in this clause (e), the Parent and the Administrative Agent shall be satisfied that such Lender intends, and has all approvals required to enable it, to continue to perform its obligations as a Lender hereunder) or

(f) become the subject of a Bail-In Action. Notwithstanding the foregoing, no Lender shall be a Defaulting Lender solely by virtue of the ownership or acquisition of any equity interest in such Lender or a parent company thereof by a Governmental Authority or an instrumentality thereof or the exercise of control over such lender or Person controlling such Lender by a Governmental Authority or instrumentality thereof. Any determination by the Administrative Agent that a Lender is a Defaulting Lender under clauses (a) through (f) above shall be conclusive and binding absent manifest error, and such Lender shall be deemed to be a Defaulting Lender (subject to Section 4.12(g)) upon delivery of written notice of such determination to the Parent, each Issuer and each Lender.

“Designated Currencies” shall mean Dollars, Canadian dollars, ~~United Kingdom pounds sterling~~ Sterling, Euros and any other lawful currency that is readily available, freely transferable and freely tradable ~~eurocurrency~~ into Dollars, which has been proposed as a Designated Currency by the Parent and is approved in writing as a Designated Currency by all of the Lenders from time to time.

“Designated Equivalent Amount” of any Loan, Letter of Credit (or the undrawn face amount thereof) or LC Disbursement shall mean (a) with respect to a Loan, Letter of Credit or LC Disbursement denominated in Dollars, the equivalent in the applicable Designated Currency of the principal amount of such Loan or LC Disbursement or the undrawn face amount of such Letter of Credit in Dollars based upon the arithmetic mean of the buy and sell spot rates of exchange of the Administrative Agent for such currency at 11:00 a.m., local time, on the date of determination and (b) with respect to a Loan, Letter of Credit or LC Disbursement denominated in such applicable Designated Currency, the principal amount of such Loan or LC Disbursement or the undrawn face amount of such Letter of Credit.

“Dollar”, “Dollars” and the symbol “\$” shall mean lawful money of the United States of America.

“Dollar Denominated Benchmark” shall mean the then-current Benchmark denominated in Dollars.

“Dollar Equivalent Amount” of any Loan, Letter of Credit (or the undrawn face amount thereof) or LC Disbursement shall mean (a) with respect to a Loan, Letter of Credit or LC Disbursement denominated in a currency other than Dollars, the equivalent in Dollars of the principal amount of such Loan or LC Disbursement or the undrawn face amount of such Letter of Credit in such currency based upon the arithmetic mean of the buy and sell spot rates of exchange of the Administrative Agent for such currency at 11:00 a.m., local time, on the date of determination and (b) with respect to a Loan, Letter of Credit or LC Disbursement denominated in Dollars, the principal amount of such Loan or LC Disbursement or the undrawn face amount of such Letter of Credit.

“Domestic Consolidated Subsidiary” shall mean any Consolidated Subsidiary incorporated or organized under the laws of the United States of America, any State thereof or the District of Columbia.

“Domestic Subsidiary” shall mean any Subsidiary incorporated or organized under the laws of the United States of America, any State thereof or the District of Columbia.

“Early Opt-in Election” shall mean,

(a) if the then-current Benchmark is USD LIBOR, the occurrence of

(1) a notification by the Administrative Agent to (or the request by the Borrower to the Administrative Agent to notify) each of the other parties hereto that at least five currently outstanding U.S. dollar-denominated syndicated credit facilities at such time contain (as a result of amendment or as originally executed) a SOFR-based rate (including SOFR, a term SOFR or any other rate based upon SOFR) as a benchmark rate (and such syndicated credit facilities are identified in such notice and are publicly available for review), and

(2) the joint election by the Administrative Agent and the Borrower to trigger a fallback from USD LIBOR and the provision by the Administrative Agent of written notice of such election to the Lenders; and

(b) if the then-current Benchmark is not a Dollar Denominated Benchmark, the occurrence of:

(1) a notification by the Administrative Agent to (or the request by the Borrower to the Administrative Agent to notify) each of the other parties hereto that syndicated credit facilities denominated in the applicable Benchmark that is not a Dollar Denominated Benchmark being executed at such time, or that include language similar to that contained in Section 2.06(d)(v) are being executed or amended, as applicable, to incorporate or adopt a new benchmark interest rate to replace such Benchmark, and

(2) the joint election by the Administrative Agent and the Borrower that an Early Opt-in Election has occurred and the provision by the Administrative Agent of written notice of such election to the Lenders.

“EEA Financial Institution” shall mean (a) any credit institution or investment firm established in any EEA Member Country which is subject to the supervision of an EEA Resolution Authority, (b) any entity established in an EEA Member Country which is a parent of an institution described in clause (a) of this definition, or (c) any financial institution established in an EEA Member Country which is a subsidiary of an institution described in clauses (a) or (b) of this definition and is subject to consolidated supervision with its parent.

“EEA Member Country” shall mean any of the member states of the European Union, Iceland, Liechtenstein, and Norway.

“EEA Resolution Authority” shall mean any public administrative authority or any Person entrusted with public administrative authority of any EEA Member Country (including any delegee) having responsibility for the resolution of any EEA Financial Institution.

“Employee Benefit Plan” shall mean an “employee benefit plan” as defined in Section 3(3) of ERISA.

“Environmental Laws” shall mean all laws, rules, regulations, codes, ordinances, orders, decrees, judgments, injunctions, binding notices or binding agreements issued, promulgated or entered into by any Governmental Authority, relating in any way to the environment, preservation or reclamation of natural resources, the management, release or threatened release of any Hazardous Material or to health and safety matters as they relate to exposure to Hazardous Materials.

“ERISA” shall mean the Employee Retirement Income Security Act of 1974, as amended from time to time, and any successor statute.

“ERISA Affiliate” shall mean any trade or business (whether or not incorporated) that, together with the Parent or any Other Borrower, is treated as a single employer under Section 414(b) or (c) of the Internal Revenue Code, or, solely for purposes of Section 302 of ERISA and Section 412 of the Internal Revenue Code, is treated as a single employer under Section 414 of the Internal Revenue Code.

“ERISA Event” shall mean (a) any “reportable event”, as defined in Section 4043 of ERISA or the regulations issued thereunder with respect to a Plan (other than an event for which the 30-day notice period referred to in Section 4043(c) of ERISA is waived); (b) any failure by any Plan to satisfy the minimum funding standards (within the meaning of Sections 412 or 430 of the Internal Revenue Code or Section 302 of ERISA) applicable to such Plan, whether or not waived; (c) the filing pursuant to Section 412(c) of the Internal Revenue Code or Section 302(c) of ERISA of an application for a waiver of the minimum funding standard with respect to any Plan, the failure to make by its due date a required installment under Section 430(j) of the Internal Revenue Code with respect to any Plan or the failure by the Parent, any Other Borrower or any ERISA Affiliate to make any required contribution to a Multiemployer Plan; (d) the incurrence by the Parent, any Other Borrower or any ERISA Affiliate of any liability under Title IV of ERISA with respect to the termination of any Plan, including but not limited to the imposition of any Lien in favor of the PBGC or any Plan; (e) a determination that any Plan is, or is expected to be, in “at risk” status (within the meaning of Section 430 of the Internal Revenue Code or Section 303 of ERISA); (f) the receipt by the Parent, any Other Borrower or any ERISA Affiliate from the PBGC or a plan administrator of any notice relating to an intention to terminate any Plan or Plans or to appoint a trustee to administer any Plan under Section 4042 of ERISA; (g) the incurrence by the Parent, any Other Borrower or any ERISA Affiliate of any liability under Section 4063 of ERISA with respect to the withdrawal from any Plan; or (h) the receipt by the Parent, any Other Borrower or any ERISA Affiliate of any notice, or the receipt by any Multiemployer Plan from the Parent, any Other Borrower or any ERISA Affiliate of any notice, concerning the imposition of Withdrawal Liability or a determination that a Multiemployer Plan is, or is expected to be, insolvent (within the meaning of Section 4245 of ERISA) or in endangered or critical status (within the meaning of Section 432 of the Internal Revenue Code or Section 305 or Title IV of ERISA).

“ESG Adjustment Amount” shall have the meaning set forth on Annex A to Schedule I hereto.

“EU Bail-In Legislation Schedule” shall mean the EU Bail-In Legislation Schedule published by the Loan Market Association (or any successor person), as in effect from time to time.

“Euro” shall mean the euro referred to in Council Regulation (EC) No. 1103/97 dated June 17, 1997 passed by the Council of the European Union, or, if different, then the lawful currency of the member states of the European Union that participate in the third stage of Economic and Monetary Union.

“Eurocurrency Liabilities” shall have the meaning set forth in the definition of Euro-Rate Reserve Percentage set forth in Section 1.01 hereof.

“Euro-Rate” shall mean, for any day for each Funding Segment of the Euro-Rate Portion corresponding to a proposed or existing Euro-Rate Funding Period,

(i) the applicable ICE Benchmark Administration Interest Settlement Rate (or any other Person that takes over the administration of such rate, including NYSE EuroNext) for deposits in the applicable Designated Currency (other than Euros or Sterling) appearing on an internationally recognized service selected by the Administrative Agent, such as Reuters, for such Designated Currency at approximately 11:00 a.m. (London time) two Business Days prior to the first day of such Euro-Rate Funding Period, and having a maturity equal to such Euro-Rate Funding Period; provided that, if no such service for such Designated Currency is available to the Administrative Agent for any reason, the applicable Euro-Rate for the relevant Euro-Rate Funding Period shall instead be determined by the Administrative Agent as the rate at which the Administrative Agent could borrow funds in the London interbank market in the relevant currency and for the relevant Funding Period, were it to do so by asking for and then accepting interbank offers for deposits in reasonable market size in that currency and for that Funding Period, at approximately 11:00 a.m. (London time) two Business Days prior to the first day of such Euro-Rate Funding Period; or

(ii) the Euro Interbank Offered Rate (or a comparable or successor rate ~~at which rate is~~ approved by the Administrative Agent) for deposits in Euros appearing on an internationally recognized service selected by the Administrative Agent, such as Reuters, for such Designated Currency at approximately 11:00 a.m. (Brussels time) two Business Days prior to the first day of such Euro-Rate Funding Period, and having a maturity equal to such Euro-Rate Funding Period.

Notwithstanding the foregoing, in no event shall the Euro-Rate be less than zero.

“Euro-Rate Funding Period” shall have the meaning set forth in Section 2.06(b) hereof.

“Euro-Rate Loan” shall mean any Loan, which bears interest at a rate based on the Euro-Rate Option.

“Euro-Rate Option” shall have the meaning set forth in Section 2.06(a)(ii) hereof.

“Euro-Rate Portion” of any Loan or Loans shall mean at any time the portion, including the whole, of such Loan or Loans bearing interest at any time under the Euro-Rate Option or at a rate calculated by reference to the Euro-Rate under Section 4.05(b)(i) hereof. If no Loan or Loans is specified, “Euro-Rate Portion” shall refer to the Euro-Rate Portion of all Loans outstanding at such time.

“Euro-Rate Reserve Percentage” shall mean for any day the percentage (expressed as a decimal fraction, rounded upward to the nearest 1/100 of 1%), as determined in good faith by the Administrative Agent (which determination shall be conclusive absent manifest error), which is in effect on such day as prescribed by the Board of Governors of the Federal Reserve System (or any successor) for determining the maximum reserve requirements (including, without limitation, supplemental, marginal and emergency reserve requirements) with respect to liabilities or assets consisting of or including Eurocurrency funding (currently referred to as “Eurocurrency Liabilities”) of a member bank in such System. The Euro-Rate shall be adjusted automatically with respect to any Revolving Credit Loans bearing interest with reference to the Euro-Rate Option outstanding on the effective date of any change in the Euro-Rate Reserve Percentage, as of such effective date.

“Event of Default” shall mean any of the Events of Default described in Section 9.01 hereof.

“Excluded Taxes” shall have the meaning set forth in Section 4.09(h) hereof.

“Existing Agreement” shall mean the Parent’s existing Revolving Credit Agreement dated as of March 31, 2017, as amended by Amendment and Appointment of Successor Administrative Agent, dated as of September 28, 2018.

“Extension Request” shall have the meaning set forth in Section 4.01(a) hereof.

“FATCA” shall mean (a) Sections 1471 through 1474 of the Code as of the date of this Agreement (or any amended or successor version that is substantively comparable and not materially more onerous to comply with), (b) any current or future regulations or official interpretations thereof, and (c) any agreement entered into pursuant to Section 1471(b)(1) of the Code or any intergovernmental agreements entered into in connection with the implementation of (a) and/or (b) and any rules or guidance implementing such agreements.

“Federal Funds Effective Rate” for any day shall mean the rate per annum (rounded upward to the nearest 1/100 of 1%) determined by the Administrative Agent (which determination shall be conclusive absent manifest error) to be the rate per annum announced by the Federal Reserve Bank of New York (or any successor) on such day as being the weighted average of the rates on overnight Federal funds transactions on the previous trading day, as computed and announced by such Federal Reserve Bank (or any successor); provided that if such Federal Reserve Bank (or its successor) does not announce such rate on any day, the “Federal Funds Effective Rate” for such day shall be the weighted average of the quotations received on such day for such transactions by the Administrative Agent from three Federal Funds brokers of recognized standing selected by the Administrative Agent. Notwithstanding the foregoing, in no event shall the Federal Funds Effective Rate be less than zero.

“Fee Letters” shall mean the Arranger Fee Letter and the Mizuho Fee Letter.

“Floor” shall mean the benchmark rate floor, if any, provided in this Agreement initially (as of the execution of this Agreement, the modification, amendment or renewal of this Agreement or otherwise) with respect to USD LIBOR.

“Funding Periods” shall have the meaning set forth in Section 2.06(b) hereof.

“Funding Segment” shall mean:

(a) with respect to the Euro-Rate Portion of the Revolving Credit Loans, at any time, the entire principal amount of such Portion to which at the time in question there is applicable a particular Funding Period beginning on a particular day and ending on a particular day. (By definition, each such Portion is at all times composed of an integral number of discrete Funding Segments and the sum of the principal amounts of all Funding Segments of any such Portion at any time equals the principal amount of such Portion at such time); and

(b) with respect to the CDOR Portion of the Revolving Credit Loans, at any time, the entire principal amount of such Portion to which at the time in question there is applicable a particular Funding Period beginning on a particular day and ending on a particular day. (By definition, each such Portion is at all times composed of an integral number of discrete Funding Segments and the sum of the principal amounts of all Funding Segments of any such Portion at any time equals the principal amount of such Portion at such time.)

“GAAP” shall mean generally accepted accounting principles in the United States as in effect from time to time (including principles of consolidation where appropriate).

“Governmental Authority” shall mean the government of the United States of America, any other nation or any political subdivision thereof, whether state or local, and any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative powers or functions of or pertaining to government (including any supranational bodies such as the European Union or the European Central Bank).

“Guarantee” of or by any Person (the “guarantor”) shall mean any obligation, contingent or otherwise, of the guarantor guaranteeing or having the economic effect of guaranteeing any Indebtedness of any other Person (the “primary obligor”) in any manner, whether directly or indirectly, and including any obligation of the guarantor, direct or indirect, (a) to purchase or pay (or advance or supply funds for the purchase or payment of) such Indebtedness or to purchase (or to advance or supply funds for the purchase of) any security for the payment thereof, (b) to purchase or lease property, securities or services for the purpose of assuring the owner of such Indebtedness of the payment thereof, (c) to maintain working capital, equity capital or any other financial statement condition or liquidity of the primary obligor so as to enable the primary obligor to pay such Indebtedness or (d) as an account party in respect of any letter of credit or letter of guaranty issued to support such Indebtedness; provided that the term Guarantee shall not include endorsements for collection or deposit in the ordinary course of business.

“Guaranteed Obligations” shall mean all Obligations from time to time of the Other Borrowers to the Administrative Agent and the Lenders.

“Hazardous Materials” shall mean all explosive or radioactive substances or wastes and all hazardous or toxic substances, wastes or other pollutants, including petroleum or petroleum distillates, asbestos or asbestos containing materials, polychlorinated biphenyls, radon gas, infectious or medical wastes and all other substances or wastes of any nature that in relevant form or concentration are regulated pursuant to any Environmental Law.

“Indebtedness” of any Person shall mean, without duplication, (a) all obligations of such Person for borrowed money or with respect to deposits or advances of any kind, other than deposits or advances in the ordinary course of business, (b) all obligations of such Person evidenced by bonds, debentures, notes or similar instruments, (c) all obligations of such Person under conditional sale or other title retention agreements relating to property acquired by such Person (other than current accounts payable and trade accounts and accrued expenses incurred in the ordinary course of business and other than customary reservations or retentions of title under agreements with suppliers entered in the ordinary course of business), (d) all obligations of such Person in respect of the deferred purchase price of property or services having the effect of a borrowing (other than (i) current accounts payable and trade accounts and accrued expenses incurred in the ordinary course of business and (ii) any noncomplete agreement, purchase price adjustment, earnout or deferred payment of a similar nature), (e) all Indebtedness of others secured by (or for which the holder of such Indebtedness has an existing right, contingent or otherwise, to be secured by) any Lien on property owned or acquired by such Person, whether or not the Indebtedness secured thereby has been assumed, but limited to the book value of such property when recourse is limited to such property, (f) all Guarantees by such Person in respect of Indebtedness of others, (g) all Capital Lease Obligations of such Person, (h) all obligations, contingent or otherwise, of such Person as an account party in respect of letters of credit and letters of guaranty and (i) all obligations, contingent or otherwise, of such Person in respect of bankers’ acceptances. The Indebtedness of any Person shall include the Indebtedness of any other entity (including any partnership in which such Person is a general partner) to the extent such Person is liable therefor as a result of such Person’s ownership interest in or other relationship with such entity, except to the extent the terms of such Indebtedness provide that such Person is not liable therefor.

“Indemnified Parties” shall mean the Agents, the Issuers, the Lenders (including, for the avoidance of doubt, the Swingline Lenders), their respective Affiliates, and the directors, officers, employees, attorneys and agents of each of the foregoing.

“Indemnified Taxes” shall have the meaning set forth in Section 4.09(c) hereof.

“Indenture” shall mean the Indenture dated as of April 30, 2020, between the Parent and The Bank of New York Mellon Trust Company, N.A.

“Initial Other Borrowers” shall mean the Subsidiaries of the Parent listed on Schedule II hereto.

“Initial Revolving Credit Committed Amount” shall have the meaning set forth in Section 2.01(a) hereof.

“Interest Period” shall mean with respect to any Competitive Bid Loan, the period commencing on the date such Competitive Bid Loan is made and ending on a date not less than seven days thereafter (with respect to any Absolute Rate Loan) or one, three or six months thereafter (with respect to any LIBO-Rate Loan), as the Parent may specify in the related Standard Notice or Competitive Bid Loan Quote Request as provided in Section 3.02(a) hereof; provided that:

(i) No Interest Period may end after the Revolving Credit Maturity Date or Competitive Bid Expiration Date;

(ii) Each Interest Period that would otherwise end on a day that is not a Business Day shall end on the next succeeding Business Day or, in the case of an Interest Period for a LIBOR-based Loan, the term “month” shall be construed in accordance with prevailing practices in the interbank eurocurrency market at the commencement of such Interest Period; and

(iii) Notwithstanding clauses (i) and (ii) above, no Interest Period for any Competitive Bid Loan shall have a duration of less than seven days and, if the Interest Period for any Competitive Bid Loan would otherwise be a shorter period, such Competitive Bid Loan shall not be available hereunder.

“ISDA Definitions” shall mean the 2006 ISDA Definitions published by the International Swaps and Derivatives Association, Inc. or any successor thereto, as amended or supplemented from time to time, or any successor definitional booklet for interest rate derivatives published from time to time by the International Swaps and Derivatives Association, Inc. or such successor thereto.

“Issuer” shall mean, as the context may require, (a) initially, each of Mizuho, BNP Paribas, Citibank, N.A., Deutsche Bank AG New York Branch and HSBC Bank USA, N.A. and (b) any new or replacement issuer of Letters of Credit named hereunder pursuant to Section 2.11(j) or Section 2.11(h), respectively, each in its capacity as an issuing bank of Letters of Credit issued by such Lender hereunder. With respect to any Letter of Credit or requested Letter of Credit or any amounts payable relating thereto, “Issuer” means the issuer thereof. An Issuer may, in its discretion, arrange for one or more Letters of Credit to be issued by its Affiliates (so long as the applicable Affiliate has been approved by the Parent, which approval will not be unreasonably withheld), in which case the term “Issuer” shall include any such Affiliate with respect to Letters of Credit issued by such Affiliate.

“Issuer Commitment” shall mean, with respect to any Issuer at any time, the amount set forth as its “Letter of Credit Committed Amount” on Schedule IV.B to issue Letters of Credit hereunder, as such amount may be increased, reduced or terminated pursuant to Section 2.11(h) or (j), as applicable.

“Issuer Exposure” shall mean, at any time with respect to any Issuer, the sum of (x) the aggregate undrawn amount at such time of all outstanding Letters of Credit issued by such Issuer plus (y) the aggregate amount at such time of all LC Disbursements relating to Letters of Credit issued by such Issuer that have not yet been reimbursed by or on behalf of the Parent or the Relevant Borrower.

“Judgment Currency” shall have the meaning set forth in Section 12.15(a) hereof.

“Law” shall mean any law (including common law), constitution, statute, treaty, convention, regulation, rule, ordinance, order, injunction, writ, decree or award of any Governmental Authority.

“LC Disbursement” shall mean a payment made by any Issuer pursuant to a Letter of Credit.

“LC Exposure” shall mean, at any time, the sum of (x) the aggregate undrawn amount of all outstanding Letters of Credit at such time plus (y) the aggregate amount of all LC Disbursements that have not yet been reimbursed by or on behalf of the Parent or Relevant Borrower at such time. The LC Exposure of any Lender at any time shall be its Commitment Percentage of the total LC Exposure at such time.

“Lender” shall mean any of the Lenders listed on the signature pages hereof, subject to the provisions of Sections 4.10 and 12.14 hereof pertaining to Persons becoming or ceasing to be Lenders. Unless the context clearly indicates otherwise, the term “Lender” includes the Swingline Lenders.

“Letter of Credit” shall mean a standby letter of credit issued pursuant to Section 2.11 hereof.

“Letter of Credit Fee” shall have the meaning set forth in Section 2.05(b) hereof.

“Letter of Credit Maturity Date” shall mean as defined in Section 2.11.

“Letter of Credit Sublimit” shall mean \$400,000,000.

“Leverage Ratio” shall mean, at any time, the ratio of (a) the Consolidated Total Debt at such time to (b) the sum of (x) the Consolidated Total Debt at such time plus (y) the Consolidated Book Net Worth at such time.

“LIBO-Rate” shall mean, with respect to each LIBOR-based Loan, the London interbank offered rate administered by ICE Benchmark Administration Limited (or any other Person that takes over administration of such rate) appearing on Reuters “LIBOR 01” screen (or on any successor or substitute page of such Reuters screen providing rate quotations comparable to those currently provided on such page of such Reuters screen, as determined by the Administrative Agent from time to time for purposes of providing quotations of interest rates for deposits in the relevant currency in the London interbank market) at approximately 11:00 a.m., London time, two Business Days prior to the making of such Loan, as the rate for the offering of the relevant currency deposits with a maturity comparable to the Interest Period of such LIBOR-based Loan; provided that, if no such service is available to the Administrative Agent for any reason, the applicable LIBO-Rate for the relevant currency shall instead be determined by the Administrative Agent as the rate at which the Administrative Agent could borrow funds in the London interbank market in the relevant currency and for the relevant Interest Period, were it to do so by asking for and then accepting interbank offers for deposits in reasonable market size in that currency and for that Interest Period, at approximately 11:00 a.m. (London time) two

Business Days prior to the day such Loan is to be made for delivery. Notwithstanding the foregoing, in no event shall the LIBO-Rate be less than zero.

“LIBOR Auction” shall mean a solicitation of Competitive Bid Loan Quotes setting forth LIBOR-based Margins based on the LIBO-Rate pursuant to Article III hereof.

“LIBOR Market Index Rate” shall mean, for any day, the rate for one (1) month U.S. dollar deposits as reported on Reuters Screen LIBOR01 (or any applicable successor page) as of 11:00 a.m., London time, for such day; provided, (i) if such day is not a Business Day, the immediately preceding Business Day (or if not so reported, then as determined by the Administrative Agent from another recognized source or interbank quotation) and (ii) if such rate shall be less than zero, such rate shall be deemed to be zero.

“LIBOR-based Loans” shall mean Competitive Bid Loans the interest rates of which are determined on the basis of the LIBO-Rate pursuant to a LIBOR Auction.

“LIBOR-based Margin” shall have the meaning set forth in Section 3.02(c)(ii)(C).

“Lien” shall mean, with respect to any asset, (a) any mortgage, deed of trust, lien, pledge, hypothecation, encumbrance, charge or security interest in, on or of such asset, (b) the interest of a vendor or a lessor under any conditional sale agreement, capital lease or title retention agreement (or any financing lease having substantially the same economic effect as any of the foregoing) relating to such asset and (c) in the case of securities, any purchase option, call or similar right of a third party with respect to such securities.

“Limited Recourse Debt” shall mean indebtedness of a Project Finance Subsidiary as to which, at the time a determination is being made, the holder of such indebtedness has recourse, with respect to such indebtedness, solely against the assets it has financed or the cash flows therefrom and does not have direct or indirect recourse (through a guarantee, keepwell or otherwise) against the Parent, any other Subsidiary or any of their assets other than the stock (or similar equity interest) of such Project Finance Subsidiary.

“Liquidation Currency” shall have the meaning set forth in Section 12.15(b)(i) hereof.

“Loan” shall mean any loan by a Lender under this Agreement, whether a Revolving Credit Loan, a Competitive Bid Loan or a Swingline Loan and “Loans” shall mean all Revolving Credit Loans, all Competitive Bid Loans and all Swingline Loans made by Lenders under this Agreement.

“Loan Documents” shall mean this Agreement, the Notes, the Borrower Accession Instruments, the Assignment Agreements and the Notices of Assignment.

“Material Adverse Effect” shall mean a material adverse effect on (a) the business, property, operations or financial condition of the Parent and its Subsidiaries, taken as a whole, (b) the ability of the Parent to perform its payment obligations under this Agreement and the other Loan Documents or (c) the validity or enforceability of this Agreement or any of the

other Loan Documents or the rights and remedies of the Administrative Agent or the Lenders hereunder or thereunder.

“Mizuho” shall mean Mizuho Bank, Ltd. and its successors.

“Mizuho Fee Letter” shall mean the Mizuho Fee Letter dated March 1, 2021 between the Parent and Mizuho.

“Modify” and “Modification” shall have the meaning set forth in Section 2.11(a).

“Moody’s” shall have the meaning set forth in Schedule I hereto.

“Multiemployer Plan” shall mean a multiemployer plan as defined in Section 4001(a)(3) of ERISA.

“National Currency Unit” shall mean the unit of currency (other than a Euro unit) of each member of the European Union that participates in the third stage of Economic and Monetary Union.

“Non-Consenting Lender” shall have the meaning set forth in Section 12.03 hereof.

“Nonextending Lender” shall have the meaning set forth in Section 4.01(b) hereof.

“Note” or “Notes” shall mean the Revolving Credit Note(s) or the Competitive Bid Note(s), as the case may be.

“Notional Funding Office” shall have the meaning given to that term in Section 4.10(a) hereof.

“Obligations” shall mean all indebtedness, obligations and liabilities of each of the Borrowers to any Lender or the Administrative Agent from time to time arising under or evidenced by or secured by this Agreement or any other Loan Document, and all extensions or renewals thereof, whether such indebtedness, obligations or liabilities are direct or indirect, joint or several, absolute or contingent, due or to become due, now existing or hereafter arising. Without limitation of the foregoing, such indebtedness, obligations and liabilities include the principal amount of Loans, reimbursement obligations with respect to Letters of Credit, interest, fees, indemnities or expenses under or in connection with this Agreement or any other Loan Document, and all extensions or renewals thereof, whether or not such Loans were made in compliance with the terms and conditions of this Agreement or in excess of the obligation of the Lenders to lend. Obligations shall remain Obligations notwithstanding any assignment or transfer or any subsequent assignment or transfer of any of the Obligations or any interest therein.

“OFAC” shall mean the U.S. Department of the Treasury’s Office of Foreign Assets Control or any successor thereto.

“Option” shall mean the Base Rate Option, the Euro-Rate Option, the SONIA Option or the CDOR Option as the case may be.

“Other Borrower Removal Notice” shall mean an Other Borrower Removal Notice substantially in the form of Exhibit G hereto, as amended, modified or supplemented from time to time.

“Other Borrowers” shall mean the Initial Other Borrowers and each other wholly-owned Subsidiary of the Parent which becomes a party to this Agreement by the execution and delivery by such Subsidiary and the Parent to the Administrative Agent of a Borrower Accession Instrument and the other documentation referred to in such Borrower Accession Instrument, but shall not include any Subsidiary of the Parent that (a) the Administrative Agent reasonably determines would violate any law, regulation or order of any Governmental Authority (to include, without limitation, applicable “know your customer” and anti-money laundering rules and regulations and the USA PATRIOT Act) or any internal regulation or policy of the Administrative Agent or (b) ceases to be a party to this Agreement upon (i) the execution and delivery by such Subsidiary and the Parent to the Administrative Agent of an Other Borrower Removal Notice, (ii) the repayment in full in cash of all Obligations owed by such Subsidiary and (iii) the expiry or cancellation of all Letters of Credit issued for its account.

“Other Taxes” shall have the meaning set forth in Section 4.09(b).

“Parent” shall mean Air Products and Chemicals, Inc., a Delaware corporation.

“Participant Register” shall have the meaning set forth in Section 12.14(b) hereof.

“Participants” shall have the meaning set forth in Section 12.14(b) hereof.

“PBGC” shall mean the Pension Benefit Guaranty Corporation referred to and defined in ERISA and any successor entity performing similar functions.

“Person” shall mean an individual, corporation, partnership, limited liability company, trust, unincorporated association, joint venture, joint-stock company, Governmental Authority or any other entity.

“Plan” shall mean any “employee pension benefit plan” as defined in Section 3(2) of ERISA (other than a Multiemployer Plan) subject to the provisions of Title IV of ERISA, Section 412 of the Internal Revenue Code or Section 302 of ERISA, and in respect of which the Parent, any Other Borrower or any ERISA Affiliate is (or, if such plan were terminated, would under Section 4069 of ERISA be deemed to be) an “employer” as defined in Section 3(5) of ERISA.

“Platform” shall have the meaning set forth in Section 12.19 hereof.

“Portion” shall mean the Base Rate Portion, the Euro-Rate Portion, the SONIA Portion or the CDOR Portion, as the case may be.

“Potential Event of Default” shall mean any event or circumstance which with giving of notice or lapse of time, or any combination of the foregoing, would constitute an Event of Default.

“Prime Rate” shall mean the rate of interest last quoted by The Wall Street Journal as the “Prime Rate” in the United States or, if The Wall Street Journal ceases to quote such rate, the highest per annum interest rate published by the Federal Reserve Board in Federal Reserve Statistical Release H.15 (519) (Selected Interest Rates) as the “bank prime loan” rate or, if such rate is no longer quoted therein, any similar rate quoted therein (as determined by the Administrative Agent) or any similar release by the Federal Reserve Board (as determined by the Administrative Agent).

“Principal Property” shall mean any manufacturing plant, research facility or warehouse owned or leased by the Parent or any Subsidiary which is located within the United States of America and has a net book value exceeding 3% of the total assets of the Parent and its consolidated Subsidiaries, as shown on the audited balance sheet in the latest annual report to shareholders of the Parent; provided, however, that the term “Principal Property” shall not include any such plant, facility or warehouse or portion thereof which the board of directors of the Parent by resolution declares is not of material importance to the total business conducted by the Parent and its Subsidiaries as an entirety.

“Project Finance Subsidiary” shall mean any Subsidiary of the Parent formed or utilized for the primary purpose of owning or operating specific assets, the acquisition of which, to the extent financed, is financed solely by Limited Recourse Debt.

“Pro Rata” shall mean, with respect to each Lender: (a) in the case of payments of Commitment Fees, participation fees with respect to Letters of Credit, participations in Letters of Credit and unreimbursed LC Disbursements, reductions pursuant to Section 2.05(c) hereof of the Revolving Credit Committed Amounts and indemnification payments under Section 11.07 hereof, ratably in accordance with such Lender’s Commitment Percentage and (b) in the case of payments and prepayments of principal of and interest on, and conversions and renewals of interest rate Options with respect to, any particular Revolving Credit Loans, ratably in accordance with such Lender’s percentage share of such Revolving Credit Loans.

“PTE” means a prohibited transaction class exemption issued by the U.S. Department of Labor, as any such exemption may be amended from time to time.

“Public Debt Rating” shall mean, as of any date, the rating that has been most recently announced by either S&P or Moody’s, as the case may be, for any class of non-credit enhanced long-term senior unsecured debt issued by the Parent.

“Reference Time” with respect to any setting of the then-current Benchmark shall mean (1) if such Benchmark is USD LIBOR, 11:00 a.m. (London time) on the day that is two London banking days preceding the date of such setting, and (2) if such Benchmark is not USD LIBOR, the time determined by the Administrative Agent in its reasonable discretion.

“Register” shall have the meaning set forth in Section 12.14(d) hereof.

“Regular Payment Date” shall mean the last Business Day of each March, June, September and December.

“Related Litigation” shall have the meaning set forth in Section 12.16(b) hereof.

“Relevant Borrower” shall mean (a) with respect to a Loan or a proposed Loan, the Borrower to which such Loan was made or is proposed to be made, as the case may be and (b) with respect to a Letter of Credit or a requested Letter of Credit, the Borrower which has requested the issuance of such Letter of Credit and for whose account such Letter of Credit is issued or requested to be issued, as the case may be.

“Relevant Governmental Body” shall mean (i) with respect to the Dollar Denominated Benchmark, the Board of Governors of the Federal Reserve System or the Federal Reserve Bank of New York, or a committee officially endorsed or convened by the Board of Governors of the Federal Reserve System or the Federal Reserve Bank of New York, or any successor thereto or (ii) with respect to any Benchmark denominated in a currency other than Dollars, (a) the central bank for the currency in which such Benchmark is denominated or any central bank or the regulatory supervisor for the administrator of such Benchmark (or the published component used in the calculation thereof), (b) any working group or committee officially endorsed or convened by (1) the central bank for the currency in which such Benchmark is denominated, (2) any central bank or other supervisor that is responsible for supervising either (A) such Benchmark or (B) the administrator of such Benchmark, (3) a group of those central banks or other supervisors, (4) the Financial Stability Board or any part thereof, (5) an insolvency official with jurisdiction over the administrator for such Benchmark (or such component), (6) a resolution authority with jurisdiction over the administrator for such Benchmark (or such component) or (7) a court or an entity with similar insolvency or resolution authority over the administrator for such Benchmark (or such component).

“Replacement Lender” shall have the meaning set forth in Section 4.01(b) hereof.

“Required Lenders” shall mean, at any time prior to the termination or expiration of the Commitments, Lenders which have Revolving Credit Committed Amounts constituting, in the aggregate, at least a 50.1% of the Total Revolving Credit Commitment at such time and shall mean, at any time thereafter, Lenders which have outstanding Loans (other than Swingline Loans), Swingline Exposure and LC Exposure constituting, in the aggregate, at least a majority of all Loans, Swingline Exposure and LC Exposure outstanding at such time.

“Requisite Extending Lenders” shall mean at any time Lenders having Revolving Credit Committed Amounts constituting at least a majority of the Revolving Credit Committed Amounts of all Lenders at such time.

“Resolution Authority” shall mean an EEA Resolution Authority or, with respect to any UK Financial Institution, a UK Resolution Authority.

“Restricted Subsidiary” shall mean any Subsidiary (a) substantially all of the property of which is located, or substantially all of the business of which is carried on, within the United States of America and (b) which owns or leases a Principal Property.

“Revolving Credit Committed Amount” shall mean, with respect to any Lender at any time, the amount set forth as its “Revolving Credit Committed Amount” on Schedule IV.A to make Revolving Credit Loans hereunder (and to acquire participation in Swingline Loans and Letters of Credit as provided for herein), as such amount may have been reduced pursuant to Section 2.05(c) or increased pursuant to Section 2.10 hereof at such time, and subject to transfer to or from another Lender as provided in Section 12.14 hereof.

“Revolving Credit Commitment” shall mean the commitment of such Lender in an amount equal to its Revolving Credit Committed Amount to make Revolving Credit Loans and to acquire participations in Letters of Credit and Swingline Loans in accordance with the terms hereof.

“Revolving Credit Exposure” shall mean, with respect to any Lender at any time, the sum of the outstanding principal amount of such Lender’s Revolving Credit Loans *plus* its LC Exposure at such time *plus* its Swingline Exposure at such time.

“Revolving Credit Loans” shall have the meaning set forth in Section 2.01(a) hereof.

“Revolving Credit Maturity Date” shall mean March 31, 2026, as such date may be extended (solely with respect to Lenders consenting thereto) pursuant to Section 4.01 hereof.

“Revolving Credit Notes” shall mean the promissory notes of each Borrower executed and delivered pursuant to Section 4.10(b), the promissory notes of each Borrower executed and delivered pursuant to Section 2.02, and any promissory note issued in substitution therefor pursuant to Sections 4.10(b) or 12.14(c) hereof, together with all extensions or renewals thereof in whole or part.

“Sanctions” shall mean economic or financial sanctions or trade embargoes imposed, administered or enforced from time to time by (a) the United States government, including those administered by OFAC or the United States Department of State, or (b) the United Nations Security Council, the European Union or Her Majesty’s Treasury of the United Kingdom.

“Sanctioned Country” shall mean, at any time, a country, region or territory which is itself, or whose government is, the subject or target of comprehensive Sanctions broadly restricting or prohibiting dealings with such country, region, territory or government (at the time of this Agreement, Crimea, Cuba, Iran, North Korea and Syria).

“Sanctioned Person” shall mean, at any time, (a) any Person listed in any Sanctions-related list of designated Persons maintained by OFAC or the U.S. Department of State, or by the United Nations Security Council, the European Union or Her Majesty’s Treasury of the United Kingdom, (b) any Person located, organized or resident in, or any Governmental Entity or governmental instrumentality of, a Sanctioned Country or (c) any Person owned 50% or

more or controlled by any such Person or Persons described in the foregoing clauses (a) and (b), in each case, to the extent dealings are prohibited or restricted with such Person under Sanctions.

“S&P” shall have the meaning set forth in Schedule I hereto.

“SOFR” shall mean, with respect to any Business Day, a rate per annum equal to the secured overnight financing rate for such Business Day published by the SOFR Administrator on the SOFR Administrator’s Website on the immediately succeeding Business Day.

“SOFR Administrator” shall mean the Federal Reserve Bank of New York (or a successor administrator of the secured overnight financing rate).

“SOFR Administrator’s Website” shall mean the website of the Federal Reserve Bank of New York, currently at <http://www.newyorkfed.org>, or any successor source for the secured overnight financing rate identified as such by the SOFR Administrator from time to time.¶

“SONIA” shall mean, for any Business Day, the Sterling Overnight Index Average Reference Rate for deposits in Sterling appearing on an internationally recognized service selected by the Administrative Agent, such as Reuters, for such Designated Currency at approximately 11:00 a.m. (London time) five Business Days prior to such Business Day. Notwithstanding the foregoing, in no event shall SONIA be less than zero.¶

“SONIA Administrator” means the Bank of England (or any successor administrator of the Sterling Overnight Index Average).¶

“SONIA Administrator’s Website” means the Bank of England’s website, currently at <http://www.bankofengland.co.uk>, or any successor source for the Sterling Overnight Index Average identified as such by the SONIA Administrator from time to time.¶

“SONIA Loan” shall mean any Loan, which bears interest at a rate based on the SONIA Option.¶

“SONIA Option” shall have the meaning set forth in Section 2.06(a)(iii) hereof.¶

“SONIA Portion” of any Loan or Loans shall mean at any time the portion, including the whole, of such Loan or Loans bearing interest at any time under the SONIA Option or at a rate calculated by reference to SONIA under Section 4.05(b)(i) hereof. If no Loan or Loans is specified, “SONIA Portion” shall refer to the SONIA Portion of all Loans outstanding at such time.

“Standard Notice” shall mean an irrevocable notice, substantially in the form of Exhibit I hereto, provided to the Administrative Agent on a Business Day which is:

(i) At least three Business Days in advance in the case of selection of, conversion to or renewal of the Euro-Rate Option or prepayment of any Euro-Rate Portion that is denominated in Dollars;

(ii) At least four Business Days in advance in the case of selection of, conversion to or renewal of the Euro-Rate Option or prepayment of any Euro-Rate Portion that is denominated in a currency other than Dollars;

(iii) At least four Business Days in advance in the case of selection of, conversion to or renewal of the CDOR Option or prepayment of any CDOR Portion that is denominated in Canadian Dollars; ¶

(iv) At least four Business Days in advance in the case of selection of, conversion to or renewal of the SONIA Option or prepayment of any SONIA Portion that is denominated in Sterling

(v) ~~(iv)~~ On the same Business Day in the case of selection of, conversion to or renewal of the Base Rate Option or prepayment of Base Rate Portion; and

(vi) ~~(v)~~ On the same Business day in the case of a borrowing of Swingline Loans.

Standard Notice must be provided no later than (a) 11:00 a.m., New York time, on the last day permitted for such notice in the case of notices delivered pursuant to clauses (i), (ii), ~~(iii)~~ and ~~(iiiiv)~~ above, (b) 10:00 a.m., New York time, on the last day permitted for such notice in the case of notices delivered pursuant to clause ~~(ivv)~~ above and (c) 2:00 p.m., New York time, on the last day permitted for such notice in the case of notices delivered pursuant to clause ~~(vvi)~~ above.¶

“Sterling” or “£” mean the lawful currency of the United Kingdom.

“Subsidiary” of a Person shall mean (a) any corporation more than 50% of the outstanding securities having ordinary voting power of which shall at the time be owned or controlled, directly or indirectly, by such Person or by one or more of its Subsidiaries or by such Person and one or more of its Subsidiaries, or (b) any partnership, limited liability company, association, joint venture or similar business organization more than 50% of the ownership interests having ordinary voting power of which shall at the time be so owned or controlled. Unless otherwise expressly provided, all references herein to a “Subsidiary” shall mean a Subsidiary of the Parent.

“Successor Borrower” shall have the meaning set forth in Section 9.01(f) hereof.

“Sustainability Structuring Agent” shall mean Mizuho.

“Swingline Commitment” shall mean, with respect to any Swingline Lender at any time, the amount set forth as its “Swingline Loans Committed Amount” on Schedule IV.C to

fund Swingline Loans hereunder, as such amount may be increased, reduced or terminated pursuant to Section 2.11(e) or (f), as applicable.

“Swingline Exposure” shall mean, at any time, the aggregate principal amount of all Swingline Loans outstanding at such time. The Swingline Exposure of any Lender at any time shall be its Commitment Percentage of the total Swingline Exposure at such time.

“Swingline Lender” shall mean, as the context may require, (a) Mizuho in its capacity as Lender of Swingline Loans hereunder and (b) any other Lender that is reasonably acceptable to the Borrowers and the Administrative Agent that may become a Swingline Lender pursuant to Section 2.04(e) or 2.04(f), each in its capacity as lender of Swingline Loans made by such Lender hereunder.

“Swingline Loan” shall mean a Loan made pursuant to Section 2.04.

“Swingline Sublimit” shall mean \$100,000,000.

“Taxes” shall have the meaning set forth in Section 4.09(a) hereof.

“Term SOFR” shall mean, for the applicable Corresponding Tenor as of the applicable Reference Time, the forward-looking term rate based on SOFR that has been selected or recommended by the Relevant Governmental Body.

“Term SOFR Notice” shall mean a notification by the Administrative Agent to the Lenders and the Borrower of the occurrence of a Term SOFR Transition Event.

“Term SOFR Transition Event” shall mean, solely with respect to the Dollar Denominated Benchmark, the determination by the Administrative Agent that (a) Term SOFR has been recommended for use by the Relevant Governmental Body, (b) the administration of Term SOFR is administratively feasible for the Administrative Agent and (c) a Benchmark Transition Event has previously occurred resulting in a Benchmark Replacement in accordance with Section 2.06(d)(v) that is not Term SOFR.

“Total Revolving Credit Commitment” shall mean, at any time, the aggregate Revolving Credit Committed Amounts of all Lenders at such time.

“Total Revolving Credit Exposure” shall mean, at any time, the aggregate Revolving Credit Exposure of all Lenders at such time.

“UK Financial Institution” shall mean any BRRD Undertaking (as such term is defined under the PRA Rulebook (as amended from time to time) promulgated by the United Kingdom Prudential Regulation Authority) or any person falling within IFPRU 11.6 of the FCA Handbook (as amended from time to time) promulgated by the United Kingdom Financial Conduct Authority, which includes certain credit institutions and investment firms, and certain affiliates of such credit institutions or investment firms.

“UK Resolution Authority” shall mean the Bank of England or any other public administrative authority having responsibility for the resolution of any UK Financial Institution.

“Unadjusted Benchmark Replacement” shall mean the applicable Benchmark Replacement excluding the related Benchmark Replacement Adjustment.

“USA PATRIOT Act” shall mean the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001, as amended from time to time.

“USD LIBOR” shall mean the London interbank offered rate for Dollars.

“Withdrawal Liability” shall mean liability to a Multiemployer Plan as a result of a complete or partial withdrawal from such Multiemployer Plan, as such terms are defined in Title IV of ERISA.

“Withholding Agent” shall mean the Parent, each Other Borrower, the Administrative Agent, and in the case of a payment to a Participant such term shall also mean the Lender selling the applicable participation interest.

“Write-Down and Conversion Powers” shall mean, (a) with respect to any EEA Resolution Authority, the write-down and conversion powers of such EEA Resolution Authority from time to time under the Bail-In Legislation for the applicable EEA Member Country, which write-down and conversion powers are described in the EU Bail-In Legislation Schedule, and (b) with respect to the United Kingdom, any powers of the applicable Resolution Authority under the Bail-In Legislation to cancel, reduce, modify or change the form of a liability of any UK Financial Institution or any contract or instrument under which that liability arises, to convert all or part of that liability into shares, securities or obligations of that person or any other person, to provide that any such contract or instrument is to have effect as if a right had been exercised under it or to suspend any obligation in respect of that liability or any of the powers under that Bail-In Legislation that are related to or ancillary to any of those powers.

Section 1.02 Construction. Unless the context of this Agreement otherwise clearly requires, references to the plural include the singular, the singular the plural and the part the whole; “or” has the inclusive meaning represented by the phrase “and/or”; and “property” includes all properties and assets of any kind or nature, tangible or intangible, real, personal or mixed. References in this Agreement to “determination” (and similar terms) by the Administrative Agent or by any Lender include reasonable and good faith estimates by the Administrative Agent or by such Lender (in the case of quantitative determinations) and good faith beliefs by the Administrative Agent or by such Lender (in the case of qualitative determinations). Unless the context requires otherwise, (a) any definition of or reference to any agreement, instrument or other document herein (including this Agreement) shall be construed as referring to such agreement, instrument or other document as from time to time amended, supplemented or otherwise modified (subject to any restrictions on such amendments, supplements or modifications set forth herein), (b) any reference herein to any Person shall be construed to include such Person’s successors and assigns (subject to any restrictions on assignment set forth herein) and, in the case of any Governmental Authority, any other Governmental Authority that shall have succeeded to any or all functions thereof, (c) any definition of or reference to any Laws shall be construed as referring thereto as from time to time amended, supplemented or otherwise modified (including by succession of comparable successor

Laws). The words “hereof,” “herein,” “hereunder” and similar terms in this Agreement refer to this Agreement as a whole and not to any particular provision of this Agreement. The section and other headings contained in this Agreement and the Table of Contents preceding this Agreement are for reference purposes only and shall not control or affect the construction of this Agreement or the interpretation thereof in any respect. Section, clause, exhibit, paragraph and schedule references are to this Agreement unless otherwise specified.

Section 1.03 Accounting Principles. All computations and determinations as to accounting or financial matters shall be made, and all financial statements to be delivered pursuant to this Agreement shall be prepared, in accordance with, and all accounting or financial terms shall have the meanings ascribed to such terms by, GAAP as in effect from time to time; provided that if the Parent notifies the Administrative Agent that the Parent requests an amendment to any provision hereof to eliminate the effect of any change occurring after the date hereof in GAAP or in the application thereof on the operation of such provision (or if the Administrative Agent notifies the Parent that the Required Lenders request an amendment to any provision hereof for such purpose), regardless of whether any such notice is given before or after such change in GAAP or in the application thereof, then such provision shall be interpreted on the basis of GAAP as in effect and applied immediately before such change shall have become effective until such notice shall have been withdrawn or such provision amended in accordance herewith. Notwithstanding any other provision contained herein, all computations of amounts and ratios referred to in this Agreement shall be made without giving effect to any election under FASB ASC Topic 825 “Financial Instruments” (or any other financial accounting standard having a similar result or effect) to value any Indebtedness of the Parent at “fair value” as defined therein.

Section 1.04 Divisions. For all purposes under the Loan Documents, in connection with any division or plan of division under Delaware law (or any comparable event under a different jurisdiction’s laws): (a) if any asset, right, obligation or liability of any Person becomes the asset, right, obligation or liability of a different Person, then it shall be deemed to have been transferred from the original Person to the subsequent Person, and (b) if any new Person comes into existence, such new Person shall be deemed to have been organized on the first date of its existence by the holders of its equity interests at such time.

Article II

THE REVOLVING CREDIT LOANS

Section 2.01 Revolving Credit Commitments.

(a) Revolving Credit Commitments. Subject to the terms and conditions and relying upon the representations and warranties herein set forth, each Lender, severally and not jointly, agrees to make loans (other than Swingline Loans) in Designated Currencies (the “Revolving Credit Loans”) to the Parent or to an Other Borrower from time to time on or after the date hereof and to but not including the Revolving Credit Maturity Date; provided that:

(i) a Lender shall have no obligation to make any Revolving Credit Loan to the extent that, upon the making of such Revolving Credit Loan, the aggregate Dollar Equivalent Amount of such Lender's Revolving Credit Exposure would exceed such Lender's Revolving Credit Committed Amount; and

(ii) no Revolving Credit Loans shall be made hereunder to the extent that such Revolving Credit Loans would cause the Dollar Equivalent Amount of the Total Revolving Credit Exposure and Competitive Bid Loans then outstanding to exceed the Total Revolving Credit Commitment.

(b) Nature of Credit. Within the limits of time and amount set forth in this Section 2.01, and subject to the provisions of this Agreement, the Borrowers may borrow, repay and reborrow Revolving Credit Loans hereunder. Each Revolving Credit Loan shall be made to a single Borrower and shall be made in one of the Designated Currencies selected by the Parent in accordance with this Article II.

(c) Maturity. To the extent not due and payable earlier, the applicable Borrower shall repay the Revolving Credit Loans on the Revolving Credit Maturity Date.

Section 2.02 Noteless Agreement; Evidence of Indebtedness.

(a) Each Lender shall maintain in accordance with its usual practice an account or accounts evidencing the indebtedness of each Borrower to such Lender resulting from each Revolving Credit Loan and Competitive Bid Loan made by such Lender from time to time, including the amounts of principal and interest payable and paid to such Lender from time to time hereunder.

(b) The Administrative Agent shall also maintain accounts in which it will record (i) the amount of each Loan made hereunder, and the Funding Period or Interest Period with respect thereto, (ii) the amount of any principal or interest due and payable or to become due and payable from each Borrower to each Lender hereunder and (iii) the amount of any sum received by the Administrative Agent hereunder from any Borrower and each Lender's share thereof.

(c) The entries maintained in the accounts maintained pursuant to clauses (a) and (b) above shall be *prima facie* evidence of the existence and amounts of the Obligations therein recorded (absent manifest error); provided, however, that the failure of the Administrative Agent or any Lender to maintain such accounts or any error therein shall not in any manner affect the obligation of the Borrowers to repay the Obligations in accordance with their terms. In the event of any conflict between the accounts and records maintained by any Lender and the accounts and records of the Administrative Agent in respect of such matters, the accounts and records of the Administrative Agent shall control in the absence of manifest error.

(d) Any Lender may request that its Revolving Credit Loans be evidenced by a promissory note in substantially the form of Exhibit A and that its Competitive Bid Loans be evidenced by a promissory note in substantially the form set forth in Exhibit B. In such event, the Borrowers shall prepare, execute and deliver to such Lender such Notes payable

to the order of such Lender. Thereafter, the Loans evidenced by such Notes and interest thereon shall at all times (including after any assignment pursuant to Section 12.14) be represented by one or more Notes payable to the order of the payee named therein or any assignee pursuant to Section 12.14, except to the extent that any such Lender or assignee subsequently returns any such Note for cancellation and requests that such Loans once again be evidenced as described in clauses (a) and (b) above.

Section 2.03 Making of Revolving Credit Loans.

(a) Procedures. Whenever the Parent desires that the Lenders make Revolving Credit Loans, the Parent shall provide Standard Notice to the Administrative Agent setting forth the following information:

(i) the identity of the Relevant Borrower;

(ii) the date, which shall be a Business Day, on which such proposed Loans are to be made;

(iii) the Designated Currency in which such proposed Loans are to be made and the aggregate principal amount of such proposed Loans, which shall be the sum of the principal amounts selected pursuant to clause (iv) of this Section 2.03(a) and which (A) in the case of Loans denominated in Dollars shall be an integral multiple of \$1,000,000 and not less than \$5,000,000 and (B) in the case of Loans denominated in a Designated Currency shall have an aggregate Dollar Equivalent Amount not less than \$5,000,000 and shall be an integral multiple of the amount determined by the Administrative Agent from time to time to be the basic unit in which such currency is traded in the eurocurrency market; provided that in the case of Loans made to refinance the reimbursement of an LC Disbursement as contemplated by Section 2.11(d), such Loans may be in the amount of such LC Disbursement;

(iv) the interest rate Option or Options selected in accordance with Section 2.06(a) hereof and the principal amounts selected in accordance with Section 2.06(c) hereof of the Base Rate Portion and SONIA Portion and each Funding Segment of the Euro-Rate Portion and CDOR Portion of such proposed Loans; and

(v) with respect to each such Funding Segment of such proposed Loans, the Funding Period to apply to such Funding Segment, selected in accordance with Section 2.06(b) hereof.

Standard Notice having been so provided, the Administrative Agent shall promptly notify each Lender of the information contained therein and of the amount of such Lender's Loan, calculated in accordance with Section 2.03(b). Unless any applicable condition specified in Article VI hereof has not been satisfied, on the date specified in such Standard Notice each Lender shall make the proceeds of its Loan available to the Administrative Agent at the Administrative Agent's Office, no later than 12:00 Noon, New York time, in funds immediately available. The Administrative Agent will make the funds so received available to the Relevant Borrower in

funds immediately available; provided that the Administrative Agent shall pay the proceeds of Loans made to finance the reimbursement of an LC Disbursement as contemplated by Section 2.11(d) directly to the applicable Issuer. This Section 2.03(a) shall not apply to Swingline Loans.

(b) Making of Revolving Credit Loans Ratably. Revolving Credit Loans shall be made by the Lenders ratably in accordance with their respective Commitment Percentages.

(c) Revolving Credit Loans to be Made in Euro. If any Revolving Credit Loan would, but for the provisions of this Section 2.03(c), be capable of being made in either the Euro or in a National Currency Unit, such Revolving Credit Loan shall be made in the Euro.

Section 2.04 Swingline Loans.

(a) Swingline Loans Generally. Subject to the terms and conditions set forth herein, each Swingline Lender agrees to make one or more Swingline Loans to the Parent and any Borrower that is a Domestic Subsidiary in Dollars from time to time on any Business Day during the period from the Closing Date until the Commitment Termination Date applicable to such Swingline Lender in an aggregate principal amount at any time outstanding that will not result in (i) the aggregate principal amount of the outstanding Swingline Loans made by all Swingline Lenders exceeding the Swingline Sublimit, (ii) the Dollar Equivalent Amount of the Total Revolving Credit Exposure exceeding the Dollar Equivalent Amount of the Total Revolving Credit Commitments, (iii) the Swingline Exposure of the applicable Swingline Lender exceeding its Swingline Commitment or (iv) the Dollar Equivalent Amount of the Revolving Credit Exposure of any Lender exceeding the Dollar Equivalent Amount of the Revolving Credit Committed Amount of such Lender; provided that no Swingline Lender shall be required to make a Swingline Loan to refinance an outstanding Swingline Loan. Each Swingline Loan shall be in an aggregate amount of \$5,000,000 or an integral multiple of \$1,000,000 in excess thereof. Within the foregoing limits and subject to the terms and conditions set forth herein, the Parent and any Borrower that is a Domestic Subsidiary may borrow, prepay and reborrow Swingline Loans.

(b) Borrowing Procedure. To request a Swingline Loan from any Swingline Lender, the Parent (on its behalf or on behalf of any Borrower that is a Domestic Subsidiary) shall notify such Swingline Lender of such request by telephone not later than 2:00 p.m. New York City time on the day of the proposed Swingline Loan. Each such telephonic notice shall be irrevocable and shall be confirmed immediately in writing, or by facsimile transmission or electronic messaging system, by delivery to such Swingline Lender (with a copy to the Administrative Agent) of Standard Notice. Each such telephonic and written Standard Notice shall specify the requested date (which shall be a Business Day) and the amount of the requested Swingline Loan, the name of the Borrower (which shall be the Parent or a Borrower that is a Domestic Subsidiary) and the location and number of the account of the applicable Borrower to which funds are to be disbursed. Such Swingline Lender shall make each Swingline Loan in the amount thereof requested by such Borrower in the Standard Notice by means of a wire transfer to the account specified in such Standard Notice by 4:00 p.m. New York City time on the requested date of such Swingline Loan. Each Swingline Lender shall give prompt notice

to the Administrative Agent of the making of, and receipt from the Borrower of any payment with respect to, any Swingline Loan of such Swingline Lender.

(c) Refinancing of Swingline Loans.

(i) Any Swingline Lender may by written notice given to the Administrative Agent not later than 10:00 a.m. New York City time on any Business Day may request, on behalf of the Parent (which hereby irrevocably authorizes each Swingline Lender to so request on its behalf), that each Lender make a Base Rate Loan in an amount equal to such Lender's Commitment Percentage of such Swingline Lender's amount of the applicable Swingline Loans then outstanding. Such written notice shall be deemed to be a Standard Notice for purposes hereof and made in accordance with the requirements of Section 2.03, without regard to the minimum and multiples specified therein for the principal amount of Base Rate Loans, but subject to the unutilized portion of the Total Revolving Credit Commitments and the conditions set forth in Section 6.02. Such notice shall specify the aggregate amount of the Swingline Loans in which the Lenders will be required to make Base Rate Loans. Promptly upon receipt of such notice, the Administrative Agent will give notice thereof to each Lender, specifying in such notice the name of the requesting Swingline Lender and such Lender's Commitment Percentage of such Swingline Loans. Each Lender shall make an amount equal to its Commitment Percentage of the amount specified in such Standard Notice available to the Administrative Agent in same day funds for the account of the applicable Swingline Lender at the Administrative Agent's Office in accordance with Section 2.04(c)(iii), whereupon, subject to Section 2.04(c)(ii), each Lender that so makes funds available shall be deemed to have made a Base Rate Loan to the Parent in such amount. The Administrative Agent shall remit the funds so received to the applicable Swingline Lender.

(ii) If for any reason any Swingline Loan cannot be refinanced by such a Borrowing in accordance with Section 2.04(c)(i), the request for Base Rate Loans submitted by the applicable Swingline Lender as set forth herein shall be deemed to be a request by such Swingline Lender that each of the Lenders fund its risk participation in the relevant Swingline Loans and each Lender's payment to the Administrative Agent for the account of such Swingline Lender pursuant to Section 2.04(c)(i) shall be deemed payment in respect of such participation. Notwithstanding anything to the contrary contained herein such Lender's participation shall bear interest at the Base Rate plus the Applicable Margin (plus the rate set forth in Section 4.05(b)(ii) hereof, if applicable).

(iii) Each Lender hereby absolutely and unconditionally agrees to make refinancing Base Rate Loans or otherwise pay, upon receipt of notice as provided above, to the Administrative Agent, for the account of such Swingline Lender, such Lender's Commitment Percentage of such Swingline Loans. Each Lender acknowledges and agrees that, in making any Swingline Loan, each Swingline Lender shall be entitled to rely, and shall not incur any liability for relying, upon the representation and warranty of the Parent and the

Borrowers deemed made pursuant to Section 6.02, unless, at least one Business Day prior to the time such Swingline Loan was made, the Required Lenders shall have notified such Swingline Lender (with a copy to the Administrative Agent) in writing that, as a result of one or more events or circumstances described in such notice, one or more of the conditions precedent set forth in Section 6.02 would not be satisfied if such Swingline Loan were then made (it being understood and agreed that, in the event any Swingline Lender shall have received any such notice, no Swingline Lender shall have any obligation to make any Swingline Loan until and unless it shall be satisfied that the events and circumstances described in such notice shall have been cured or otherwise shall have ceased to exist). Each Lender further acknowledges and agrees that its obligation to make Base Rate Loans or acquire and fund risk participations in Swingline Loans pursuant to this Section 2.04(c) is absolute and unconditional and shall not be affected by any circumstance whatsoever, including the occurrence and continuance of a Potential Event of Default, an Event of Default or any reduction or termination of the Commitments, and that each such payment shall be made without any offset, counterclaim, abatement, withholding or reduction whatsoever. Each Lender shall comply with its obligation under this Section 2.04(c) by wire transfer of immediately available funds, in the same manner as provided in Section 2.03(a) with respect to Loans made by such Lender (and Section 2.03(a) shall apply, *mutatis mutandis*, to the payment obligations of the Lenders pursuant to this Section 2.04(c)), and the Administrative Agent shall promptly remit to such Swingline Lender the amounts so received by it from the Lenders. The Administrative Agent shall notify the Parent of any Base Rate Loans made to refinance, and participations acquired in, any Swingline Loan pursuant to this Section 2.04(c), and thereafter payments in respect of such Swingline Loan shall be made to the Administrative Agent and not to the applicable Swingline Lender. Any amounts received by any Swingline Lender from any Borrower (or other Person on behalf of any Borrower) in respect of a Swingline Loan after receipt by such Swingline Lender of the proceeds of a sale of participations therein shall be promptly remitted to the Administrative Agent; any such amounts received by the Administrative Agent shall be promptly remitted by the Administrative Agent to the Lenders that shall have made their payments pursuant to this Section 2.04(c) and to such Swingline Lender, as their interests may appear; provided that any such payment so remitted shall be repaid to such Swingline Lender or to the Administrative Agent, as applicable, if and to the extent such payment is required to be refunded to any Borrower for any reason. Neither the making of Base Rate Loans or the purchase of participations in a Swingline Loan pursuant to this Section 2.04(c) shall relieve any Borrower of its obligation to repay such Swingline Loan, together with interest as provided herein.

(iv) If any Lender fails to make available to the Administrative Agent for the account of the applicable Swingline Lender any amount required to be paid by such Lender pursuant to the foregoing provisions of this Section 2.04(c) by the time specified in Section 2.04(c)(i), such Swingline Lender shall be entitled to recover from such Lender (acting through the

Administrative Agent), on demand, such amount with interest thereon for the period from the date such payment is required to the date on which such payment is immediately available to such Swingline Lender at a rate per annum equal to the greater of (x) the Federal Funds Effective Rate and (y) an overnight rate determined by the such Swingline Lender in accordance with banking industry rules on interbank compensation, *plus* any administrative, processing or similar fees customarily charged by such Swingline Lender in connection with the foregoing. If such Lender pays such amount (with interest and fees as aforesaid), the amount so paid (excluding interest and fees as aforesaid) shall constitute such Lender's Base Rate Loan included in the relevant Borrowing or funded participation in the relevant Swingline Loan, as the case may be. A certificate of the applicable Swingline Lender submitted to any Lender (through the Administrative Agent) with respect to any amounts owing under this clause (iv) shall be conclusive absent manifest error.

(d) Repayment of Swingline Loans. Each Borrower hereby promises to pay to each Swingline Lender the then unpaid principal amount of each Swingline Loan made by such Swingline Lender on the earlier of (x) the Commitment Termination Date applicable to such Swingline Lender and (y) the date that is ten (10) Business Days after such Swingline Loan is made; provided that on each date that a Borrowing is made, the Borrowers shall repay all Swingline Loans that were outstanding on the date such Borrowing was requested. To the extent not due and payable earlier, the applicable Borrower shall repay the Swingline Loans on the Revolving Credit Maturity Date.

(e) Additional Swingline Lenders. Parent may, at any time and from time to time with the consent of the Administrative Agent and such Lender, designate in writing one or more additional Lenders to act as a swingline lender under the terms of this Agreement, subject to reporting requirements reasonably satisfactory to the Administrative Agent with respect to loan fundings, payments and interest payment dates of Swingline Loans by such additional swingline lender. Any Lender designated as a swingline lender pursuant to this paragraph (e) shall be set forth in an updated Schedule IV.C and be deemed to be a "Swingline Lender" (in addition to being a Lender) in respect of Swingline Loans issued or to be issued by such Lender, and, with respect to such Swingline Loan, such term shall thereafter apply to such additional Swingline Lender and such Lender.

(f) Removal of a Swingline Lender. Any Swingline Lender may be removed at any time by the Parent by notice to the Swingline Lender, the Administrative Agent and the Lenders. The Administrative Agent shall notify the Lenders of any such removal of a Swingline Lender. At the time such removal shall become effective, the Borrowers shall pay all accrued and unpaid fees and other amounts due to such retiring Swingline Lender. The acceptance of any appointment as a Swingline Lender hereunder by a successor Lender shall be evidenced by an agreement entered into by such successor, in a form satisfactory to the Parent and the Administrative Agent, and, from and after the effective date of such agreement, (i) such successor Swingline Lender shall be set forth in an updated Schedule IV.C and shall have all the rights and obligations of a Swingline Lender under this Agreement and the other Loan Documents with respect to Swingline Loans to be made by it thereafter and (ii) references herein and in the other Loan Documents to the term "Swingline Lender" shall be deemed to refer to

such successor or to any previous Swingline Lender, or to such successor and all previous Swingline Lenders, as the context shall require. After the removal of a Swingline Lender hereunder, the retiring Swingline Lender shall remain a party hereto and shall continue to have all the rights and obligations of a Swingline Lender under this Agreement and the other Loan Documents with respect to Swingline Loans funded by it prior to such removal, but shall not be required to fund any additional Swingline Loans.

Section 2.05 Fees; Reduction of the Revolving Credit Committed Amounts.

(a) Commitment Fee. The Parent shall pay to the Administrative Agent for the account of each Lender a fee (the "Commitment Fee") for each day from and including the Closing Date and to but not including the date that such Lender's Revolving Credit Commitment is terminated. Such fee shall be payable on the unused amount of such Lender's Revolving Credit Committed Amount on such day and shall accrue at the applicable rate per annum for such day set forth on Schedule I under the caption "Commitment Fee Rate", in each case as adjusted by the ESG Adjustment Amount. Commitment Fees shall be due and payable for the preceding period for which such fees have not been paid on each Regular Payment Date and on the date on which the Revolving Credit Commitments terminate. All Commitment Fees shall be computed on the basis of a year of 360 days and shall be payable for the actual number of days elapsed. For purposes of calculating the Commitment Fee only, no portion of the Commitments shall be deemed utilized as a result of outstanding Swingline Loans.

(b) Letter of Credit Fees. The Parent agrees to pay (i) to the Administrative Agent for the account of each Lender a participation fee with respect to its participations in each Letter of Credit, which shall accrue at a rate per annum equal to the Applicable Margin for Euro-Rate Loans on the daily amount of such Lender's LC Exposure (excluding any portion thereof attributable to unreimbursed LC Disbursements) in respect of such Letter of Credit during the period from and including the Closing Date to but excluding the later of the date on which such Lender's Revolving Credit Commitment terminates and the date on which such Lender ceases to have any LC Exposure, and (ii) to each Issuer a fronting fee, which shall accrue at a rate per annum separately agreed between the Parent and such Issuer (or such Issuer's Affiliate, if applicable) on the average daily amount of the LC Exposure associated with Letters of Credit issued by such Issuer (excluding any portion thereof attributable to unreimbursed LC Disbursements) during the period from and including the Closing Date to but excluding the later of the date of termination of the Revolving Credit Commitments and the date on which there ceases to be any LC Exposure, as well as such Issuer's standard fees with respect to the issuance, amendment, renewal or extension of any Letter of Credit or processing of drawings thereunder. Participation fees and fronting fees (together, "Letter of Credit Fees") shall be payable in arrears on each Regular Payment Date, the date on which the Revolving Credit Commitments terminate and thereafter on demand. Any other fees payable to the Issuer pursuant to this paragraph shall be payable within 10 days after demand. All Letter of Credit Fees shall be computed on the basis of a year of 360 days and shall be payable for the actual number of days elapsed.

(c) Optional Reduction of the Revolving Credit Committed Amounts. The Parent may at any time or from time to time reduce Pro Rata the Revolving Credit Committed Amounts of the Lenders to an aggregate amount (which may be zero) not less than

the sum of the aggregate Dollar Equivalent Amounts of the Revolving Credit Exposures and Competitive Bid Loans then outstanding plus the aggregate Dollar Equivalent Amount of all Revolving Credit Loans, Letters of Credit and Competitive Bid Loans not yet made as to which notice has been given by the Parent under Section 2.03, 2.11(b) or 3.02 hereof, as the case may be. Any reduction of the Revolving Credit Committed Amounts shall be in an aggregate amount which is an integral multiple of \$20,000,000 or the Total Revolving Credit Commitment. Reduction of the Revolving Credit Committed Amounts shall be made by providing not less than three Business Days' notice to such effect to the Administrative Agent. Such notice of reduction shall be irrevocable; provided that such a notice delivered by the Parent may state that such notice is conditioned upon the effectiveness of other credit facilities, in which case such notice may be revoked by the Parent (by notice to the Administrative Agent on or prior to the specified effective date) if such condition is not satisfied. After the date specified in such notice which is not so revoked the Commitment Fee shall be calculated upon the Revolving Credit Committed Amounts as so reduced. The Administrative Agent will promptly send copies of such notice to the Lenders.

Section 2.06 Interest Rates.

(a) Optional Bases of Borrowing. The unpaid principal amount of the Loans shall bear interest for each day from and including the date on which funds are made available to the Relevant Borrower by the Administrative Agent and to but excluding the date of repayment on one or more bases selected by the Parent from among the interest rate Options set forth below; provided, however, that (~~w~~y) the Base Rate Option may not be selected to apply to Revolving Credit Loans which are denominated in a currency other than Dollars, (~~x~~w) the Euro-Rate Option may not be selected to apply to Revolving Credit Loans which are denominated in Canadian Dollars or Sterling, (~~y~~x) a CDOR Option shall apply to all Revolving Credit Loans denominated in Canadian Dollars (and only those Loans), (y) a SONIA Option shall apply to all Revolving Credit Loans denominated in Sterling (and only those Loans) and (z) the LIBOR Market Index Rate shall apply to all Swingline Loans (and only those Loans). Subject to the provisions of this Agreement, the Parent may select different Options to apply simultaneously to different Portions of the Revolving Credit Loans and may select different Funding Segments to apply simultaneously to different parts of each of the Euro-Rate Portion, SONIA Portion and the CDOR Portion of the Revolving Credit Loans. The aggregate number of Funding Segments applicable to all of the Euro-Rate Portions, SONIA Portions and CDOR Portions of the Revolving Credit Loans at any time shall not exceed six unless otherwise permitted by the Administrative Agent.

(i) Base Rate Option: A rate per annum (computed on the basis of a year of 360 days and actual days elapsed) for each day equal to (x) the Base Rate for such day (or 365 or 366 days, as the case may be, in the case of Base Rate Loans where interest is based on the Prime Rate) plus (y) the Applicable Margin for such day (the "Base Rate Option").

(ii) Euro-Rate Option: A rate per annum (computed on the basis of a year of 360 days and actual days elapsed ~~or, in the case of Loans denominated in U.K. pounds sterling, computed on the basis of a year of 365 or 366 days, as the case may be~~) for each day equal to (x) the rate per annum

determined in good faith by the Administrative Agent in accordance with its usual procedures (which determination shall be conclusive absent manifest error) by dividing (the resulting quotient to be rounded upward to the nearest 1/100 of 1%) (1) the Euro-Rate for such day by (2) a number equal to 1.00 minus the Euro-Rate Reserve Percentage, if any, for such day plus (y) the Applicable Margin for such day (the “Euro-Rate Option”).

(iii) CDOR Option: A rate per annum (computed on the basis of a year of 365 or 366 days, as the case may be) for each day equal to (x) the rate per annum determined in good faith by the Administrative Agent in accordance with its usual procedures (which determination shall be conclusive absent manifest error) as the CDOR plus (y) the Applicable Margin for such day (the “CDOR Rate Option”).

(iv) SONIA Option: A rate per annum (computed on the basis of a year of 365 or 366 days, as the case may be) for each day equal to (x) the rate per annum determined in good faith by the Administrative Agent in accordance with its usual procedures (which determination shall be conclusive absent manifest error) as Daily Simple RFR with respect to Sterling plus (y) the Applicable Margin for such day (the “SONIA Option”)

(v) ~~(iv)~~ Swingline Loans: A rate per annum (computed on the basis of a year of 360 days and actual days elapsed) for each day equal to (x) the LIBOR Market Index Rate plus (y) the Applicable Margin for such day; provided that Swingline Loans that have been refinanced in accordance with Section 2.04(c) (i) shall bear interest in accordance with the Base Rate Option.

The Administrative Agent shall give prompt notice to the Parent and to the Lenders of the Base Rate, Euro-Rate, Daily Simple RFR with respect to Sterling, CDOR Rate or LIBOR Market Index Rate so determined.

(b) Funding Periods. At any time when the Parent shall select, convert to or renew the Euro-Rate Option to apply to any part of the Revolving Credit Loans, the Parent shall specify one or more periods (the “Euro-Rate Funding Periods”) during which each such Option shall apply, such Euro-Rate Funding Periods being one, three or six months; provided that (i) each Euro-Rate Funding Period shall begin on a Business Day, and the term “month”, when used in connection with a Euro-Rate Funding Period, shall be construed in accordance with prevailing practices in the interbank eurocurrency market at the commencement of such Euro-Rate Funding Period, as determined in good faith by the Administrative Agent (which determination shall be conclusive); and (ii) the Parent may not select a Euro-Rate Funding Period that would end after the Revolving Credit Maturity Date. At any time when the Parent shall select, convert to or renew the CDOR Option to apply to any part of the Revolving Credit Loans, the Parent shall specify one or more periods (the “CDOR Funding Periods”) during which each such Option shall apply, such CDOR Funding Periods being one, two, or three ~~or six~~ months; provided that (i) each CDOR Funding Period shall begin on a Business Day, and the term “month”, when used in connection with a CDOR Funding Period, shall be construed in accordance with prevailing practices in the relevant market at the commencement of such CDOR

Funding Period, as determined in good faith by the Administrative Agent (which determination shall be conclusive); and (ii) the Parent may not select a CDOR Funding Period that would end after the Revolving Credit Maturity Date. The term “Funding Period” shall mean a CDOR Funding Period or a Euro-Rate Funding Period, as applicable.

(c) Transactional Amounts. Every selection of, conversion from, conversion to or renewal of an interest rate Option and every payment or prepayment of any Revolving Credit Loans shall be either:

(i) in a principal amount such that after giving effect thereto the aggregate principal amount of the Base Rate Portion of the Revolving Credit Loans, or the aggregate principal amount of each Funding Segment of the Euro-Rate Portion of the Revolving Credit Loans, shall be (A) in the case of Revolving Credit Loans denominated in Dollars, \$5,000,000 or a higher integral multiple of \$1,000,000 and (B) in the case of Revolving Credit Loans denominated in a currency other than Dollars, an amount the Dollar Equivalent Amount of which is greater than \$5,000,000 and which is an integral multiple of the amount determined by the Administrative Agent from time to time to be the basic unit in which such currency is funded in the eurocurrency market; or

(ii) in the case of a prepayment by any Borrower, if the principal amount of the Base Rate Portion of the Revolving Credit Loans, the principal amount of the SONIA Portion of the Revolving Credit Loans or the aggregate principal amount of a Funding Segment of the Euro-Rate Portion or CDOR Portion of the Revolving Credit Loans is a Dollar Equivalent Amount of less than \$5,000,000, in a principal amount equal to such principal amount.

(d) Euro-Rate, Daily Simple RFR or CDOR Unascertainable; Impracticability.

(i) If (A) on any date on which a Euro-Rate, Daily Simple RFR (with respect to Sterling) or CDOR would otherwise be set the Administrative Agent shall have determined in good faith (which determination shall be conclusive absent manifest error) that:

(1) adequate and reasonable means do not exist for ascertaining such Euro-Rate, Daily Simple RFR or CDOR, as applicable, or

(2) a contingency has occurred which materially and adversely affects the interbank eurocurrency market for the relevant currency, or

(3) the effective cost to the Required Lenders of funding a proposed Funding Segment of the Euro-Rate Portion or CDOR Portion, as applicable, shall exceed the Euro-Rate or CDOR applicable to such Funding Segment, or

(B) at any time any Lender shall have determined in good faith (which determination shall be conclusive absent manifest error) that the making, maintenance or funding of any part of the Euro-Rate Portion, SONIA Portion or CDOR Portion has been made impracticable or unlawful by compliance by such Lender or a Notional Funding Office in good faith with any Law or guideline or interpretation or administration thereof by any Governmental Authority charged with the interpretation or administration thereof or with any request or directive of any such Governmental Authority (whether or not having the force of law); then, and in any such event, the Administrative Agent or such Lender, as the case may be, may notify the Parent of such determination (and any Lender giving such notice shall notify the Administrative Agent). Upon such date as shall be specified in such notice (which shall not be earlier than the date such notice is given), the obligation of each of the Lenders to allow the Parent to select, convert to or renew the Euro-Rate Option, SONIA Option or CDOR Option, as applicable, with respect to the relevant currency or currencies shall be suspended until the Administrative Agent or such Lender, as the case may be, shall have later notified the Parent (and any Lender giving such notice shall notify the Administrative Agent) of the Administrative Agent's or such Lender's determination in good faith (which determination shall be conclusive absent manifest error) that the circumstance giving rise to such previous determination no longer exist.

(ii) If any Lender notifies the Parent of a determination under clause (B) of Section 2.06(d)(i), (I) the Euro-Rate Portion or CDOR Portion of the Loans of such Lender (the "Affected Lender") shall, subject to Section 4.08(c) hereof, (i) be automatically converted to the Base Rate Option, in the case of Revolving Credit Loans denominated in Dollars, or (ii) be repaid by the Relevant Borrower, in the case of Revolving Credit Loans denominated in a currency other than Dollars, on the last day of the then current Funding Period with respect to such Loans (in the case of a determination that the making, maintenance or funding of any Euro-Rate Portion or CDOR Portion of such Loans is impracticable) and the last day on which the making, maintenance or funding of any Euro-Rate Portion or CDOR Portion of such Loans is not unlawful (in the case of a determination that the making, maintenance or funding of any Euro-Rate Portion or CDOR Portion, as applicable, of such Loans is unlawful) and accrued interest thereon shall be due and payable on such date or (II) (i) the Parent may revoke any pending request for a Borrowing of SONIA Loans to the extent of the affected SONIA Loans or determination date(s), as applicable or, failing that, will be deemed to have converted such request into a request for a Borrowing of Base Rate Loans denominated in Dollars in the Dollar Equivalent Amount of the amount specified therein and (ii) any outstanding affected SONIA Loans shall either be (x) prepaid in full immediately or (y) converted into Base Rate Loans denominated in Dollars in the Dollar Equivalent Amount of such outstanding affected SONIA Loans.

(iii) If at the time the Administrative Agent or a Lender makes a determination under clause (A) or (B) of Section 2.06(d)(i) the Parent

previously has notified the Administrative Agent that it wishes to select, convert to or renew the Euro-Rate Option or CDOR ~~PortionOption~~ with respect to any proposed Revolving Credit Loans but such Loans have not yet been made, (A) such notification shall be deemed to provide for selection of, conversion to or renewal of the Base Rate Option instead of the Euro-Rate Option with respect to any such Loans denominated in Dollars or, in the case of a determination by a Lender, any such Loans denominated in Dollars of such Lender or (B) subject to Section 4.08(c), such notification shall be deemed to be revoked in the case of a selection of the Euro-Rate Option or CDOR ~~PortionOption~~ or shall be deemed to be a notice of prepayment in the case of a conversion or renewal, with respect to any such Loans denominated in a currency other than Dollars or, in the case of a determination by a Lender, any such Loans denominated in a currency other than Dollars of such Lender.

(iv) An Affected Lender shall take actions of the type referred to in Section 4.10, if such actions would avoid the application of clause (B) of Section 2.06(d)(i) and would not, in the good faith judgment of such Lender, be disadvantageous in any way to such Lender or its Affiliates at such time or in the future.

(v) Benchmark Replacement Setting.

(A) Notwithstanding anything to the contrary herein or in any other Loan Document, if a Benchmark Transition Event or an Early Opt-in Election, as applicable, and its related Benchmark Replacement Date have occurred prior to the Reference Time in respect of any setting of the then-current Benchmark, then (x) if a Benchmark Replacement is determined in accordance with clause (1) or (2) of the definition of "Benchmark Replacement" for such Benchmark Replacement Date, such Benchmark Replacement will replace such Benchmark for all purposes hereunder and under any Loan Document in respect of such Benchmark setting and subsequent Benchmark settings without any amendment to, or further action or consent of any other party to, this Agreement or any other Loan Document and (y) if a Benchmark Replacement is determined in accordance with clause (3) of the definition of "Benchmark Replacement" for such Benchmark Replacement Date, such Benchmark Replacement will replace such Benchmark for all purposes hereunder and under any Loan Document in respect of any Benchmark setting at or after 5:00 p.m. (New York City time) on the fifth (5th) Business Day after the date notice of such Benchmark Replacement is provided to the Lenders without any amendment to, or further action or consent of any other party to, this Agreement or any other Loan Document so long as the Administrative Agent has not received, by such time, written notice of objection to such Benchmark Replacement from Lenders comprising the Required Lenders.

(B) Notwithstanding anything to the contrary herein or in any other Loan Document and subject to the proviso below in this paragraph, if a Term SOFR Transition Event and its related Benchmark

Replacement Date have occurred prior to the Reference Time in respect of any setting of the then-current Benchmark, then the applicable Benchmark Replacement will replace the then-current Benchmark for all purposes hereunder or under any Loan Document in respect of such Benchmark setting and subsequent Benchmark settings, without any amendment to, or further action or consent of any other party to, this Agreement or any other Loan Document; provided that, this clause (B) shall not be effective unless the Administrative Agent has delivered to the Lenders and the Parent a Term SOFR Notice.

(C) In connection with the implementation of a Benchmark Replacement, the Administrative Agent will have the right to make Benchmark Replacement Conforming Changes from time to time and, notwithstanding anything to the contrary herein or in any other Loan Document, any amendments implementing such Benchmark Replacement Conforming Changes will become effective without any further action or consent of any other party to this Agreement or any other Loan Document.

(D) The Administrative Agent will promptly notify the Parent and the Lenders of (i) any occurrence of a Term SOFR Transition Event or an Early Opt-in Election, as applicable, and its related Benchmark Replacement Date, (ii) the implementation of any Benchmark Replacement, (iii) the effectiveness of any Benchmark Replacement Conforming Changes, (iv) the removal or reinstatement of any tenor of a Benchmark pursuant to clause (E) below and (v) the commencement or conclusion of any Benchmark Unavailability Period. Any determination, decision or election that may be made by the Administrative Agent or, if applicable, any Lender (or group of Lenders) pursuant to this Section 2.06(d)(v), including any determination with respect to a tenor, rate or adjustment or of the occurrence or non-occurrence of an event, circumstance or date and any decision to take or refrain from taking any action or any selection, will be conclusive and binding absent manifest error and may be made in its or their sole discretion and without consent from any other party to this Agreement or any other Loan Document, except, in each case, as expressly required pursuant to this Section 2.06(d)(v).

(E) Notwithstanding anything to the contrary herein or in any other Loan Document, at any time (including in connection with the implementation of a Benchmark Replacement), (i) if the then-current Benchmark is a term rate (including Term SOFR or USD LIBOR) and either (A) any tenor for such Benchmark is not displayed on a screen or other information service that publishes such rate from time to time as selected by the Administrative Agent in its reasonable discretion or (B) the regulatory supervisor for the administrator of such Benchmark has provided a public statement or publication of information announcing that any tenor for such Benchmark is or will be no longer representative, then the Administrative Agent may modify the definition of "Interest Period" for any Benchmark settings at or after such time to remove such unavailable or non-representative tenor and (ii) if a tenor that was removed pursuant to clause (i) above either (A) is subsequently displayed on a

screen or information service for a Benchmark (including a Benchmark Replacement) or (B) is not, or is no longer, subject to an announcement that it is or will no longer be representative for a Benchmark (including a Benchmark Replacement), then the Administrative Agent may modify the definition of “Interest Period” for all Benchmark settings at or after such time to reinstate such previously removed tenor.

(F) Upon the Parent’s receipt of notice of the commencement of a Benchmark Unavailability Period, the Parent may revoke any request for a Borrowing of, conversion to or continuation of Euro-Rate Loans to be made, converted or continued during any Benchmark Unavailability Period and, failing that, either (x) the Parent will be deemed to have converted any request for a Borrowing of Euro-Rate Loans denominated in Dollars into a request for a Borrowing of or conversion to Base Rate Loans or (y) any Borrowing denominated in a Designated Currency shall be ineffective. During any Benchmark Unavailability Period or at any time that a tenor for the then-current Benchmark is not an Available Tenor, the component of Base Rate based upon the then-current Benchmark or such tenor for such Benchmark, as applicable, will not be used in any determination of Base Rate. Furthermore, if any Euro-Rate Loan is outstanding on the date of the Parent’s receipt of notice of the commencement of a Benchmark Unavailability Period with respect to a ~~Relevant Rate~~ Benchmark applicable to such Euro-Rate Loan, then (1) if such Euro-Rate Loan is denominated in Dollars, then on the last day of the Interest Period applicable to such Loan (or the next succeeding Business Day if such day is not a Business Day), such Loan shall be converted by the Administrative Agent to, and shall constitute, a Base Rate Loan on such day or (2) if such Euro-Rate Loan is denominated in any Designated Currency (other than Dollars), then such Loan shall, on the last day of the Interest Period applicable to such Loan (or the next succeeding Business Day if such day is not a Business Day), at the Parent’s election prior to such day, (I) be prepaid by the Parent on such day or (II) be converted by the Administrative Agent to, and (subject to the remainder of this subclause (II)) shall constitute, a Base Rate Loan denominated in Dollars (in an amount equal to the Dollar Equivalent Amount of such Designated Currency) on such day (it being understood and agreed that if the applicable Borrower does not so prepay such Loan on such day by 12:00 noon, New York City time, the Administrative Agent is authorized to effect such conversion of such Euro-Rate Loan into a Base Rate Loan), and, in the case of such subclause (II), upon any subsequent implementation of a Benchmark Replacement in respect of such Designated Currency pursuant to this Section 2.06(d)(v)(F) such Base Rate Loan shall then be converted by the Administrative Agent to, and shall constitute, a Euro-Rate Loan denominated in such original Designated Currency (in an amount equal to the Designated Currency Equivalent Amount thereof) on the day of such implementation, giving effect to such Benchmark Replacement in respect of such Designated Currency.¶

(G) The Administrative Agent does not warrant or accept any responsibility for, and shall not have any liability with respect to,

the administration, submission or any other matter related to LIBOR or with respect to any alternative, successor or replacement rate thereof (including any Benchmark Replacement), or any calculation, component definition thereof or rate referenced in the definition thereof, including, without limitation, (i) any such alternative, successor or replacement rate implemented pursuant to this Section 2.06(d)(v), whether upon the occurrence of a Benchmark Transition Event, Term SOFR Transition Event or an Early Opt-in Election, and (ii) the effect, implementation or composition of any Benchmark Replacement Conforming Changes pursuant to Section 2.06(d)(v)(C), including without limitation, whether the composition or characteristics of any such alternative, successor or replacement reference rate will be similar to, or produce the same value or economic equivalence of, LIBOR or the Euro-Rate or have the same volume or liquidity as did LIBOR or the Euro-Rate prior to the discontinuance or unavailability of LIBOR. In addition, the discontinuation of LIBOR and any alternative, successor or replacement reference rate may result in a mismatch between the reference rate referenced in this Agreement and your other financial instruments, including potentially those that are intended as hedges. The Administrative Agent and its Affiliates and/or other related entities may engage in transactions that affect the calculation of any alternative, successor or replacement rate and/or any relevant adjustments thereto. The Administrative Agent may select information sources or services in its reasonable discretion to ascertain such alternative, successor or replacement rate, in each case pursuant to the terms of this Agreement (as amended, amended and restated, supplemented or otherwise modified from time to time), and shall have no liability to the Parent, any Lender or any other person or entity for damages of any kind, including direct or indirect, special, punitive, incidental or consequential damages, costs, losses or expenses (whether in tort, contract or otherwise and whether at law or in equity), for any error or calculation of any such rate (or component thereof) provided by any such information source or service.

Section 2.07 Conversion or Renewal of Interest Rate Options.

(a) Conversion or Renewal. Subject to the provisions of Section 2.08 hereof, the Parent may convert any part of the Revolving Credit Loans denominated in any Designated Currency from any interest rate Option or Options to one or more different interest rate Options available for such Designated Currency and may renew the Euro-Rate Option or CDOR Option as to any Funding Segment of the Euro-Rate Portion or CDOR Portion, as applicable:

(i) at any time with respect to conversion from the Base Rate Option; or

(ii) at the expiration of any Funding Period with respect to conversions from or renewals of the Euro-Rate Option or CDOR Option as to the Funding Segment corresponding to such expiring Funding Period;

provided that at any time when an Event of Default has occurred and is continuing or exists, (w) the Parent may not select, convert to or renew the Euro-Rate Option with respect to any Revolving Credit Loans denominated in Dollars, (x) the Parent may not select, convert to or renew the CDOR Option with respect to any Revolving Credit Loans, (y) the Parent may not renew or convert any Revolving Credit Loans to any Designated Currency other than Dollars, and (z) the Parent may not select a Funding Period longer than one month with respect to Revolving Credit Loans denominated in a currency other than Dollars; provided, further, that this Section 2.07(a) shall not apply to Swingline Loans, which may not be converted.

Whenever the Parent desires to convert or renew any interest rate Option or Options, the Parent shall provide to the Administrative Agent Standard Notice setting forth the following information:

- (i) the date, which shall be a Business Day, on which the proposed conversion or renewal is to be made;
- (ii) the principal amounts selected in accordance with Section 2.06(c) hereof of the Base Rate Portion and each Funding Segment of the Euro-Rate Portion or CDOR Portion to be converted from or renewed;
- (iii) the interest rate Option or Options selected in accordance with Section 2.06(a) hereof and the principal amounts selected in accordance with Section 2.06(c) hereof of the Base Rate Portion and each Funding Segment of the Euro-Rate Portion or CDOR Portion to be converted to; and
- (iv) with respect to each Funding Segment to be converted to or renewed, the Funding Period selected in accordance with Section 2.06(b) hereof to apply to such Funding Segment.

Standard Notice having been so provided, after the date specified in such Standard Notice, interest shall be calculated upon the principal amount of the Loans as so converted or renewed.

(b) Failure to Convert or Renew. Absent due notice from the Parent of conversion or renewal in the circumstances described in Section 2.07(a)(ii) hereof, any part of the Euro-Rate Portion for which such notice is not received (i) shall be converted automatically to the Base Rate Option, in the case of Revolving Credit Loans denominated in Dollars or (ii) the Euro-Rate Option or CDOR Option, as applicable, shall be automatically renewed for a Funding Period of one month for the Euro-Rate Option or CDOR Option, as applicable, in the case of Revolving Credit Loans denominated in a currency other than Dollars, on the last day of the expiring Funding Period.

Section 2.08 Optional Prepayments. The Relevant Borrower shall have the right at its option at any time and from time to time to prepay its Revolving Credit Loans or Swingline Loans in whole or part without premium or penalty (subject, however, to Sections 2.06(c), 4.04 and 4.08(c) hereof).

Section 2.09 Interest Payment Dates. The applicable Borrower shall pay interest on the Base Rate Portion of the Revolving Credit Loans on the date of any conversion of

all or part of the Base Rate Portion to a different interest rate Option on the amount converted, any prepayment of any part of the Base Rate Portion on the amount prepaid, and on each Regular Payment Date. The applicable Borrower shall pay interest on each Funding Segment of the Euro-Rate Portion or CDOR Portion of the Revolving Credit Loans on the last day of the corresponding Funding Period and, if such Funding Period is longer than three months, also on the last day of every third month during such Funding Period. The applicable Borrower shall pay interest on the Swingline Loans, [and the SONIA Loans](#) quarterly in arrears, on the last Business Day of each of March, June, September and December (or more frequently as the applicable Swingline Lender and the relevant Borrower may otherwise agree in writing with notice thereof provided to the Administrative Agent). After maturity of any part of the Loans (by acceleration or otherwise), the applicable Borrower shall pay interest on such part of the Loans on demand.

Section 2.10 Increase in Total Revolving Credit Commitment. The Parent may, at its option, on one or more occasions, seek to increase the Total Revolving Credit Commitment by up to \$500,000,000 in the aggregate for all such occasions (i.e., the maximum Total Revolving Credit Commitment is \$3,000,000,000) upon at least three (3) Business Days' prior notice to the Administrative Agent, which notice shall specify the amount of any such requested increase and shall state that, and be delivered at a time when, no Event of Default or Potential Event of Default has occurred and is continuing or exists. The Parent may, after giving such notice, offer the increase in the Total Revolving Credit Commitment to any of the existing Lenders and/or to other banks, financial institutions or other entities on a non-pro rata basis in such amounts as determined by the Parent; provided, however, all amounts, Lenders and/or other banks, financial institutions or other entities shall be approved by the Administrative Agent, the Swingline Lenders and the Issuers (such approval not to be unreasonably withheld or delayed). The Parent may elect to accept on any such occasion an increase in the Total Revolving Credit Commitment in an amount up to the aggregate increased commitments offered to the Parent. No increase in the Total Revolving Credit Commitment shall become effective until the existing or new Lender extending such incremental commitment amount and the Parent shall have executed and delivered to the Administrative Agent an agreement in writing in substantially the form of Exhibit H attached hereto pursuant to which such Lender states its Revolving Credit Committed Amount and agrees to assume and accept the obligations and rights of a Lender hereunder. No Lender shall have any obligation to increase its Commitment hereunder. The Lenders (new or existing) shall accept an assignment from the existing Lenders, and the existing Lenders shall make an assignment to the new or existing Lender accepting a new or increased Revolving Credit Committed Amount, of an interest in all then outstanding Revolving Credit Loans and a participation interest in all then outstanding Letters of Credit and LC Disbursements such that, after giving effect thereto, all Revolving Credit Exposure is held ratably by the Lenders in proportion to their respective Revolving Credit Committed Amounts. Assignments pursuant to the preceding sentence shall be made in exchange for the principal amount assigned plus accrued and unpaid interest and Commitment Fees. The Parent shall make any payments under Section 4.08(c) resulting from such assignments. Any such increase in the Total Revolving Credit Commitment shall be in a minimum amount of \$10,000,000 or a higher integral multiple of \$5,000,000 and shall be subject to receipt by the Administrative Agent from the Parent of such supplemental opinions, resolutions, certificates and other documents as the Administrative Agent may reasonably request.

Section 2.11 Letters of Credit.

(a) Issuance. Each Issuer hereby agrees, on the terms and conditions set forth in this Agreement, to issue Letters of Credit and to renew, extend, increase, decrease or otherwise modify Letters of Credit (“Modify,” and each such action a “Modification”), from time to time from and including the date of this Agreement and prior to the Letter of Credit Maturity Date upon the request of the Parent and for the account of any Borrower; provided that a Letter of Credit shall be issued or Modified only if (and upon each issuance or Modification the Relevant Borrower shall be deemed to represent and warrant that) before and after giving effect to such issuance or Modification (i) the LC Exposure shall not exceed the Letter of Credit Sublimit, (ii) the Dollar Equivalent Amount of the Total Revolving Credit Exposure and Competitive Bid Loans then outstanding shall not exceed the Total Revolving Credit Commitment (either as in effect on the date of such issuance or Modification or, if the Revolving Credit Maturity Date has been extended pursuant to Section 4.01 and the expiration of such Letter of Credit (as Modified, if applicable) would occur after the Revolving Credit Maturity Date without giving effect to such extension, as the Total Revolving Credit Commitment is scheduled to be in effect immediately following the expiry of the Commitment of any Lender which is a Nonextending Lender relative to such extension), (iii) the Dollar Equivalent Amount of the Issuer Exposure of the applicable Issuer shall not exceed the Dollar Equivalent Amount of its Issuer Commitment and (iv) the Dollar Equivalent Amount of the Revolving Credit Exposure of any Lender shall not exceed the Dollar Equivalent Amount of the Revolving Credit Committed Amount of such Lender. Each Letter of Credit shall be denominated in a Designated Currency and shall be in a form satisfactory to the Issuer. No Letter of Credit shall have an expiry date later than the fifth Business Day prior to the Revolving Credit Maturity Date (such day, the “Letter of Credit Maturity Date”). Notwithstanding the foregoing, no Issuer shall be under any obligation to issue any Letter of Credit if any order, judgment or decree of any Governmental Authority or other regulatory body with jurisdiction over such Issuer shall purport by its terms to enjoin or restrain such Issuer from issuing such Letter of Credit, or any law or governmental rule, regulation, policy, guideline or directive (whether or not having the force of law) from any governmental authority or other regulatory body with jurisdiction over such Issuer shall prohibit, or request that such Issuer refrain from, the issuance of such Letter of Credit in particular or shall impose upon such Issuer with respect to any Letter of Credit any restriction or reserve or capital requirement (for which such Issuer is not otherwise compensated) or any unreimbursed loss, cost or expense which was not applicable, in effect and known to such Issuer as of the date of this Agreement and which such Issuer in good faith deems material to it.

(b) Notice of Issuance or Modification; Certain Conditions. The Parent shall give the Issuer and the Administrative Agent notice prior to 10:00 a.m., New York time, at least three Business Days (or such shorter period agreed to by the Issuer) prior to the proposed date of issuance or Modification of each Letter of Credit, specifying the beneficiary, the proposed date of issuance (or Modification), the expiry date of such Letter of Credit, the amount and currency of such Letter of Credit and such other information as the Issuer may reasonably request to facilitate the requested issuance or Modification. Such notice shall be by hand delivery, facsimile or, if arrangements for doing so have been agreed upon by the Parent, the Issuer and the Administrative Agent, by electronic communication. Upon request of a Lender, the Administrative Agent agrees to provide the information contained in such notice to such Lender. If requested by the Issuer, the Relevant Borrower also shall submit a letter of credit

application on the Issuer's standard form in connection with any request for a Letter of Credit. In the event of any inconsistency between the terms and conditions of this Agreement and the terms and conditions of any form of letter of credit application or other agreement submitted by the Relevant Borrower to, or entered into by the Relevant Borrower with, the Issuer relating to any Letter of Credit, the terms and conditions of this Agreement shall control.

(c) Participations. By the issuance of a Letter of Credit (or an amendment to a Letter of Credit increasing the amount thereof) and without any further action on the part of the Issuer or the Lenders, the Issuer hereby grants to each Lender, and each Lender hereby acquires from the Issuer, a participation in such Letter of Credit equal to such Lender's Commitment Percentage of the aggregate amount available to be drawn under such Letter of Credit. In consideration and in furtherance of the foregoing, each Lender hereby absolutely and unconditionally agrees to pay to the Administrative Agent, for the account of the Issuer, such Lender's Commitment Percentage of each LC Disbursement made by the Issuer and not reimbursed by the Relevant Borrower on the date due as provided in clause (d) of this Section, or of any reimbursement payment required to be refunded to the Relevant Borrower for any reason. Each Lender acknowledges and agrees that its obligation to acquire participations pursuant to this paragraph in respect of Letters of Credit is absolute and unconditional and shall not be affected by any circumstance whatsoever, including any amendment, renewal or extension of any Letter of Credit or the occurrence and continuance of an Event of Default or Potential Event of Default or reduction or termination of the Commitments, and that each such payment shall be made without any offset, abatement, withholding or reduction whatsoever.

(d) Reimbursement. If the Issuer shall make any LC Disbursement in respect of a Letter of Credit, the Relevant Borrower shall reimburse such LC Disbursement by paying to the Administrative Agent at its Office an amount in the applicable Designated Currency equal to such LC Disbursement not later than 12:00 Noon, New York time, on the Business Day immediately following the day that the Parent or Relevant Borrower receives notice of such LC Disbursement; provided that if the amount to be reimbursed is denominated in Dollars, the Parent or Relevant Borrower may, subject to the conditions to borrowing set forth herein, request in accordance with Section 2.03 that such payment be financed with Base Rate Option Revolving Credit Loans in an equivalent amount and, to the extent so financed, the Relevant Borrower's obligation to make such payment shall be discharged and replaced by the resulting Revolving Credit Loans. If the Relevant Borrower fails to make such payment when due, the Administrative Agent shall notify each Lender of the applicable LC Disbursement, the payment then due from the Relevant Borrower in respect thereof and such Lender's Commitment Percentage thereof. Promptly (and in any event within one Business Day) following receipt of such notice, each Lender shall pay to the Administrative Agent its Commitment Percentage of the payment then due from the Relevant Borrower in the same manner as provided in Section 2.03(a) with respect to Revolving Credit Loans made by such Lender, and the Administrative Agent shall promptly pay to the Issuer the amounts so received by it from the Lenders. Any amount due from a Lender pursuant to the preceding sentence but not timely paid shall accrue interest for the account of the Issuer at a rate per annum equal to the Federal Funds Effective Rate for the first three days and thereafter at a rate of interest equal to the rate applicable to the Base Rate Portion. Promptly following receipt by the Administrative Agent of any payment from the Relevant Borrower pursuant to this paragraph, the Administrative Agent shall distribute such payment to the Issuer or, to the extent that Lenders have made payments pursuant to this

paragraph to reimburse the Issuer, then to such Lenders and the Issuer as their interests may appear. Any payment made by a Lender pursuant to this paragraph to reimburse the Issuer for any LC Disbursement (other than the funding of Revolving Credit Loans as contemplated above) shall not constitute a Revolving Credit Loan and shall not relieve the Relevant Borrower of its obligation to reimburse such LC Disbursement.

(e) Obligations Absolute. The Relevant Borrower's obligation to reimburse LC Disbursements as provided in clause (d) of this Section shall be absolute, unconditional and irrevocable, and shall be performed strictly in accordance with the terms of this Agreement under any and all circumstances whatsoever and irrespective of (i) any lack of validity or enforceability of any Letter of Credit or this Agreement, or any term or provision therein, (ii) any draft or other document presented under a Letter of Credit proving to be forged, fraudulent or invalid in any respect or any statement therein being untrue or inaccurate in any respect, (iii) payment by the Issuer under a Letter of Credit against presentation of a draft or other document that does not comply with the terms of such Letter of Credit, or (iv) any other event or circumstance whatsoever, whether or not similar to any of the foregoing, that might, but for the provisions of this Section, constitute a legal or equitable discharge of, or provide a right of setoff against, the Relevant Borrower's obligations hereunder. Neither the Administrative Agent, the Lenders nor the Issuer, nor any of their respective Affiliates, directors, officers, employees, attorneys or agents, shall have any liability or responsibility by reason of or in connection with the issuance or transfer of any Letter of Credit or any payment or failure to make any payment thereunder (irrespective of any of the circumstances referred to in the preceding sentence), or any error, omission, interruption, loss or delay in transmission or delivery of any draft, notice or other communication under or relating to any Letter of Credit (including any document required to make a drawing thereunder), any error in interpretation of technical terms or any consequence arising from causes beyond the control of the Issuer; provided that the foregoing shall not be construed to excuse the Issuer from liability to the Relevant Borrower to the extent of any direct damages (as opposed to consequential damages, claims in respect of which are hereby waived by the Relevant Borrower to the extent permitted by applicable law) suffered by the Relevant Borrower that are caused by the Issuer's failure to exercise care when determining whether drafts and other documents presented under a Letter of Credit comply with the terms thereof. The parties hereto expressly agree that, in the absence of gross negligence or willful misconduct (including willful failure to pay under any Letter of Credit after the presentation to it by the beneficiary of documents strictly complying with the terms and conditions of the Letter of Credit and payment in bad faith of a drawing under a Letter of Credit after the presentation to it by the beneficiary of documents not substantially or reasonably complying with the terms and conditions of the Letter of Credit) on the part of the Issuer (as determined by a non-appealable judgment of a court of competent jurisdiction), the Issuer shall be deemed to have exercised care in each such determination. In furtherance of the foregoing and without limiting the generality thereof, the parties agree that, with respect to documents presented which appear on their face to be in substantial compliance with the terms of a Letter of Credit, the Issuer may, in its sole discretion, either accept and make payment upon such documents without responsibility for further investigation, regardless of any notice or information to the contrary, or refuse to accept and make payment upon such documents if such documents are not in strict compliance with the terms of such Letter of Credit.

(f) Disbursement Procedures. The Issuer shall, promptly following its receipt thereof, examine all documents purporting to represent a demand for payment under a Letter of Credit. The Issuer shall promptly notify the Administrative Agent and the Parent or Relevant Borrower by telephone (confirmed by electronic or facsimile transmission) of such demand for payment and whether the Issuer has made or will make an LC Disbursement thereunder; provided that any failure to give or delay in giving such notice shall not relieve the Relevant Borrower of its obligation to reimburse the Issuer and the Lenders with respect to any such LC Disbursement.

(g) Interim Interest. If the Issuer shall make any LC Disbursement, then, unless the Relevant Borrower shall reimburse such LC Disbursement in full on the date such LC Disbursement is made, the unpaid amount thereof shall bear interest, for each day from and including the date such LC Disbursement is made to but excluding the date that the Relevant Borrower reimburses such LC Disbursement, at the rate per annum set forth in Section 4.05(b) (except that interest on amounts timely paid pursuant to Section 2.11(d) shall bear interest at such rate minus two percent (2%) per annum). Interest accrued pursuant to this paragraph shall be for the account of the Issuer, except that interest accrued on and after the date of payment by any Lender pursuant to clause (e) of this Section to reimburse the Issuer shall be for the account of such Lender to the extent of such payment.

(h) Replacement of an Issuer. Any Issuer may be replaced at any time by written agreement among the Parent, the Administrative Agent and the successor Issuer. The Administrative Agent shall notify the Lenders of any such replacement of an Issuer. At the time any such replacement shall become effective, the Parent shall pay all unpaid fees accrued for the account of the replaced Issuer pursuant to Section 2.05(b). From and after the effective date of any such replacement, (i) the successor Issuer shall be set forth in an updated Schedule IV.B and shall have all the rights and obligations of an Issuer under this Agreement and the other Loan Documents with respect to Letters of Credit to be issued by it thereafter and (ii) references herein and in the other Loan Documents to the term "Issuer" shall be deemed to refer to such successor or to any previous Issuer, or to such successor and all previous Issuers, as the context shall require. After the replacement of an Issuer hereunder, the replaced Issuer shall remain a party hereto and shall continue to have all the rights and obligations of an Issuer under this Agreement with respect to Letters of Credit issued by it prior to such replacement, but shall not be required to issue additional Letters of Credit.

(i) Cash Collateralization. If any Event of Default which requires cash collateralization as specified in Section 9.02 shall occur and be continuing, on the Business Day that the Parent receives notice from the Administrative Agent or the Required Lenders demanding the deposit of cash collateral pursuant to this paragraph, the Parent shall deposit in an account with the Administrative Agent, in the name of the Administrative Agent and for the benefit of the Lenders and Issuers, an amount in cash equal to the LC Exposure as of such date plus any accrued and unpaid interest thereon; provided that the obligation to deposit such cash collateral shall become effective immediately, and such deposit shall become immediately due and payable, without demand or other notice of any kind, upon the occurrence of any Event of Default with respect to the Parent or Relevant Borrower described in clause (i) or (j) of Section 9.01. Such deposit shall be held by the Administrative Agent as collateral for the payment and performance of the Obligations. Subject to the express provisions of this Section 2.11(i), the

Administrative Agent shall have exclusive dominion and control, including the exclusive right of withdrawal, over such account. Other than any interest earned on the investment of such deposits, which investments shall be made at the option and sole discretion of the Administrative Agent and at the Parent's risk and expense, such deposits shall not bear interest; provided, however, that any deposits so invested shall be invested only in certificates of deposit of the Administrative Agent, direct obligations of, or obligations unconditionally guaranteed by, the United States of America, money market funds rated AAA by S&P or similar investments, in each case having a maturity of no more than thirty (30) days. Interest or profits, if any, on such investments shall accumulate in such account. Moneys in such account shall be applied by the Administrative Agent to reimburse the Issuer for LC Disbursements for which it has not been reimbursed and, to the extent not so applied, shall be held first for the satisfaction of the reimbursement obligations of the Parent and Relevant Borrower for the LC Exposure at such time or, if the maturity of the Loans has been accelerated, shall be held for application to other Obligations held ratably (relative to Commitment Percentage) by the Lenders and thereafter, if the LC Exposure is zero, shall be applied to satisfy other Obligations. If the Parent has provided an amount of cash collateral hereunder as a result of the occurrence of an Event of Default, such amount (to the extent not applied as aforesaid) shall be returned to the Parent within three Business Days after all Events of Default have been cured or waived.

(j) Additional Issuers. Parent may, at any time and from time to time with the consent of the Administrative Agent (which consent shall not be unreasonably withheld, conditioned or delayed) and such Lender, designate one or more additional Lenders to act as an Issuer under the terms of this Agreement, subject to reporting requirements reasonably satisfactory to the Administrative Agent with respect to issuances, amendments, extensions and terminations of Letters of Credit by such additional Issuer. Any Lender designated as an issuing bank pursuant to this paragraph (j) shall be set forth in an updated Schedule IV.B and be deemed to be an "Issuer" (in addition to being a Lender) in respect of Letters of Credit issued or to be issued by such Lender, and, with respect to such Letters of Credit, such term shall thereafter apply to such Issuer and such Lender.

Article III

THE COMPETITIVE BID LOANS

Section 3.01 Competitive Bid Loans. In addition to Revolving Credit Loans, the Parent may, as set forth in this Article III request the Lenders to make offers to make one or more Competitive Bid Loans to the Parent or to an Other Borrower. Each Lender may, but shall have no obligation to, make one or more such offers and, subject to the terms and provisions hereof, the Parent may, but shall have no obligation to, accept any such offers in the manner set forth in this Article III; provided that no Competitive Bid Loan shall be made or requested if the making of such Loan would cause the aggregate Dollar Equivalent Amount of all Loans and LC Exposure outstanding hereunder to exceed the Total Revolving Credit Commitment. Competitive Bid Loans may be Absolute Rate Loans or LIBOR-based Loans (each a "type" of Competitive Bid Loan) and, subject to Section 4.07 hereof, may be in any Designated Currency. Competitive Bid Loans shall be due and payable on the earlier of the Competitive Bid Expiration Date and the applicable Competitive Bid Loan Maturity Date.

Section 3.02 Competitive Bid Loan Procedures.

(a) Competitive Bid Loan Quote Requests. When the Parent wishes to request offers to make Competitive Bid Loans under this Article III, it shall transmit to the Administrative Agent by facsimile transmission, at its Office, a notice (a "Competitive Bid Loan Quote Request") so as to be received no later than 11:00 a.m. New York time on (x) the fourth Business Day prior to the date of borrowing proposed therein, in the case of a LIBOR Auction or (y) the Business Day next preceding the date of borrowing proposed therein, in the case of an Absolute Rate Auction (or, in any case, such other time as the Parent and Administrative Agent may agree). The Parent may request offers to make Competitive Bid Loans for different Interest Periods in a single notice; provided that the request for each separate Interest Period shall be deemed to be a separate Competitive Bid Loan Quote Request for a separate Competitive Bid Loan (all Competitive Bid Loans proposed to be made at one time herein collectively referred to as a "Competitive Bid Borrowing"). Each such notice shall be substantially in the form of Exhibit C hereto and in any case shall specify as to each Competitive Bid Borrowing:

(i) the identity of the Relevant Borrower for such Competitive Bid Borrowing;

(ii) the proposed date of such Competitive Bid Borrowing, which shall be a Business Day;

(iii) the currency or currencies in which such Competitive Bid Borrowing is to be made;

(iv) the aggregate amount of such Competitive Bid Borrowing which shall be a Dollar Equivalent Amount of at least \$5,000,000 (or a higher integral multiple of \$1,000,000) (but only to the extent practical in the case of Competitive Bid Loans denominated in a currency other than Dollars), but shall not cause the limits specified in Section 3.01 hereof to be violated;

(v) the duration of the initial Interest Period or Interest Periods applicable thereto, subject to the provisions of the definition of "Interest Period" (including without limitation that no such Interest Period shall end after the Competitive Bid Expiration Date); and

(vi) whether the Competitive Bid Loan Quotes requested are to set forth a LIBOR-based Margin or an Absolute Rate.

No Competitive Bid Loan Request shall be given if such request could result in more than six Competitive Bid Loans being outstanding at any one time unless otherwise permitted by the Administrative Agent.

(b) Invitation for Competitive Bid Loan Quotes. Promptly after receipt of a Competitive Bid Loan Quote Request, the Administrative Agent shall transmit to the Lenders by facsimile transmission notice of such Competitive Bid Loan Request, which notice shall constitute an invitation by the Parent to each Lender to submit Competitive Bid Loan

Quotes offering to make Competitive Bid Loans in accordance with such Competitive Bid Loan Quote Request.

(c) Submission and Contents of Competitive Bid Loan Quotes.

(i) Each Lender may submit one or more Competitive Bid Loan Quotes, each containing an offer to make a Competitive Bid Loan in response to any Competitive Bid Loan Quote Request; provided that, if the Parent's request under Section 3.02(a) hereof specifies more than one Interest Period, such Lender may make a single submission containing one or more Competitive Bid Loan Quotes for each such Interest Period. Each Competitive Bid Loan Quote must comply with the requirements of this Section 3.02(c) and must be submitted to the Administrative Agent by facsimile transmission at its Office not later than (x) 10:00 a.m. New York time on the third Business Day prior to the proposed date of borrowing, in the case of a LIBOR Auction or (y) 10:00 a.m. New York time on the proposed date of borrowing, in the case of an Absolute Rate Auction (or, in either case upon reasonable notice to the Lenders, such other time and date as the Parent and the Administrative Agent may agree in writing); provided that any Competitive Bid Loan Quote submitted by the Administrative Agent (or an Affiliate of the Administrative Agent) in the capacity of a Lender may be submitted, and may only be submitted, if the Administrative Agent (or such Affiliate) notifies the Parent of the terms of the offer or offers contained therein not later than (x) 9:30 a.m. New York time on the third Business Day prior to the proposed date of borrowing, in the case of a LIBOR Auction or (y) 9:30 a.m. New York time on the proposed date of borrowing, in the case of an Absolute Rate Auction. Subject to Sections 4.07 and 6.01 hereof, any Competitive Bid Loan Quote so made shall be irrevocable except with the written consent of the Administrative Agent given on the written instructions of the Parent.

(ii) Each Competitive Bid Loan Quote shall be substantially in the form of Exhibit D hereto and shall in any case specify:

(A) the proposed date of borrowing, the proposed currency and the Interest Period therefor;

(B) the principal amount of the Competitive Bid Loan for which each such offer is being made, which principal amount shall be a Dollar Equivalent Amount of at least \$5,000,000 or a higher integral multiple of \$1,000,000 (but only to the extent practical in the case of Competitive Bid Loans denominated in a currency other than Dollars); provided that the aggregate principal amount of all Competitive Bid Loans for which a Lender submits Competitive Bid Loan Quotes (x) may be greater than, less than or equal to the Revolving Credit Committed Amount of such Lender but (y) may not exceed the principal amount of the Competitive Bid Borrowing for which offers were requested in the related Competitive Bid Loan Quote Request;

(C) in the case of a LIBOR Auction, the margin above (or, if a negative margin is offered, below) the applicable LIBO-Rate (the “LIBOR-based Margin”) offered for each such Competitive Bid Loan, expressed as a percentage (rounded upwards, if necessary, to the nearest 1/10,000th of 1%) to be added to the applicable LIBO-Rate;

(D) in the case of an Absolute Rate Auction, the rate of interest per annum, calculated on the basis of a 360-day year (rounded upwards, if necessary, to the nearest 1/10,000th of 1%) (the “Absolute Rate”) offered for each such Competitive Bid Loan; and

(E) the identity of the quoting Lender.

(iii) No Competitive Bid Loan Quote shall contain qualifying, conditional or similar language or propose terms other than or in addition to those set forth in the applicable Competitive Bid Loan Quote Request and, in particular, no Competitive Bid Loan Quote may be conditioned upon acceptance by the Parent of all (or some specified minimum) of the principal amount of the Competitive Bid Loan for which such Competitive Bid Loan Quote is being made, and the Administrative Agent shall disregard any Competitive Bid Loan Quote that contains such language or terms or conditions or that arrives at the Administrative Agent’s Office after the time set forth for submission of Competitive Bid Loan Quotes in Section 3.02(c)(i) hereof.

(d) Notice to the Parent. The Administrative Agent shall promptly after 10:00 a.m., New York time, on the last day on which Competitive Bid Loan Quote may be submitted pursuant to Section 3.02(c), notify the Parent by facsimile transmission of the terms (i) of any Competitive Bid Loan Quote submitted by a Lender that is in accordance with Section 3.02(c) hereof and (ii) of any Competitive Bid Loan Quote that amends, modifies or is otherwise inconsistent with a previous Competitive Bid Loan Quote submitted by such Lender with respect to the same Competitive Bid Loan Quote Request. Any such subsequent Competitive Bid Loan Quote shall be disregarded by the Administrative Agent unless such subsequent Competitive Bid Loan Quote is submitted solely to correct a manifest error in such former Competitive Bid Loan Quote. The Administrative Agent’s notice to the Parent shall specify (A) the aggregate principal amount of each Competitive Bid Loan for which Competitive Bid Loan Quotes have been received for each Interest Period specified in the related Competitive Bid Loan Quote Request, and (B) the respective principal amounts and LIBOR-based Margins or Absolute Rates, as the case may be, so offered by each Lender, identifying the Lender that made each Competitive Bid Loan Quote.

(e) Acceptance and Notice by the Parent. Not later than one hour after receipt of notice from the Administrative Agent of Competitive Bid Loan Quotes pursuant to Section 3.02(d) (or, in either case upon reasonable prior notice to the Lenders, such other time and date as the Parent and the Administrative Agent may agree), the Parent shall notify the Administrative Agent by facsimile transmission at its Office of its acceptance or nonacceptance of the Competitive Bid Loan Quotes so notified to it pursuant to Section 3.02(d) hereof (and the failure of the Parent to give such notice by such time shall constitute nonacceptance) and the

Administrative Agent shall promptly notify each affected Lender in accordance with Section 3.02(g) hereof. In the case of acceptance, such notice shall specify the aggregate principal amount of Competitive Bid Loan Quotes for each Interest Period that are accepted. The Parent may accept one or more Competitive Bid Loan Quotes in whole or in part (provided that any Competitive Bid Loan Quote accepted in part shall be a Dollar Equivalent Amount of at least \$5,000,000 or a higher integral multiple of \$1,000,000 (but only to the extent practical in the case of Competitive Bid Loans denominated in a currency other than Dollars)); provided that:

(i) the aggregate principal amount of each Competitive Bid Borrowing may not exceed the applicable amount set forth in the related Competitive Bid Loan Quote Request;

(ii) the aggregate principal amount of each Competitive Bid Borrowing shall be a Dollar Equivalent Amount of at least \$5,000,000 (or a higher integral multiple of \$1,000,000) (but only to the extent practical in the case of Competitive Bid Loans denominated in a currency other than Dollars);

(iii) acceptance of offers may be made only in ascending yield order of LIBOR-based Margins or Absolute Rates, as the case may be; and

(iv) the Parent shall not accept any offer where the Administrative Agent has advised the Parent that such offer fails to comply with Section 3.02(c)(ii) hereof or otherwise fails to comply with the requirements of this Agreement.

(f) Allocation by the Administrative Agent. If Competitive Bid Loan Quotes are made by two or more Lenders with the same LIBOR-based Margins or Absolute Rates, as the case may be, for a greater aggregate principal amount than the amount in respect of which Competitive Bid Loan Quotes are accepted for the related Interest Period, the principal amount of Competitive Bid Loans in respect of which such Competitive Bid Loan Quotes are accepted shall be allocated by the Administrative Agent among such Lenders as nearly as possible (in such multiples, not less than \$500,000, as the Administrative Agent may deem appropriate) in proportion to the aggregate principal amount of such offers. If two or more such Competitive Bid Loan Quotes cannot be allocated evenly within the limits set forth in the immediately preceding sentence, the Administrative Agent shall have discretion to allocate a larger share of such Competitive Bid Loans to one or more of the successful Lenders and in making such allocation shall use reasonable efforts to take into account previous allocations of unequal shares to one or more of such Lenders in connection with other Competitive Bid Loans. Determinations by the Administrative Agent of the amounts of Competitive Bid Loans to be allocated to each such Lender shall be conclusive absent manifest error.

(g) Notice to Lenders. On the date the Parent notifies the Administrative Agent of its acceptance of one or more of the offers made by any Lender or Lenders pursuant to Section 3.02(e) hereof, the Administrative Agent shall (x) not later than 3:00 p.m. New York time on such date, in the case of a LIBOR Auction or (y) as promptly as practicable on such date (but in no event later than 3:00 p.m. New York time), in the case of an Absolute Rate Auction notify each Lender which has made an offer (i) of the aggregate amount

of each Competitive Bid Borrowing with respect to which the Parent accepted one or more Competitive Bid Loan Quotes and such Lender's share of such Competitive Bid Borrowing or (ii) that the Parent accepted no offers, such notice to be by facsimile transmission.

(h) Funding of Competitive Bid Loans. Any Lender whose offer to make any Competitive Bid Loan has been accepted shall on the date specified in the related Competitive Bid Loan Quote Request make the proceeds of such Loan available to the Administrative Agent at the Administrative Agent's Office, no later than 12:00 Noon, New York time, in the case of a LIBOR Auction, and 3:00 p.m. New York City time, in the case of an Absolute Rate Auction, in funds immediately available at such Office. The Administrative Agent will make the funds so received available to the Relevant Borrower in funds immediately available.

Section 3.03 Competitive Bid Loan Maturity Dates. The principal amount of each Competitive Bid Loan shall be due and payable on the last day of the applicable Interest Period specified in the related Competitive Bid Loan Quote Request (the "Competitive Bid Loan Maturity Date") and no prepayments of Competitive Bid Loans shall be permitted.

Section 3.04 Interest Rates for Competitive Bid Loans. The outstanding principal amount of each Competitive Bid Loan shall bear interest for each day until due at the following rate or rates per annum:

(i) for each LIBOR-based Loan, a rate per annum (computed on the basis of a year of 360 days and actual days elapsed or, in the case of Loans denominated in either ~~U.K. pounds sterling~~ Sterling or Canadian Dollars, computed on the basis of a year of 365 or 366 days, as the case may be) equal to the LIBOR Rate applicable to the Interest Period therefor plus the LIBOR-based Margin quoted by the Lender making such Loan in the related Competitive Bid Loan Quote submitted in accordance with Section 3.02(c) hereof; and

(ii) for each Absolute Rate Loan, a rate per annum (computed on the basis of a year of 360 days and actual days elapsed) equal to the Absolute Rate quoted by the Lender making such Loan in the related Competitive Bid Loan Quote submitted in accordance with Section 3.02(c) hereof.

Section 3.05 Competitive Bid Loan Interest Payment Dates. Interest on each Competitive Bid Loan shall be due and payable on the Competitive Bid Loan Maturity Date thereof, and if any Interest Period is longer than three months, also on each third month of such Interest Period. After maturity of any Competitive Bid Loan (by acceleration or otherwise), interest on such Competitive Bid Loan shall be due and payable on demand.

Section 3.06 Competitive Bid Register. The Administrative Agent shall maintain a register (or an electronic equivalent thereof) for the recordation of the names and addresses of Lenders that have made Competitive Bid Loans and the principal amount of the Competitive Bid Loans owing to each Lender from time to time together with the Competitive Bid Loan Maturity Dates and interest rates applicable to each such Competitive Bid Loan, and other terms applicable thereto (the "Competitive Bid Register"). The Competitive Bid Register

shall be available for inspection by the Parent or any Lender, as to its bid only, at any reasonable time and from time to time upon reasonable prior notice.

Section 3.07 Certain Provisions Relating to LIBOR-Based Loans. Each Competitive Bid Loan that is a LIBOR-based Loan shall be subject to the provisions of Section 2.06(d) applicable to Euro-Rate Portions.

Article IV

PROVISIONS APPLICABLE TO LOANS

Section 4.01 Extension of Revolving Credit Maturity Date and Competitive Bid Expiration Date. The Revolving Credit Maturity Date and the Competitive Bid Expiration Date may be extended at any time for any period at the request of the Parent with the express consent of the Lenders as provided below.

(a) Request for Extension. The Parent may, in a written notice to the Administrative Agent, request (an “Extension Request”) that the Revolving Credit Maturity Date be extended for a period of 364 days; provided such Extension Request is delivered to the Administrative Agent at least 30 days, but no more than 90 days, prior to any anniversary of the Closing Date. The Parent may only submit a total of two Extension Requests to the Administrative Agent. The Administrative Agent shall promptly inform the Lenders of such Extension Request. Each Lender that agrees with such Extension Request shall deliver to the Administrative Agent its express written consent thereto no later than 15 days after the date of such Extension Request. Each Lender shall have the right to withhold such consent in its sole discretion.

(b) Replacement Lenders. If the Requisite Extending Lenders have expressly consented in writing to any such Extension Request as provided in Section 4.01(a), then the Administrative Agent shall so notify the Parent and the Parent, at its option, may replace any Lender which has not agreed to such Extension Request (a “Nonextending Lender”) with another financial institution (which may be a Lender) which agrees to such extension and is reasonably satisfactory to the Administrative Agent, the Swingline Lenders and the Issuers (a “Replacement Lender”) by giving (not later than 90 days after the date of the Extension Request) notice of the name of such Replacement Lender to the Administrative Agent, the Swingline Lenders and the Issuers. Unless the Administrative Agent, an Issuer or any Swingline Lender shall object to the identity of such proposed Replacement Lender prior to the date 100 days after the date of the Extension Request, upon notice from the Administrative Agent, such Nonextending Lender shall, upon payment in full in cash to it of all amounts owed to it hereunder and under the other Loan Documents, including all amounts owed under Section 4.08(c) hereof, assign all of its interests hereunder and under the other Loan Documents to such Replacement Lender and such Replacement Lender shall assume all of such Nonextending Lender’s obligations hereunder and under the other Loan Documents in accordance with the provisions of Section 12.14(c) hereof.

(c) Extension.

(i) If the Requisite Extending Lenders shall have consented to any such Extension Request, then as of 5:00 p.m. New York time on the date which is 20 days after the date of such Extension Request the Revolving Credit Maturity Date shall be deemed to have been extended until, and shall be, the date specified in the Extension Request, and if the Revolving Credit Maturity Date is so extended, the Competitive Bid Expiration Date and the Letter of Credit Maturity Date (as such dates may have been previously extended pursuant to this Section) shall be deemed to have been extended for the same period. Under all other circumstances neither the Revolving Credit Maturity Date, the Competitive Bid Expiration Date nor the Letter of Credit Maturity Date shall be extended. Notwithstanding anything herein to the contrary, in no event shall any such extension of the Revolving Credit Maturity Date be effective as to any Nonextending Lender. To the extent that any Nonextending Lender has not theretofore been replaced as described above, then on the Revolving Credit Maturity Date which is applicable to such Nonextending Lender (i.e., the Revolving Credit Maturity Date determined without giving effect to any extension thereof to which such Nonextending Lender has not consented), (i) the Parent (or, as applicable, Other Borrowers) shall make payment in full in cash to such Nonextending Lender of all amounts owed to it hereunder and under the other Loan Documents, including all amounts owed under Section 4.08(c) hereof, (ii) if the conditions set forth in Section 6.02 are then satisfied, the participation of such Nonextending Lender in all Letters of Credit shall terminate and each extending Lender shall be deemed to have acquired its pro rata (relative to Commitment Percentage) share of such participation and shall thereafter be liable to the Issuer in respect thereof and (iii) if the conditions set forth in Section 6.02 are not then satisfied, the Parent shall deposit with the Administrative Agent for the account of the Nonextending Lender cash in the amount of such Nonextending Lender's LC Exposure, which shall be held on the terms of Section 2.11(i); provided that (A) amounts so deposited and interest thereon shall be applied exclusively to amounts for which such Nonextending Lender is or becomes liable to an Issuer pursuant to Section 2.11(d) and (B) at such time as the LC Exposure of the Nonextending Lender is zero, all such amounts shall be refunded to the Parent.

(ii) Notwithstanding the foregoing, the Revolving Credit Maturity Date and the Commitment Termination Date (without taking into consideration any extension pursuant to this Section 4.01(c)), as such terms are used in reference to any Swingline Lender or any Swingline Loans made by such Swingline Lender, may not be extended without the prior written consent of such Swingline Lender (it being understood and agreed that, in the event such Swingline Lender shall not have consented to any such extension, (A) such Swingline Lender shall continue to have all the rights and obligations of the Swingline Lenders, as applicable, hereunder through the Revolving Credit Maturity Date in effect prior to giving effect to any extension pursuant to this Section 4.01(c) and thereafter shall have no obligation to make any Swingline Loan, and (B) the Borrowers shall repay all Swingline Loans, and all accrued

interest thereon, made by any Swingline Lender that shall not have consented to such extension no later than the day on which such Swingline Loans would have been required to have been repaid in accordance with the terms hereof without giving effect to any effectiveness of the extension of the Revolving Credit Maturity Date pursuant to this paragraph (and, in any event, no later than the Revolving Credit Maturity Date)).

Section 4.02 Calculation of Dollar Equivalent Amounts.

(a) Calculation Upon Making and Repayment of Loans. Upon each issuance of a Letter of Credit, Modification of a Letter of Credit which changes the undrawn face amount thereof and each making and repayment of a Revolving Credit Loan or a Competitive Bid Loan, in each case denominated in a currency other than Dollars, the Administrative Agent shall calculate the Dollar Equivalent Amount of the applicable LC Exposure or Loan.

(b) Recalculation of Dollar Equivalent Amounts. In determining the aggregate Dollar Equivalent Amount of all LC Exposure and Loans outstanding and proposed to be outstanding, the Administrative Agent may (i) use the respective Dollar Equivalent Amounts for LC Exposure and Loans calculated by it pursuant to clause (a) of this Section and (ii) recalculate the Dollar Equivalent Amounts of the LC Exposure and each outstanding Loan as frequently as it determines to do so in its discretion; provided that in any event, such recalculation shall be made for the LC Exposure and all Loans no less frequently than once each week during any period when the aggregate Dollar Equivalent Amount of the LC Exposure and Loans outstanding exceeds 90% of the Total Revolving Credit Commitment. The Administrative Agent shall recalculate the Dollar Equivalent Amount of the LC Exposure and each outstanding Revolving Credit Loan and Competitive Bid Loan at the Parent's request made no earlier than one month after the Parent's most recent such request.

Section 4.03 Mandatory Prepayments. In the event that for any reason other than fluctuations in currency exchange rates the aggregate Dollar Equivalent Amount of the outstanding Loans and LC Exposure exceeds at any time 100% of the Total Revolving Credit Commitment as then in effect, the Borrowers shall prepay outstanding Loans (subject to Section 4.08(c) hereof) and/or cash collateralize Letters of Credit (in the manner set forth in Section 2.11(i)) as selected by the Parent in an amount necessary to reduce the aggregate Dollar Equivalent Amount of the outstanding Loans and Letters of Credit which are not cash-collateralized to an amount which does not exceed the Total Revolving Credit Commitment. If the Parent elects to prepay, or cause the prepayment of, Loans in order to comply with the requirements of this Section 4.03, such prepayment shall be made to the Lenders Pro Rata.

In the event that for any reason (including fluctuations in currency exchange rates) the aggregate Dollar Equivalent Amount of the outstanding Loans and LC Exposure at any time exceeds 105% of the Total Revolving Credit Commitment as then in effect, the Borrowers shall prepay outstanding Loans (subject to Section 4.08(c) hereof) and/or cash collateralize Letters of Credit (in the manner set forth in Section 2.11(i)) as selected by the Parent in an amount necessary to reduce the aggregate Dollar Equivalent Amount of the outstanding Loans and Letters of Credit which are not cash-collateralized to an amount which does not exceed the Total Revolving Credit Commitment. If the Parent elects to prepay, or cause the prepayment of,

Loans in order to comply with the requirements of this Section 4.03, such prepayment shall be made to the Lenders Pro Rata.

Section 4.04 Prepayment Procedures. Whenever any Borrower desires or is required to prepay any part of its Loans, the Parent shall provide not less than one Business Day's prior written notice to the Administrative Agent at its Office setting forth the following information:

- (a) the identity of the Relevant Borrower;
- (b) the type of Loans to be prepaid and the identity of the portions of such Loans to be prepaid; and
- (c) the date, which shall be a Business Day, on which the proposed prepayment is to be made.

Section 4.05 Payments Generally; Interest on Overdue Amounts.

(a) Payments Generally. All payments and prepayments to be made by the Parent or any Other Borrower in respect of principal, interest, fees, reimbursement of LC Disbursements, indemnity, expenses or other amounts due from the Parent or any Other Borrower hereunder or under any Loan Document in Dollars shall be payable by 12:00 Noon, New York time, on the day when due without presentment, demand, protest or notice of any kind (other than notice of acceleration as required by Section 9.02 hereof), all of which are hereby expressly waived, without set-off, counterclaim, withholding or other deduction of any kind or nature, except for payments to a Lender subject to a withholding deduction under Section 4.09 hereof. Except for payments to be made directly to an Issuer or a Swingline Lender as expressly provided herein and payments under Sections 4.08, 4.09 and 12.06 hereof, such payments shall be made to the Administrative Agent at its Office in Dollars in funds immediately available at such Office, and payments under Sections 4.08, 4.09 and 12.06 hereof shall be made to the applicable Lender at such domestic account as it shall specify to the Parent from time to time in funds immediately available at such account.

All payments and prepayments to be made by the Parent or any Other Borrower in respect of principal, interest, reimbursement of LC Disbursements or other amounts due from any Borrower hereunder or under any Loan Document in a currency other than Dollars shall be made by payment in that currency in freely transferable funds by 12:00 Noon, New York time, for value on the applicable payment date and such payment shall be due without presentment, demand, protest or notice of any kind (other than notice of acceleration as required by Section 9.02 hereof), all of which are hereby expressly waived, without set-off, counterclaim, withholding or other deduction of any kind or nature, except for payments to a Lender subject to a withholding deduction under Section 4.09 hereof. Except for payments to be made directly to an Issuer as expressly provided herein and payments under Sections 4.08, 4.09 and 12.06 hereof, such payments shall be made to the Administrative Agent at the Administrative Agent's Office. Any payment or prepayment received by the Administrative Agent after 12:00 Noon, New York time on any day shall be deemed to have been received on the next succeeding Business Day.

All payments to be made by a Lender under Section 4.05(c)(i) shall be made to the Administrative Agent at its Office without set-off, withholding, counterclaim or other deduction of any nature.

All payments hereunder of (i) principal or interest in respect of any Loan shall be made in the currency in which such Loan is denominated, (ii) reimbursement obligations (and interest in respect of reimbursement obligations) shall be made in the currency in which the Letter of Credit in respect of which such reimbursement obligation exists was denominated or (iii) any other amount due hereunder or under another Loan Document shall be made in Dollars. The Administrative Agent shall distribute to the Lenders all payments received by it for the account of the Lenders from any Borrower as promptly as practicable after receipt by the Administrative Agent. Except as expressly contemplated by Section 4.01(c), all payments on account of Revolving Credit Loans shall be distributed to the Lenders Pro Rata. If and to the extent that the Administrative Agent has not forwarded to any Lender such Lender's share of any such payment on the same Business Day as such payment is received (or deemed received) from such Borrower, the Administrative Agent shall pay to such Lender interest on such amount at the Federal Funds Effective Rate for each day until such payment is made.

Upon termination of this Agreement and the expiration or cancellation of all Letters of Credit and payment in full in cash of all principal, interest, reimbursement amounts, fees, expenses and other amounts due from the Borrowers hereunder or under any other Loan Document, each Lender will promptly mark any Notes "cancelled" and forward them to the Administrative Agent for delivery to the Parent.

(b) Interest on Overdue Amounts. To the extent permitted by Law, after there shall have become due (by acceleration or otherwise) principal, interest, fees, obligations with respect to LC Disbursements, indemnity, expenses or any other amounts due from any Borrower hereunder or under any other Loan Document, such amounts shall bear interest for each day until paid (before and after judgment), payable on demand, at a rate per annum based on a year of 360 days (or in the case of Loans denominated in ~~U.K. pounds sterling~~ Sterling or Canadian Dollars, based on a year of 365 or 366 days, as the case may be) and actual days elapsed which for each day shall be equal to the following:

(i) in the case of any part of the Euro-Rate Portion or CDOR Portion of any Revolving Credit Loans or of Competitive Bid Loans, (A) until the end of the applicable then-current Funding Period or until regularly scheduled maturity, as the case may be, at a rate per annum 2% above the rate otherwise applicable to such part, and (B) thereafter in accordance with the following clause (ii); and

(ii) in the case of any other amount due from any Borrower hereunder or under any Loan Document, (A) 2% above the then current Base Rate, in the case of Loans or other amounts denominated in Dollars ~~or~~, (B) 2% above the rate then borne by overnight deposit in the applicable currency in the eurocurrency market as determined by the Administrative Agent, in the case of Revolving Credit Loans, Competitive Bid Loans or other amounts denominated in a currency other than Dollars or Sterling or (C) 2% above the then current

[Daily Simple RFR in the case of SONIA Loans or other amounts denominated in Sterling.](#)

(c) Administrative Agent's Clawback.

(i) Funding by Lenders; Presumption by Administrative Agent. Unless the Administrative Agent shall have received notice from a Lender (x) in the case of Base Rate Loans, one hour prior to the proposed time of the Borrowing and (y) otherwise, prior to the proposed date of any Borrowing that such Lender will not make available to the Administrative Agent such Lender's share of such Borrowing, the Administrative Agent may assume that such Lender has made such share available on such date in accordance with this Agreement and may, in reliance upon such assumption, make available to the Borrower a corresponding amount. In such event, if a Lender has not in fact made its share of the applicable Borrowing available to the Administrative Agent, then the applicable Lender and the Borrower severally agree to pay to the Administrative Agent forthwith on demand such corresponding amount, with interest thereon, for each day from and including the date such amount is made available to the Borrower to but excluding the date of payment to the Administrative Agent, at (i) in the case of a payment to be made by such Lender, the greater of the Federal Funds Effective Rate and a rate determined by the Administrative Agent in accordance with banking industry rules on interbank compensation, and (ii) in the case of a payment to be made by the Borrower, the rate determined by reference to the applicable interest rate Option for such Borrowing. If the Borrower and such Lender shall pay such interest to the Administrative Agent for the same or an overlapping period, the Administrative Agent shall promptly remit to the Borrower the amount of such interest paid by the Borrower for such period. If such Lender pays its share of the applicable Borrowing to the Administrative Agent, then the amount so paid shall constitute such Lender's Loan included in such Borrowing. Any payment by the Borrower shall be without prejudice to any claim the Borrower may have against a Lender that shall have failed to make such payment to the Administrative Agent.

(ii) Payments by Borrower; Presumptions by Administrative Agent. Unless the Administrative Agent shall have received notice from the Borrower prior to the date on which any payment is due to the Administrative Agent for the account of the Lenders or the Issuers hereunder that the Borrower will not make such payment, the Administrative Agent may assume that the Borrower has made such payment on such date in accordance herewith and may, in reliance upon such assumption, distribute to the Lenders or the Issuers, as the case may be, the amount due. In such event, if the Borrower has not in fact made such payment, then each of the Lenders or the Issuers, as the case may be, severally agrees to repay to the Administrative Agent forthwith on demand the amount so distributed to such Lender or Issuer, with interest thereon, for each day from and including the date such amount was distributed to it to but excluding the date of payment to the Administrative Agent, at the greater of the

Federal Funds Effective Rate and a rate determined by the Administrative Agent in accordance with banking industry rules on interbank compensation.

Section 4.06 Availability of Currencies.

(a) Unavailability. If, in the reasonable judgment of the Administrative Agent, a Designated Currency ceases to be available and freely tradable in the eurocurrency market then such currency shall cease to be a Designated Currency hereunder. The Administrative Agent shall give prompt notice to the Parent and the Lenders of any such determination.

(b) Repayment in Dollars. In the event that (i) pursuant to Section 4.06(a), the Administrative Agent has determined that a Designated Currency has ceased to be available and freely tradable in the eurocurrency market and (ii) the Administrative Agent has determined in good faith that such Designated Currency is not otherwise available to the Parent or any Other Borrower, then, on the date any Loans or amounts in respect of a Letter of Credit denominated in such Designated Currency would become due under the terms of this Agreement (other than as a result of an optional prepayment or of the acceleration of the Loans under Section 9.02), the Relevant Borrower may repay such Loans (or other amounts) by paying to each Lender an amount in Dollars equal to the amount determined in good faith by such Lender (which determination shall be conclusive absent manifest error) to be the amount in Dollars necessary to compensate such Lender for the principal of and accrued interest on such Loans (or other amounts) and any additional cost, expense or loss incurred by such Lender as a result of such Loans or other amounts being repaid in Dollars (rather than in their denominated currency).

Section 4.07 Changes in Law Rendering Certain Loans Unlawful. In the event that any Law or guideline or interpretation or application thereof shall at any time make it unlawful for any Lender to make, maintain or fund its Loans or its Letter of Credit or Swingline Loan participations, such Lender shall promptly notify the Parent and the Administrative Agent thereof. Thereupon, the Relevant Borrower shall, subject to Section 4.08(c), if such Lender so requests, on such date as may be required by the relevant Law, guideline, interpretation or application, prepay such Loans. Each Lender shall take actions of the type referred to in Section 4.10, if such actions would avoid such circumstances and would not in the good faith judgment of such Lender be disadvantageous in any way to such Lender or its Affiliates at such time or in the future. No Lender shall be obligated to make any extension of credit hereunder in violation of any applicable law.

Section 4.08 Additional Compensation in Certain Circumstances.

(a) Increased Costs or Reduced Return Resulting From Taxes, Reserves, Capital Adequacy Requirements, Expenses, Etc. If any Law or change therein or interpretation or application thereof by any Governmental Authority charged with the interpretation or administration thereof or compliance with any request or directive of any Governmental Authority (whether or not having the force of Law), in each case adopted or made after the date hereof (or, with respect to any Other Borrower, adopted or made at any time); provided, however, that for purposes of this Section 4.08, (x) the Dodd-Frank Wall Street Reform and Consumer Protection Act or any change therein or interpretation or application

thereof by any Governmental Authority charged with the interpretation or administration thereof or compliance with any related request or directive of any Governmental Authority (whether or not having the force of Law) and (y) any requests or directives promulgated by, or the interpretations or applications thereof by the Bank for International Settlements, the Basel Committee on Banking Regulations and Supervisory Practices (or any successor or similar authority) or the United States or foreign regulatory authorities, in each case pursuant to Basel III, shall be deemed to have been adopted or made after the date hereof:

(i) subjects any Lender or Issuer or any Notional Funding Office to any Tax with respect to this Agreement, the Notes, the Loans, the Letters of Credit or payments by any Borrower of principal, interest, Commitment Fees or other amounts due from any Borrower hereunder or under the Notes, or other obligations, its deposits, reserves, other liabilities or capital attributable thereto (except for (A) Indemnified Taxes or (B) Excluded Taxes),

(ii) imposes, modifies or deems applicable any reserve, special deposit or similar requirement or imposes any other condition adversely affecting the cost to a Lender or Issuer or Notional Funding Office of making, maintaining or funding any Loan or issuing any Letter of Credit or acquiring or maintaining a participation in any Letter of Credit hereunder (other than requirements expressly included herein in the determination of interest under the Euro-Rate Option), or

(iii) imposes, modifies or deems applicable any capital adequacy, liquidity or similar requirement (A) against assets (funded or contingent) of, or credits or commitments to extend credit extended by, any Lender, any Issuer or any Notional Funding Office hereunder, or any Person controlling a Lender or an Issuer, or (B) otherwise applicable to the obligations of any Lender, any Issuer or any Notional Funding Office under this Agreement, or any Person controlling a Lender or an Issuer.

and the result of any of the foregoing is reasonably determined by any Lender or Issuer to increase the cost to, reduce the income receivable by, or impose any expense (including loss of margin) upon such Lender or Issuer, any Notional Funding Office or, in the case of clause (iii) hereof, any Person controlling a Lender or Issuer, with respect to this Agreement, the Notes or the making, maintenance or funding of any Loan or the issuing of any Letter of Credit or the acquiring or maintaining of a participation in any Letter of Credit (or, in the case of any capital adequacy, liquidity or similar requirement, to have the effect of reducing the rate of return on such Lender's, Issuer's or controlling Person's capital, taking into consideration such Lender's, Issuer's or controlling Person's policies with respect to capital adequacy, liquidity or similar requirement) by an amount which such Lender or Issuer reasonably deems to be material, such Lender or Issuer may from time to time promptly notify the Parent of the amount determined in good faith (using any reasonable averaging and attribution methods) by such Lender or Issuer (which determination shall be conclusive absent manifest error) to be necessary to compensate such Lender or Issuer or such Notional Funding Office or controlling Person for such increase, reduction or imposition. Each Lender and Issuer will furnish the Parent and the Administrative Agent with a statement setting forth in reasonable detail the basis, the manner of calculation and

the amount of each request by such Lender or Issuer for compensation from the Parent under this Section 4.08. Such amount shall be due and payable by the Parent to such Lender or Issuer five Business Days after such notice is given; provided that the Parent shall not be obligated to pay such compensation unless such Lender or Issuer in such notice certifies its good faith determination that it shall be generally assessing such amounts against borrowers under agreements having provisions similar to this paragraph. Notwithstanding the foregoing, the Parent will not be required to reimburse any Lender or Issuer for any such increase, reduction or imposition under this Section 4.08 (a) that (i) arises prior to 120 days preceding the date of such Lender's or Issuer's request for compensation under this Section 4.08(a), unless the applicable Law, guideline, change, interpretation or application is imposed retroactively or (ii) if the applicable Law, guideline, change, interpretation or application is imposed retroactively, arises prior to 120 days preceding the later of the date the Lender or Issuer reasonably should have learned of such Law, guideline, change, interpretation or application and the date of such Lender's or Issuer's request.

Each Lender will take actions of the type referred to in Section 4.10, if such actions would avoid the conditions referred to in clause (i), (ii) and (iii) of this Section 4.08(a) and would not in the good faith judgment of such Lender be disadvantageous in any way to such Lender or its Affiliates at such time or in the future.

If a Lender requests reimbursement under this Section 4.08(a), so long as the circumstances giving rise to such request continue to exist, the Parent at its option, and at the sole cost and expense of the Borrowers, may replace such Lender with another Lender or a financial institution reasonably satisfactory to the Administrative Agent, each Issuer and each Swingline Lender by giving notice of such replacement Lender to such Lender and the Administrative Agent. Unless the Administrative Agent, any Issuer or any Swingline Lender shall object to the identity of such proposed replacement Lender within 10 days after receipt of such notice, the Lender being so replaced shall, upon payment in full in cash to it of all amounts owed to it hereunder and under the other Loan Documents, including all amounts owed under Section 4.08(c) hereof, assign all of its interests hereunder and under the other Loan Documents to such replacement Lender and such replacement Lender shall assume all of such other Lender's obligations hereunder and under the other Loan Documents in accordance with the provisions of Section 12.14(c) hereof.

(b) Additional Reserve Costs. For so long as any Lender is required to make special deposits with the European Central Bank and/or the Bank of England (or, in either case, any other authority which replaces all or any of its functions) or comply with reserve assets, liquidity, cash margin or other requirements of the European Central Bank and/or the Bank of England (or, in any case, any other authority which replaces all or any of its functions), to maintain reserve asset ratios or to pay fees, in each case in respect of the Euro-Rate Portion of such Lender's Revolving Credit Loans, such Lender shall be entitled to require the Relevant Borrower to pay, contemporaneously with each payment of interest on each of such Revolving Credit Loans, additional interest on such Revolving Credit Loan at a rate per annum equal to the Mandatory Costs Rate calculated in accordance with the formula and in the manner set forth in Schedule V hereto. Any additional interest owed pursuant to this Section 4.08(b) shall be determined in reasonable detail by the applicable Lender, which determination shall be conclusive and binding absent manifest error, and notified to the Relevant Borrower (with a copy

to the Administrative Agent) at least five Business Days before each date on which interest is payable for the applicable Loan, and such additional interest so notified to the Relevant Borrower by such Lender shall be payable to the Administrative Agent for the account of such Lender on each date on which interest is payable for such Loan.

(c) Funding Breakage. If any repayment of principal with respect to any part of any Funding Segment of any Euro-Rate Portion or CDOR Portion of the Loans (other than Swingline Loans) is made on a day other than on the last day of the corresponding Funding Period, or any prepayment of principal with respect to any Competitive Bid Loan is made, as a result of an acceleration of the maturity thereof pursuant to Section 9.02 or for any other reason, or if any Borrower fails to borrow after giving notice of borrowing, the Parent shall reimburse each Lender on demand for any loss incurred by such Lender as a result of the timing of such payment, prepayment or failure, including (without limitation) any loss incurred in liquidating or employing deposits from third parties but excluding loss of margin for the period after such payment, prepayment or failure; provided that such Lender shall have delivered to the Parent a certificate setting forth the basis for determining such loss, which certificate shall be conclusive in the absence of manifest error.

Section 4.09 Taxes.

(a) Payments Free of Taxes. Unless required by Law, all payments made by or on account of any obligation of any Borrower under this Agreement and any other Loan Document shall be made free and clear of and without deduction for any and all present or future taxes, levies, imposts, deductions, charges or withholdings, and all interest, additions to tax or penalties with respect thereto or similar charges imposed by a Governmental Authority ("Taxes"). If any Withholding Agent shall be required by Law to deduct or withhold any Taxes from or in respect of any sum payable under this Agreement or any other Loan Document to any Lender, any Issuer or the Administrative Agent, then (i) if such Taxes are Indemnified Taxes, the sum payable by the applicable Borrower shall be increased as may be necessary so that after making all required deductions or withholdings (including deductions or withholdings applicable to additional sums payable under this Section 4.09) such Lender, such Issuer or the Administrative Agent, as the case may be, receives an amount equal to the sum it would have received had no such deductions or withholdings been made, (ii) the applicable Withholding Agent shall make such deductions or withholding, and (iii) the applicable Withholding Agent shall pay the full amount deducted to the relevant Governmental Authority or other authority in accordance with applicable Law.

(b) Other Taxes. In addition, each Borrower agrees to timely pay any present or future stamp or documentary taxes or any other excise or property Taxes, charges or similar levies which arise from any payment made under this Agreement or any other Loan Document or from the execution, delivery or registration of, or otherwise with respect to, this Agreement or any other Loan Document, except any such taxes that are imposed with respect to an assignment (other than an assignment made or other action taken at the request of the Parent) ("Other Taxes"), or at the option of the Administrative Agent, timely reimburse it for such taxes.

(c) Indemnity by the Parent. The Parent will indemnify each Lender and Issuer and the Administrative Agent for the full amount of Taxes (other than Excluded

Taxes) imposed on or with respect to any payment made by or on account of any obligation of the Parent and the Other Borrowers under any Loan Document and Other Taxes (including, without limitation, any Taxes and Other Taxes imposed by any jurisdiction on amounts payable under this Section 4.09) paid or payable by such Lender or Issuer or Administrative Agent, as the case may be, and any liability (including, without limitation, penalties, interest and expenses) arising therefrom or with respect thereto, whether or not such Taxes or Other Taxes were correctly or legally asserted (referred to herein as “Indemnified Taxes”). The Administrative Agent and each Issuer and Lender agree to give notice to the Parent of the assertion of any claim against the Administrative Agent or such Issuer or Lender relating to such Taxes or Other Taxes as promptly as is practicable after being notified of such assertion; provided that the Administrative Agent’s or such Issuer’s or Lender’s failure to notify the Parent promptly of such assertion shall not relieve the Parent of its obligations under this Section 4.09 except to the extent that the Parent is actually prejudiced thereby. Payments by the Parent pursuant to this indemnification shall be made within 30 days from the date the Administrative Agent or such Issuer or Lender makes written demand therefor (submitted through the Administrative Agent), which demand shall be accompanied by a certificate describing in reasonable detail the basis therefor, which certificate shall be conclusive absent manifest error.

(d) Lender Indemnity. Each Lender shall severally indemnify the Administrative Agent for any Taxes (but only to the extent that the Parent has not already indemnified the Administrative Agent for such Taxes and without limiting the obligation of the Parent to do so) attributable to such Lender that are paid or payable by the Administrative Agent in connection with any Loan Document and any reasonable expenses arising therefrom or with respect thereto, whether or not such Taxes were correctly or legally imposed or asserted by the relevant Governmental Authority. The indemnity under this Section 4.09(d) shall be paid within 10 days after the Administrative Agent delivers to the applicable Lender a certificate stating the amount of Taxes so paid or payable by the Administrative Agent. Such certificate shall be conclusive of the amount so paid or payable absent manifest error.

(e) Receipts, etc. Within 30 days after the date of any payment of Taxes or Other Taxes, the Parent will furnish to the Administrative Agent the original or a certified copy of a receipt evidencing payment thereof, a copy of the return reporting such payment or other evidence of such payment reasonably satisfactory to the Administrative Agent.

(f) Other. Nothing in this Section 4.09 (including, for the avoidance of doubt, Section 4.09(i)) or otherwise in this Agreement shall require the Administrative Agent, any Lender or any Issuer to disclose to any other party to this Agreement any of its tax returns (or any other information that it deems to be confidential or proprietary).

(g) Withholding Tax Exemption.

(i) Each Lender or Issuer shall, (1) on or about the date such Lender or such Issuer becomes party to this Agreement, and (2) from time to time thereafter if, in each case of (1) and (2), reasonably requested in writing by the Parent or the Administrative Agent, as promptly as is reasonable provide the Administrative Agent and the Parent with the executed copies of forms prescribed by the United States Internal Revenue Service or other relevant Governmental

Authority certifying as to the status of such Lender or such Issuer for purposes of determining exemption from, or reduced rate applicable to, withholding taxes with respect to payments to be made to such Lender or such Issuer under this Agreement and the other Loan Documents.

(ii) Without limiting the generality of the foregoing,

(A) If a payment made to a Lender or Issuer under this Agreement or any other Loan Documents would be subject to United States Federal withholding tax imposed by FATCA if such Lender or such Issuer fails to comply with the applicable reporting requirements of FATCA (including those contained in Section 1471(b) or 1472(b) of the Code, as applicable), such Lender or such Issuer shall deliver to the Administrative Agent and the Parent on or about the date such Lender or such Issuer becomes party to this Agreement, at the time or times prescribed by law and at such time or times reasonably requested by the Administrative Agent or the Parent, such documentation prescribed by applicable law (including as prescribed by Section 1471(b)(3)(C)(i) of the Code) and such additional documentation reasonably requested by the Administrative Agent or the Parent as may be necessary for such party to comply with its obligations under FATCA, to determine that such Lender or such Issuer has complied with its obligations under FATCA or to determine the amount to deduct and withhold from such payment; solely for purposes of this clause (g), "FATCA" shall include any amendments made to FATCA after the date of this Agreement;

(B) Any Lender or Issuer, if reasonably requested by the Administrative Agent or the Parent, shall deliver such other documentation prescribed by applicable law or reasonably requested by the Administrative Agent or the Parent as will enable the Administrative Agent or the Parent to determine whether or not such Lender or such Issuer is subject to backup withholding or information reporting requirements;

(C) Each Lender that is a "United States person" within the meaning of Section 7701(a)(30) of the Code shall deliver to the Administrative Agent and the Parent on or prior to the date on which such Lender becomes a Lender under this Agreement or when reasonably requested by the Administrative Agent or the Parent, executed copies of IRS Form W-9 (or any successor form) certifying that such Lender is exempt from U.S. federal backup withholding tax; and

(D) Each Lender that is not a "United States person" within the meaning of Section 7701(a)(30) of the Code shall deliver to the Administrative Agent and the Parent on or prior to the date on which such Lender becomes a Lender under this Agreement or when reasonably requested by the Administrative Agent or the Parent, (x) executed copies of any applicable IRS Form W-8, (y) in the case of such Lender claiming the benefits of the exemption for portfolio interest under Section 881(c) of the Code, a certificate to the effect

that such Lender is not a “bank” within the meaning of Section 881(c)(3)(A) of the Code, a “10 percent shareholder” of the Borrower within the meaning of Section 881(c)(3)(B) of the Code, or a “controlled foreign corporation” described in Section 881(c)(3)(C) of the Code (a “U.S. Tax Compliance Certificate”), and (z) to the extent such Lender is a partnership or is acting as an intermediary for the beneficial owner of the payments to be made, executed copies of an applicable IRS Form W-8, a U.S. Tax Compliance Certificate, IRS Form W-9, and/or other certification documents from each partner or beneficial owner, as applicable; provided that if such Lender is a partnership and one or more direct or indirect partners of such Lender are claiming the portfolio interest exemption, such Lender may provide a U.S. Tax Compliance Certificate on behalf of each such direct and indirect partner;

provided that a Lender or Issuer shall not be obligated to provide any such form specified in clause (i) or (ii) if such Lender or such Issuer is not legally able to do so. Each Lender and Issuer agrees that if any form or certification it previously delivered expires or becomes obsolete or inaccurate in any respect, it shall update such form or certification or promptly notify the Administrative Agent and the Parent in writing of its legal inability to do so.

(h) Excluded Taxes. Excluded Taxes shall mean any of the following Taxes imposed on or with respect to the Administrative Agent, any Lender or an Issuer or required to be withheld from a payment to such Person:

(i) Any Taxes imposed on or measured by net income (however denominated), franchise Taxes, and branch profits Taxes imposed on such Lender, such Issuer or the Administrative Agent, as the case may be, (A) by the jurisdiction under the laws of which such Lender, such Issuer or the Administrative Agent, as the case may be, is organized or by any political subdivision thereof or imposed as a result of such Lender, the Issuer, or Administrative Agent having its principal office or applicable lending office or Notional Funding Office in the Jurisdiction imposing the Tax, or (B) as a result of a present or former connection between such Lender, such Issuer or the Administrative Agent and the jurisdiction imposing such Tax (other than connections arising from such Lender, Administrative Agent or such Issuer having executed, delivered, become a party to, performed its obligations under, received payments under, received or perfected a security interest under, engaged in any other transaction pursuant to or enforced any Loan Document, or sold or assigned an interest in any Loan or Loan Document);

(ii) In the case of each Lender or Issuer, any United States federal withholding Taxes, to the extent that such withholding is imposed on amounts payable to or for the account of such Lender or such Issuer with respect to a Loan, Letter of Credit or Commitment pursuant to a law that existed on the date such Lender or such Issuer became a party to this Agreement or on the date such Lender or such Issuer changes its lending office or Notional Funding Office; provided that this clause (ii) shall not apply to a Lender or Issuer that

became a Lender or Issuer as a result of an assignment made or other action taken at the request of the Parent;

(iii) Any Taxes to the extent that the obligation to make such indemnification or to pay such additional amounts would not have arisen but for gross negligence, willful misconduct or bad faith of such Lender or such Issuer or the failure of such Lender or such Issuer to comply with the provisions of Section 4.09(g); and

(iv) Any United States federal withholding Taxes imposed under FATCA.

(i) Refunds. If any party determines in its sole discretion exercised in good faith that it has received a refund in respect of any Taxes or Other Taxes as to which it has been indemnified pursuant to this Section 4.09 or with respect to which a Borrower has paid additional amounts, pursuant to this Section 4.09, such party shall promptly after the date of such receipt pay over the amount of such refund to the indemnifying party (but only to the extent of indemnity payments made, or additional amounts paid, by the indemnifying party under this Section 4.09 with respect to the Taxes or Other Taxes giving rise to such refund and only to the extent that the amount of any such refund is directly attributable to payments made under this Agreement), net of all reasonable expenses of such party (including additional Taxes and Other Taxes attributable to such refund, as determined by such party) and without interest (other than interest, if any, paid by the relevant Governmental Authority with respect to such refund). The indemnifying party shall, upon demand, pay to such indemnified party any amount paid over to the indemnifying party by such indemnified party (plus penalties, interest or other charges imposed by such Governmental Authority) in the event such indemnified party is required to repay any portion of such refund to such Governmental Authority. Notwithstanding anything to the contrary in this paragraph (i), in no event will the indemnified party be required to pay any amount to an indemnifying party pursuant to this paragraph (i) the payment of which would place the indemnified party in a less favorable net after-tax position than the indemnified party would have been in if the Tax subject to indemnification and giving rise to such refund had not been deducted, withheld or otherwise imposed and the indemnification payments or additional amounts with respect to such Tax had never been paid.

(j) Cure Action. Each Lender and Issuer agrees to take actions of the type referred to in Section 4.10, if such actions would avoid or reduce payments under this Section 4.09 and would not, in the good faith judgment of such Lender or such Issuer, be disadvantageous in any way to such Lender or such Issuer or its Affiliates at such time or in the future. If a Lender requests reimbursement under this Section 4.09, so long as the circumstances giving rise to such request continue to exist, the Parent at its option, and at the sole cost and expense of the Borrowers, may replace such Lender with another Lender or a financial institution reasonably satisfactory to the Administrative Agent by giving notice of such replacement Lender to such Lender and the Administrative Agent. Unless the Administrative Agent, any Issuer or any Swingline Lender shall object to the identity of such proposed replacement Lender within 10 days after receipt of such notice, the Lender being so replaced shall, upon payment in full in cash to it of all amounts owed to it hereunder and under the other Loan Documents, including all amounts owed under Sections 4.08(c) and 4.09 hereof, assign all of its interests hereunder and

under the other Loan Documents to such replacement Lender and such replacement Lender shall assume all of such other Lender's obligations hereunder and under the other Loan Documents in accordance with the provisions of Section 12.14(c) hereof.

(k) Defined Terms. For purposes of this Section 4.09, the term "Lender" includes any Issuer.

Section 4.10 Funding by Branch, Subsidiary or Affiliate.

(a) Notional Funding. Each Lender shall have the right from time to time, prospectively or retrospectively, without notice to any Borrower, to deem any branch, subsidiary or Affiliate of such Lender to have made, maintained or funded any part of the Loans at any time; provided that if a Lender exercises such right as a matter of administrative convenience and not as required by Law or by this Agreement, then the Parent shall not be required to reimburse the Lender for any increased amounts payable under Section 4.08(a) or 4.09 hereof that result from the exercise of such right. Any branch, subsidiary or Affiliate so deemed shall be known as a "Notional Funding Office." Such Lender shall deem any part of its Loans or the funding therefor to have been transferred to a different Notional Funding Office if such transfer would avoid or cure an event or condition described in Section 2.06(d)(i)(B) hereof or would lessen compensation payable by any Borrower under Sections 4.08(a) or 4.09 hereof, and would not, in the good faith judgment of such Lender, be disadvantageous in any way to such Lender or its Affiliates at such time or in the future (it being assumed for purposes of such determination that the Loans are actually made or maintained by or funded through the corresponding Notional Funding Office). Notional Funding Offices may be selected by such Lender without regard to such Lender's actual methods of making, maintaining or funding Loans or any sources of funding actually used by or available to such Lender.

(b) Actual Funding. Each Lender shall have the right from time to time to make or maintain any part of the Loans by arranging for a branch, subsidiary or Affiliate of such Lender to make or maintain such part of the Loans; provided that if a Lender exercises such right as a matter of administrative convenience and not as required by Law or by this Agreement, then the Parent shall not be required to reimburse the Lender for any increased amounts payable under Section 4.08(a) or 4.09 hereof that result from the exercise of such right. Such Lender shall have the right to (i) hold any applicable Note payable to its order for the benefit and account of such branch, subsidiary or Affiliate or (ii) request any Borrower to issue one or more promissory notes in the principal amount of such part, in substantially the form attached hereto as Exhibit A or B, as the case may be, with the blanks appropriately filled, payable to such branch, subsidiary or Affiliate and with appropriate changes reflecting that the holder thereof is not obligated to make any additional Loans to any Borrower. Each Borrower agrees to comply promptly with any request under clause (ii) of this Section 4.10(b). If any Lender causes a branch, subsidiary or Affiliate to make or maintain any part of Loans hereunder, all terms and conditions of this Agreement shall, except where the context clearly requires otherwise, be applicable to such part of the Loans and to any note payable to the order of such branch, subsidiary or Affiliate to the same extent as if such part of the Loans were made or maintained and such note were a Note payable to such Lender's order.

Section 4.11 Several Obligations. The failure of any Lender to make a Revolving Credit Loan shall not relieve any other Lender of its obligation to lend hereunder, but neither the Administrative Agent nor any Lender shall be responsible for the failure of any other Lender to make a Revolving Credit Loan.

Section 4.12 Defaulting Lenders. Notwithstanding any provision of this Agreement to the contrary, if any Lender becomes a Defaulting Lender, then the following provisions shall apply for so long as such Lender is a Defaulting Lender:

(a) Commitment Fees shall cease to accrue on the Revolving Credit Commitment of such Defaulting Lender pursuant to Section 2.05(a).

(b) The Revolving Credit Committed Amount, Loans and LC Exposure of such Defaulting Lender shall not be included in determining whether the Lenders or the Required Lenders have taken or may take any action hereunder (including any consent to any amendment, waiver or other modification pursuant to Section 12.03); provided that this clause (b) shall not apply for purposes of any amendment, modification or waiver that (i) increases such Defaulting Lender's Revolving Credit Committed Amount or extends the maturity of such Defaulting Lender's Loans or extends its Revolving Credit Commitment, or reduces principal owed with respect thereto or (ii) requires the consent of all Lenders or each Lender affected thereby and treats such Defaulting Lender differently than the other respective Lenders.

(c) If any LC Exposure exists at the time such Lender becomes a Defaulting Lender then:

(i) all or any part of the LC Exposure of such Defaulting Lender shall be reallocated among the non-Defaulting Lenders in accordance with their respective Commitment Percentages (calculated without regard to such Defaulting Lender's Revolving Credit Commitments) but only to the extent that (A) no Event of Default has occurred and is continuing at such time and (B) such reallocation does not cause the Dollar Equivalent Amount of the Revolving Credit Exposure of any non-Defaulting Lender to exceed the Dollar Equivalent Amount of the Revolving Credit Committed Amount of such non-Defaulting Lender (it being understood and agreed that, subject to Section 12.21, no reallocation hereunder shall constitute a waiver or release of any claim of any party hereunder against a Defaulting Lender arising from such Lender having become a Defaulting Lender, including any claim of a non-Defaulting Lender as a result of such non-Defaulting Lender's increased exposure following such reallocation);

(ii) if the reallocation described in clause (i) above cannot, or can only partially, be effected, the Parent shall within one Business Day following notice by the Administrative Agent cash collateralize for the benefit of the Issuers only the Relevant Borrower's obligations corresponding to such Defaulting Lender's LC Exposure (after giving effect to any partial reallocation pursuant to clause (i) above) in accordance with the procedures set forth in Section 2.11(i) for so long as such LC Exposure is outstanding;

(iii) if the Parent cash collateralizes any portion of such Defaulting Lender's LC Exposure pursuant to clause (ii) above, the Parent shall not be required to pay any participation fees to such Defaulting Lender pursuant to Section 2.05(b), and such fees shall not accrue, with respect to such Defaulting Lender's LC Exposure during the period such Defaulting Lender's LC Exposure is cash collateralized;

(iv) if any LC Exposure of such non-Defaulting Lender is reallocated pursuant to clause (i) above, then the participation fees payable to the Lenders pursuant to Section 2.05(b) shall be adjusted in accordance with such non-Defaulting Lenders' Commitment Percentages; and

(v) if all or any portion of such Defaulting Lender's LC Exposure is neither reallocated nor cash collateralized pursuant to clause (i) or (ii) above, then, without prejudice to any rights or remedies of the Issuers or any other Lender hereunder, all participation fees payable under Section 2.05(b) with respect to such Defaulting Lender's LC Exposure (to the extent neither so reallocated nor cash collateralized) shall be payable to the applicable Issuer or Issuers in respect of the Letters of Credit included in such LC Exposure, pro rata until and to the extent that such LC Exposure is so reallocated and/or cash collateralized.

(d) So long as such Lender is a Defaulting Lender, no Issuers shall be required to issue, amend or increase any Letter of Credit, unless it is satisfied that the related exposure and the Defaulting Lender's then outstanding LC Exposure will be 100% covered by the Commitments and the obligations to participate in Letters of Credit of the non-Defaulting Lenders and/or cash collateral will be provided by the Parent in accordance with clauses (i) and (ii) of Section 4.12(c) above.

(e) If any Swingline Exposure exists at the time such Lender becomes a Defaulting Lender, then (i) the Swingline Exposure (other than any portion thereof with respect to which such Defaulting Lender shall have funded its participation as contemplated by Section 2.04(c)) of such Defaulting Lender shall be reallocated among the non-Defaulting Lenders in accordance with their respective Commitment Percentages (calculated without regard to such Defaulting Lender's Commitments) but only to the extent that (A) no Event of Default has occurred and is continuing at such time and (B) such reallocation does not cause the Dollar Equivalent Amount of the Revolving Credit Exposure of any non-Defaulting Lender to exceed the Dollar Equivalent Amount of the Revolving Credit Committed Amount of such non-Defaulting Lender (it being understood and agreed that, subject to Section 12.21, no reallocation hereunder shall constitute a waiver or release of any claim of any party hereunder against a Defaulting Lender arising from such Lender having become a Defaulting Lender, including any claim of a non-Defaulting Lender as a result of such non-Defaulting Lender's increased exposure following such reallocation); and (ii) if the reallocation described in clause (i) above cannot, or can only partially, be effected, the Borrowers shall within one Business Day following notice by the Administrative Agent prepay the portion of such Defaulting Lender's Swingline Exposure that has not been reallocated.

(f) So long as such Lender is a Defaulting Lender, no Swingline Lender shall be required to fund any Swingline Loan unless it is satisfied that the related exposure and the Defaulting Lender's then outstanding Swingline Exposure will be fully covered by the Commitments of the non-Defaulting Lenders, and participating interests in any such funded Swingline Loan will be allocated among the non-Defaulting Lenders in a manner consistent with Section 4.12(e)(i) (and such Defaulting Lender shall not participate therein).

(g) If (i) a Bankruptcy Event or a Bail-In Action with respect to a parent entity of which any Lender is a subsidiary shall occur following the date hereof and for so long as such event shall continue or (ii) an Issuer or Swingline Lender has a good faith belief that any Lender has defaulted in fulfilling its obligations under one or more other agreements in which such Lender commits to extend credit, then (x) such Issuer shall not be required to issue, amend or increase any Letter of Credit, unless such Issuer shall have entered into arrangements with the Parent or such Lender, satisfactory to such Issuer to defease any risk to it in respect of such Lender hereunder and (y) such Swingline Lender shall not be required to fund any Swingline Loan unless such Swingline Lender shall have entered into arrangements with the Parent or such Lender, satisfactory to such Swingline Lender to defease any risk to it in respect of such Lender hereunder, as applicable.

(h) Any principal, interest, fees or any other amounts payable to or for the account of any Defaulting Lender in its capacity as a Lender hereunder shall, in lieu of being distributed to such Defaulting Lender, be retained by the Administrative Agent in a segregated account and, subject to any applicable requirements of law, (A) be applied, at such time or times as may be determined by the Administrative Agent, (1) first, to the payment of any amounts owing by such Defaulting Lender to the Administrative Agent hereunder, (2) second, pro rata, to the payment of any amounts owing by such Defaulting Lender to the Issuers or the Swingline Lender in respect of such Defaulting Lender's participations in Letters of Credit or such Defaulting Lender's Swingline Loans, as applicable, (3) third, to the funding of such Defaulting Lender's Commitment Percentage of any borrowing in respect of which such Defaulting Lender shall have failed to fund such share as required hereunder, (4) fourth, to cash collateralize participation obligations of such Defaulting Lender in respect of outstanding Letters of Credit and (B) to the extent not applied as aforesaid, be held, if so determined by the Administrative Agent, as cash collateral for funding obligations of such Defaulting Lender in respect of future Revolving [Credit](#) Loans hereunder, (C) to the extent not applied or held as aforesaid, be applied, pro rata, to the payment of any amounts owing to the Parent or the non-Defaulting Lenders as a result of any judgment of a court of competent jurisdiction obtained by the Parent or any non-Defaulting Lender against such Defaulting Lender as a result of such Defaulting Lender's breach of its obligations hereunder and (D) to the extent not applied or held as aforesaid, be distributed to such Defaulting Lender or as otherwise directed by a court of competent jurisdiction.

(i) In the event that the Administrative Agent, the Parent and the Issuers each agrees that a Defaulting Lender has adequately remedied all matters that caused such Lender to be a Defaulting Lender, then the LC Exposure and Swingline Exposure of the Lenders shall be readjusted to reflect the inclusion of such Lender's Commitment and on such date such Lender shall purchase at par such of the Revolving Credit Loans of the other Lenders as the Administrative Agent shall determine may be necessary in order for such Lender to hold such Loans in accordance with its Commitment Percentage.

(j) So long as such Lender is a Defaulting Lender, the Parent may, at its option, replace such Defaulting Lender with another financial institution (which may be a Lender) reasonably satisfactory to the Administrative Agent by giving notice of such replacement Lender to such Defaulting Lender and the Administrative Agent. Unless the Administrative Agent, any Swingline Lender or any Issuer shall object to the identity of such proposed replacement Lender within 10 days after receipt of such notice, the Defaulting Lender being so replaced shall, upon indefeasible payment in full in cash to it of all amounts owed to it hereunder (which shall include amounts referenced in Section 4.08(c)) and under the other Loan Documents assign all of its interests hereunder and under the Loan Documents to such replacement Lender and such replacement Lender shall assume all of such Defaulting Lender's obligations hereunder and under the other Loan Documents in accordance with the provisions of 12.14(c).

(k) So long as such Lender is a Defaulting Lender and no Event of Default or Potential Event of Default has occurred or exists, the Parent may, at its option, reduce the unused portion of such Defaulting Lender's Commitment without being required to reduce any other Lender's Commitment. Any such reduction shall be effective upon written notice by the Parent to the Administrative Agent.

Article V

REPRESENTATIONS AND WARRANTIES

As of the date hereof, the Parent hereby represents and warrants to the Administrative Agent and each Lender as follows:

Section 5.01 Financial Statements; No Material Adverse Change. The Parent's audited consolidated balance sheet as of September 30, 2020, and the related statement of consolidated income for the year then ended (copies of which have been furnished to each Lender) are complete and correct in all material respects and present fairly the financial condition of the Parent and its Subsidiaries as of such date and the results of its operations for such year and since such date to the date hereof there has been no material adverse change in such financial condition or operations on a consolidated basis. The Parent's unaudited consolidated balance sheet as of December 31, 2020, and the related statement of consolidated income for the three-month period ended on such date (copies of which have been furnished to each Lender) are complete and correct in all material respects and present fairly the financial condition of the Parent and its Subsidiaries as of such date and the results of its operations for such period (subject to normal year-end audit adjustments and the absence of certain footnotes).

Section 5.02 Litigation. There is no action, suit or administrative proceeding, to the knowledge of the Parent after due inquiry, pending or threatened against the Parent or any of its Subsidiaries as of the date hereof which, in the opinion of the Parent, involves any substantial risk of any material adverse effect on the financial condition or business of the Parent and its Subsidiaries on a consolidated basis.

Section 5.03 Due Organization. The Parent is a corporation and each Initial Other Borrower is (and as of the date it becomes an Other Borrower hereunder, each additional

Other Borrower will be) a legal entity, in each case duly organized, validly existing and in good standing under the laws of its jurisdiction of organization.

Section 5.04 Consents and Approvals. The Parent and each Initial Other Borrower has (and as of the date it becomes an Other Borrower hereunder, each additional Other Borrower will have) obtained the necessary material consents and approvals, governmental or otherwise, for its execution and performance under this Agreement.

Section 5.05 Corporate Power, Authorization and Enforceability. The Parent and each Initial Other Borrower has (and as of the date it becomes an Other Borrower hereunder, each additional Other Borrower will have) taken all necessary corporate or other organizational action to authorize its execution and performance under this Agreement such that this Agreement, the Notes and, as applicable, the other Loan Documents constitute valid and legally binding obligations of the Parent and each Other Borrower, subject to applicable bankruptcy, reorganization, insolvency, moratorium or similar laws affecting creditors' rights generally and equitable principles of general application (regardless of whether enforcement is sought in a proceeding in equity or at law).

Section 5.06 ERISA. Parent and each Other Borrower is in compliance in all material respects with all applicable provisions and requirements of ERISA with respect to any Employee Benefit Plan for which Parent or such Other Borrower is the plan sponsor or a contributing employer, and neither Parent nor any Other Borrower is subject to any material liability, penalty, excise tax or Lien arising under ERISA or under the Internal Revenue Code with respect to any Plan or Multiemployer Plan, except to the extent such noncompliance, liability, penalty, excise tax or Lien would not reasonably be expected to result, alone or together with all such noncompliance, liabilities, penalties, excise taxes or Liens, in a Material Adverse Effect.

Section 5.07 No Conflict. Neither the execution and delivery by the Parent or, as applicable, the Other Borrowers of the Loan Documents, nor the consummation of the transactions therein contemplated, nor compliance by the Parent or, as applicable, the Other Borrowers with the provisions thereof will violate (a) to the best of the Parent's knowledge after due inquiry, any material law, rule, regulation, order, writ, judgment, injunction, decree or award binding on the Parent or any of its Subsidiaries, (b) the Parent's or any Subsidiary's articles or certificate of incorporation, partnership agreement, certificate of partnership, articles or certificate of organization, by-laws, or operating or other management agreement, as the case may be, or (c) to the best of the Parent's knowledge after due inquiry, the provisions of any material indenture, instrument or agreement to which the Parent or any of its Subsidiaries is a party or is subject, or by which it, or its property, is bound, or conflict with or constitute a default thereunder, or result in, or require, the creation or imposition of any lien in, of or on the property of the Parent or a Subsidiary pursuant to the terms of any such indenture, instrument or agreement, except, in each case, to the extent such violation would not have a material adverse effect on the financial condition or business of the Parent and its Subsidiaries on a consolidated basis.

Section 5.08 No Default. Each of the Parent and its Subsidiaries is in compliance with all laws, regulations and orders of any Governmental Authority applicable to it

or its property and all indentures, agreements and other instruments binding upon it or its property, except where the failure to do so, individually or in the aggregate, would not reasonably be expected to result in a Material Adverse Effect. No Event of Default or Potential Event of Default has occurred and is continuing.

Section 5.09 Anti-Corruption Laws and Sanctions; KYC. The Parent and its Subsidiaries have implemented and maintain in effect policies and procedures reasonably designed to promote compliance by the Parent and its Subsidiaries and their respective directors, officers, employees and agents with Anti-Corruption Laws and applicable Sanctions, and the Parent, its Subsidiaries and, to the knowledge of the senior management of each of the Parent and its Subsidiaries, their respective directors, officers, employees and agents are in compliance in all material respects with Anti-Corruption Laws and applicable Sanctions. None of (x) the Parent, any Subsidiary of the Parent, or, to the knowledge of the senior management of each of the Parent and its Subsidiaries, any of their respective directors, officers or employees, or (y) to the knowledge of the senior management of each of the Parent and its Subsidiaries, any agent of the Parent or any of its Subsidiaries or other Affiliates that will act in any capacity in connection with or benefit from the credit facility established hereby, is a Sanctioned Person. Parent and its Subsidiaries are in compliance in all material respects with applicable provisions of Title III of the USA PATRIOT Act.

Article VI

CONDITIONS OF CREDIT

Section 6.01 Conditions to Initial Credit Events. The obligation of each Lender to make its initial Loan and of each Issuer to issue its initial Letter of Credit is subject to the execution and delivery of this Agreement by all parties hereto and the following conditions precedent:

(a) Officer's Certificate. The Administrative Agent shall have received a certificate dated the Closing Date and signed by the Treasurer or a Vice President of the Parent to the effect that each of the representations and warranties made by the Parent in Article V hereof is true and correct in all material respects (or, if qualified by "material," "Material Adverse Effect" or similar language, in all respects (after giving effect to such materiality qualification)) on and as of the Closing Date as if made on and as of such date, both before and after giving effect to the Credit Events requested to be made on the Closing Date.

(b) Legal Opinion. The Parent shall provide to the Administrative Agent a legal opinion dated the Closing Date in form and substance reasonably satisfactory to the Administrative Agent as to the matters set forth in Sections 5.03, 5.04, 5.05 and 5.07 of this Agreement.

(c) Corporate Action. The Administrative Agent shall have received on or before the Closing Date certified copies of all corporate action taken by the Parent and each Initial Other Borrower to authorize the execution and delivery of this Agreement and, if required, the Notes and such other papers as the Administrative Agent or any Lender shall reasonably

require, including specimen signatures of the officers executing this Agreement, the Notes and such documents, including any notices of borrowing.

(d) Patriot Act Information. The Administrative Agent shall have received copies of the articles or certificate of incorporation of the Parent and each Initial Other Borrower, together with all amendments, and a certificate of good standing, each certified as of a recent date by the appropriate governmental officer in its jurisdiction of incorporation, as well as any other information required by Section 326 of the USA PATRIOT ACT, the Beneficial Ownership Regulation or necessary for the Administrative Agent or any Lender to verify the identity of the Parent and each Initial Other Borrower as required by Section 326 of the USA PATRIOT Act and the Beneficial Ownership Regulation.

(e) Fees and Expenses. The Parent shall have paid all fees and expenses required to be paid by it on or before the Closing Date in connection with this Agreement (to the extent such fees and expenses are due and reasonably detailed statements for such fees and expenses have been delivered to the Parent).

(f) Termination of Existing Agreement. The Existing Agreement, and all commitments thereunder, shall have been terminated and the Borrowers shall have paid all "Obligations" owing thereunder, including but not limited to all accrued and unpaid fees, costs and expenses.

Section 6.02 Conditions to All Credit Events. The obligation of each Lender to make each Loan to be made by it hereunder and of each Issuer to issue or Modify Letters of Credit is subject to the following conditions precedent:

(a) No Default. No Event of Default and (except in the case of a rollover or an extension of a Loan, but not an increase in the principal amount of a Loan) no Potential Event of Default, has occurred and is continuing on and as of the date of such Credit Event, both immediately before and immediately after giving effect to such Credit Event.

(b) Representations and Warranties. Each of the representations and warranties made by the Parent in Sections 5.03, 5.04, 5.05, 5.07 and 5.09 hereof shall be true and correct in all material respects on and as of the date of such Credit Event as if made on and as of such date unless such representation is already qualified by materiality and then, in such case, the representation shall be true in all respects, both immediately before and immediately after giving effect to such Credit Event. It is further understood and agreed that notice by the Parent requesting any Credit Event pursuant to Section 2.03, 2.11(b) or 3.02 hereof shall constitute a certification by the Parent that (a) the conditions precedent required by this Section 6.02 are satisfied at the date of such Credit Event, and (b) that the proceeds of such Loans will be used by the Borrowers for, and such Letters of Credit will be issued to support, general corporate purposes and no part of such proceeds will be used either directly or indirectly to purchase or carry margin stock in violation of Regulation U of the Board of Governors of the Federal Reserve System.

Section 6.03 Additional Conditions to Initial Credit Events of Other Borrowers. The obligations of each Lender to make each Loan to be made by it hereunder to an Other Borrower and of each Issuer to issue Letters of Credit for the account of an Other Borrower shall

be subject to the following conditions precedent, in addition to those conditions stated in Section 6.02:

(a) Either (i) such Other Borrower is an Initial Other Borrower with respect to which the documents referred to in Sections 6.01(a), (b), (c) and (d) were delivered to the Administrative Agent on the Closing Date or (ii) such Other Borrower and the Parent have executed and delivered to the Administrative Agent a Borrower Accession Instrument, together with the documents listed therein, and such documents are in form and substance reasonably satisfactory to the Administrative Agent, as evidenced by its signature on such Borrower Accession Instrument, and at least five Business Days have elapsed since the delivery of such Borrower Accession Agreement to the Administrative Agent (of which delivery the Administrative Agent shall give prompt notice to the Lenders).

(b) No event or circumstance of the type described in Section 9.01(c), (d), (e), (g), (i), or (j) with respect to such Other Borrower has occurred and is continuing on and as of the date of such Loans or Letter of Credit issuance.

Article VII

AFFIRMATIVE COVENANTS

Section 7.01 Affirmative Covenants. From and after the Closing Date and until the payment in full in cash of all of the Obligations (other than contingent indemnification and contingent expense reimbursement obligations not yet due and payable) and so long as any Commitment shall be in effect or any Loan or Letter of Credit (other than Letters of Credit that have been cash collateralized or as to which other arrangements with respect thereto satisfactory to the applicable Issuer shall have been made) or unreimbursed LC Disbursement shall be outstanding hereunder, the Parent agrees that it will, unless the Required Lenders shall otherwise consent in writing:

(a) Maintain, and cause each Subsidiary to maintain, insurance against risks of fire and other casualties with good and responsible insurance companies upon its properties of an insurable nature which are owned and acquired by it from time to time, in accordance with its normal insurance policies and practices.

(b) Duly pay and discharge, and cause each Subsidiary to pay and discharge, all taxes, assessments and governmental charges upon it or against its properties prior to the date on which penalties attach thereto, unless and to the extent only that (i) the same shall be contested in good faith and by proper proceedings or (ii) the failure to pay such taxes, assessments and charges, either individually or in the aggregate, would not reasonably be expected to have a Material Adverse Effect.

(c) Furnish to the Administrative Agent, with a copy for each Lender (i) within 60 days after the close of each quarter, except the last quarter, of each fiscal year, an unaudited consolidated balance sheet of the Parent and its Subsidiaries as of the end of such quarter, an unaudited consolidated income statement of the Parent and its Subsidiaries for the period commencing at the end of the Parent's previous fiscal year and ending with the end of such quarter and an unaudited consolidated cash flow statement of the Parent and its Subsidiaries

for the period commencing at the end of the Parent's previous fiscal year and ending with the end of such quarter, as such are filed with the Securities and Exchange Commission, (ii) within 120 days after the close of each fiscal year financial statements filed with the Securities and Exchange Commission consisting of a consolidated balance sheet of the Parent and its Subsidiaries as of the end of such fiscal year and a consolidated income statement of the Parent and its Subsidiaries for such fiscal year and a consolidated cash flow statement of the Parent and its Subsidiaries for such fiscal year which will be certified by independent certified public accountants of recognized standing, (iii) as soon as possible and in any event within five days after having knowledge of the occurrence of any Event of Default or Potential Event of Default which in either case is continuing on the date of such statement, a statement of the Chief Financial Officer of the Parent setting forth details of such Event of Default or Potential Event of Default and the action which the Parent has taken and proposes to take with respect thereto, (iv) promptly following a request therefor, any documentation or other information that a Lender reasonably requires in order to comply with its ongoing obligations under applicable "know your customer" and anti-money laundering rules and regulations, including the USA PATRIOT Act or Beneficial Ownership Regulation and (v) such other information in confidence respecting the financial condition and affairs of the Parent and its Subsidiaries as the Administrative Agent or any Lender (through the Administrative Agent) may from time to time reasonably request. Any financial statement or other material required to be delivered pursuant to this clause (c) shall be deemed to have been furnished to each of the Administrative Agent and the Lenders on the date that such financial statement or other material is publicly accessible on the Securities and Exchange Commission's website at www.sec.gov; provided that the Parent will furnish paper copies of such financial statements and other materials to any Lender that requests, by notice to the Parent, that the Parent do so, until the Parent receives notice from such Lender to cease delivering such paper copies.

(d) Furnish to the Administrative Agent, with a copy for each Lender, a certificate duly completed and signed by the Treasurer, the Chief Financial Officer, the Assistant Treasurer or the Controller of the Parent concurrently with the delivery of the financial statements referred to in Section 7.01(c)(i) and (ii) (i) stating that, to the knowledge of such officer (after due inquiry), as of the date thereof no Event of Default or Potential Event of Default has occurred and is continuing or exists (or if an Event of Default or Potential Event of Default has occurred and is continuing or exists, specifying in detail the nature and period of the existence thereof and any action with respect thereto taken or contemplated to be taken by the Parent) and (ii) stating in reasonable detail the information and calculations necessary to establish compliance with Section 8.01 hereof.

(e) Comply, and cause each of its Subsidiaries to comply, with all laws (including ERISA and Environmental Laws), rules, regulations and orders of any Governmental Authority applicable to it or its property, except where the failure to do so, individually or in the aggregate, would not reasonably be expected to result in a Material Adverse Effect.

(f) (x) Ensure that it (A) shall not request any Borrowing nor any Letter of Credit and (B) shall not use, and (y) shall procure that the Other Borrowers and their respective directors, officers and employees shall not use, directly or indirectly, the proceeds of any Loan or Letter of Credit, and shall not lend, contribute, or otherwise make such proceeds

available to any Subsidiary, other Affiliate, joint venture partner or other Person (i) in furtherance of an offer, payment, promise to pay or authorization of the payment or giving of money, or anything else of value, to any Person in violation of any Anti-Corruption Laws, (ii) for the purpose of funding, financing or facilitating any activities, business or transaction of or with any Sanctioned Person, or in any Sanctioned Country, in each case, except to the extent permissible for a Person required to comply with Sanctions or (iii) in any manner that would result in the violation of any Sanctions applicable to any party hereto (including any Person participating in the transaction, whether as Lender, Administrative Agent, or otherwise).

(g) Maintain in effect and enforce policies and procedures reasonably designed to promote compliance by the Parent and its Subsidiaries and their respective directors, officers, employees, and agents with Anti-Corruption Laws and applicable Sanctions.

(h) Use the proceeds of the Loans and the issuances of Letters of Credit only for general corporate purposes of the Parent and its Subsidiaries.

Article VIII

NEGATIVE COVENANTS

From and after the Closing Date and until the payment in full in cash of all of the Obligations (other than contingent indemnification and contingent expense reimbursement obligations not yet due and payable) and so long as any Commitment shall be in effect or any Loan or Letter of Credit (other than Letters of Credit that have been cash collateralized or as to which other arrangements with respect thereto satisfactory to the applicable Issuer shall have been made) or unreimbursed LC Disbursement shall be outstanding hereunder, the Parent agrees that it will not, unless the Required Lenders shall otherwise consent in writing:

Section 8.01 Maximum Leverage Ratio. Permit the Leverage Ratio to, at any time, exceed 0.70 to 1.00.

Section 8.02 Disposal of Assets. Sell, lease, assign, transfer or otherwise dispose of all or substantially all of its consolidated assets or permit its percentage ownership interest in any Other Borrower to be less than 75% (so long as such Other Borrower remains an Other Borrower hereunder).

Section 8.03 Liens. Create, assume or suffer to exist, nor cause or permit any Subsidiary to create, assume or suffer to exist, any mortgage, lien, pledge or security interest on any Principal Property, or any underlying real estate of such property, or shares of capital stock or indebtedness of any Restricted Subsidiary, whether now owned or hereafter acquired; provided that this Section 8.03 shall not apply to any of the following:

(a) mortgages, liens, pledges or security interests on any Principal Property (including any underlying real estate) acquired, repaired, constructed or improved by the Parent or any Restricted Subsidiary which are created or assumed prior to, contemporaneously with, or within 180 days after (or in the case of any such Principal Property which is being financed on the basis of long-term contracts or similar financing arrangements for which a firm commitment is made by one or more banks, insurance companies or other lenders

or investors (not including the Parent or any Restricted Subsidiary), then within 360 days after), the completion of such acquisition, repair, construction or improvement of such Principal Property to secure or provide for the payment of any part of the purchase price and other acquisition costs of such property or the cost of such repair, construction or improvement, or mortgages, liens, pledges or security interests on any Principal Property existing at the time of acquisition thereof (including by means of a merger or consolidation);

(b) mortgages, liens, pledges or security interests on property or shares of capital stock or indebtedness of a Person existing at the time such Person is merged into or consolidated with the Parent or a Restricted Subsidiary or at the time of a sale, lease or other disposition of the properties of a Person substantially as an entirety to the Parent or a Restricted Subsidiary;

(c) mortgages, liens, pledges or security interests existing on the date of the Indenture or mortgages, liens, pledges or security interests on property or shares of capital stock or indebtedness of a Person existing at the time such Person becomes a Restricted Subsidiary;

(d) mortgages, liens, pledges or security interests to secure indebtedness of a Restricted Subsidiary to the Parent or to another Restricted Subsidiary, but only so long as such indebtedness is held by the Parent or a Restricted Subsidiary;

(e) mortgages, liens, pledges or security interests in favor of the United States of America or any State or territory thereof (including the District of Columbia) or any foreign jurisdiction, or any department, agency or political subdivision of the United States of America or any State or territory thereof (including the District of Columbia) or any foreign jurisdiction, to secure partial, progress, advance or other payments pursuant to any contract, statute or regulation, including, without limitation, mortgages, liens, pledges or security interests to secure indebtedness of the pollution control or industrial revenue bond type, or to secure any indebtedness incurred for the purpose of financing all or any part of the purchase price and other acquisition costs or the cost of constructing or improving the property subject to such mortgages, liens, pledges or security interests;

(f) mortgages, liens, pledges or security interests in favor of any customer arising in respect of partial, progress, advance or other payments made by or on behalf of such customer for goods produced for or services rendered to such customer in the ordinary course of business not exceeding the amount of such payments;

(g) mortgages, liens, pledges or security interests for the sole purpose of extending, renewing or replacing (including successive extensions, renewals or replacements), in whole or in part any lien referred to in the foregoing clauses (a) through (f), inclusive, or in this clause (g), or any lien created prior to and existing on the date of the Indenture; provided that the principal amount of indebtedness secured thereby shall not exceed the principal amount of indebtedness so secured at the time of such extension, renewal or replacement (plus an amount in respect of fees, costs and expenses, including premiums and accrued and unpaid interest in relation to any refinancing, refunding, extension, renewal or replacement of such indebtedness),

and that such extension, renewal or replacement shall be limited to all or a part of the property subject to the lien so extended, renewed or replaced (plus improvements on such property);

(h) mechanics', workmen's, repairmen's, materialmen's, carriers' or other similar liens arising in the ordinary course of business;

(i) mortgages, liens, pledges or security interests created by or resulting from any litigation or proceedings which are being contested in good faith; mortgages, liens, pledges or security interests arising out of judgments or awards against the Parent or any Restricted Subsidiary with respect to which the Parent or such Restricted Subsidiary is in good faith prosecuting an appeal or proceedings for review; or mortgages, liens, pledges or security interests incurred by the Parent or any Restricted Subsidiary for the purpose of obtaining a stay or discharge in the course of any legal proceeding to which the Parent or such Restricted Subsidiary is a party;

(j) mortgages, liens, pledges or security interests for taxes or assessments or governmental charges or levies not yet due or delinquent, or which can thereafter be paid without penalty, or which are being contested in good faith by appropriate proceedings; landlord's liens on property held under lease, and tenants' rights under leases; minor survey exceptions, easements, rights of way and other restrictions on the use of properties; liens in favor of performance, appeal, surety or similar bonds; and any other mortgages, liens, pledges or security interests of a nature similar to those hereinabove described in this clause (j) which do not, in the opinion of the Parent, materially impair the use of such property in the operation of the business of the Parent or a Restricted Subsidiary or the value of such property;

(k) mortgages, liens, pledges or security interests in respect of sale and lease-back transactions permitted under the Indenture; or

(l) mortgages, liens, pledges or security interests if the Obligations are secured by such mortgage, lien, pledge or security interest equally and ratably with any and all other indebtedness for borrowed money secured thereby;

provided, however, that if (x) the Parent creates, assumes or suffers to exist or causes or permits any Subsidiary to create, assume or suffer to exist any such mortgage, lien, pledge or security interest on any such Principal Property or any such underlying real estate, shares or indebtedness or (y) to the extent any securities under the Indenture remain outstanding, and the Indenture requires the Parent to make or cause to be made effective provision whereby the obligations outstanding under the Indenture are secured by any mortgage, lien, pledge or security interest equally and ratably with any and all other indebtedness for borrowed money secured thereby, then, in each case of (x) and (y), the Parent shall also make or cause to be made effective provision whereby the Obligations shall be secured by such mortgage, lien, pledge or security interest equally and ratably with any and all other indebtedness for borrowed money secured thereby (including the outstanding obligations under the Indenture, if any); provided further, that any mortgage, lien, pledge or security interest created to secure the Obligations pursuant to the first proviso in this paragraph shall be automatically and unconditionally released and discharged upon the release and discharge of the applicable mortgage, lien, pledge or security interest

described in the first proviso of this paragraph without any further action on the part of the Administrative Agent, the Issuers, the Lenders, the Borrower or Subsidiaries.

Article IX

EVENTS OF DEFAULT

Section 9.01 Events of Default. An “Event of Default” shall mean the occurrence or existence of one or more of the following events or conditions:

(a) Default in payment of principal on any Loan or Note or reimbursement obligation with respect to any Letter of Credit when due; or

(b) Default in payment of interest, any Commitment Fee, Letter of Credit Fee or any other amount provided for herein, and such default shall continue unremedied for five Business Days after written notice thereof shall have been received by the Parent from the Administrative Agent or any Lender; or

(c) Any representation made by the Parent or any Other Borrower herein or in any certificate, statement or report, or any financial statement, furnished by the Parent or any Other Borrower hereunder shall prove at any time to be erroneous in any material respect; provided, however, the Parent or such Other Borrower shall have twenty days after the Parent or such Other Borrower has knowledge of such fact to remedy the underlying facts resulting in such certificate, statement or report being erroneous as above described; or

(d) (i) Default in any respect in the performance of Section 7.01(f) hereof or (ii) default in any material respect by the Parent or any Other Borrower in the performance of any other term, covenant or agreement contained in this Agreement, other than those set forth in clause (i) of this clause (d) or clauses (a) through (c) above and (x) such default (other than a default in the performance of Section 7.01(c)(iii) hereof) shall continue unremedied for thirty days after written notice thereof shall have been received by the Parent from the Administrative Agent or (y) in the case of a default in the performance of Section 7.01(c)(iii) hereof, such default shall have continued unremedied for five days; or

(e) Failure by the Parent or any Subsidiary to pay when due (whether at maturity, upon acceleration or otherwise, giving effect to any applicable grace period) obligations for borrowed money (other than Limited Recourse Debt) in excess of the Dollar Equivalent Amount of \$225,000,000 in the aggregate at any time; or

(f) If the Parent dissolves or merges or is merged with another entity (unless (i) the Parent is the surviving entity or the surviving entity is (x) a corporation incorporated under the laws of the United States, any state thereof or the District of Columbia or (y) a partnership or limited liability company formed under the laws of the United States, any state thereof or the District of Columbia (any such entity, the “Successor Borrower”) and, in the case of this clause (y), the Lenders will not recognize income, gain or loss for U.S. federal income tax purposes as a result of such merger and will be subject to federal income tax on the same amounts, in the same manner and at the time times as would have been the case if such merger had not occurred, (ii) the Successor Borrower (if not Parent) shall succeed, by agreement

reasonably satisfactory in form and substance to the Administrative Agent, to all of the businesses and operations of the Parent and shall assume all of the rights and Obligations of the Parent under this Agreement and the other Loan Documents, (iii) each Other Borrower confirms its Obligations under this Agreement and the other Loan Documents in form and substance reasonably satisfactory to the Administrative Agent, (iv) the Administrative Agent and each Lender shall have received, such other documents and information as may be reasonably requested, including, without limitation, information in respect of applicable “know your customer” and anti-money laundering rules and regulations, the Beneficial Ownership Regulation and the USA PATRIOT Act, (v) no Event of Default and no Potential Event of Default has occurred and is continuing or would result therefrom, (vi) after giving effect to such dissolution or merger, the Public Debt Rating is at least BBB+/Baa1 and (vii) Parent or such Successor Borrower, as applicable, shall have delivered to the Administrative Agent, for distribution to the Lenders, an officer’s certificate to the effect that such merger complies with the terms of this Agreement); or

(g) A judgment or order for the payment of money in excess of the Dollar Equivalent Amount of \$225,000,000 shall be rendered against the Parent or any Other Borrower and such judgment shall continue unsatisfied or unstayed for a period of 60 days after the time period for appeal has expired; provided, however, that, for purposes of determining whether an Event of Default has occurred under this Section 9.01(g), the amount of any such judgment or order shall be reduced to the extent that (i) such judgment or order is covered by a valid and binding policy of insurance between the defendant and the insurer covering payment thereof and (ii) such insurer, which shall be rated at least “A” by A.M. Best Company, has been notified of, and has not disputed the claim made for payment of, such judgment or order; or

(h) The Parent shall purport to terminate, revoke, declare voidable or void all or any part of its obligations under Article X hereof and such termination, revocation or declaration shall not have been rescinded in writing within three Business Days after written notice thereof by the Administrative Agent to the Parent; or

(i) The Parent or any Other Borrower makes, or takes corporate or other organizational action for a general assignment for the benefit of creditors, or files a voluntary petition in bankruptcy or a petition or answer seeking its reorganization or the readjustment of its indebtedness or consents to or petitions for the appointment of a receiver, trustee or liquidator of all or substantially all of its property; or

(j) The commencement of a case or other proceeding, without the application or consent of the Parent or any Other Borrower, in any court of competent jurisdiction, seeking the liquidation, reorganization, dissolution, winding up, or composition or readjustment of debts, of the Parent or such Other Borrower, the appointment of a trustee, receiver, custodian, liquidator or the like for the Parent or any Other Borrower, or any similar action with respect to the Parent or any Other Borrower, under any laws relating to bankruptcy, insolvency, reorganization, winding up or composition or adjustment of debts, and such case or proceeding shall continue undismissed, or unstayed and in effect for a period of 90 consecutive days or an order for relief in respect of the Parent or any Other Borrower, shall be entered in an involuntary case under the Federal bankruptcy laws (as now or hereafter in effect) and such order

shall not be dismissed, discharged, stayed or restrained prior to the end of such 90 day period or within 30 days of its entry, whichever is later; or

(k) A Change of Control shall have occurred; or

(l) An ERISA Event shall have occurred, which either alone or together with all other such ERISA Events, if any, that have already occurred would reasonably be expected to result in a Material Adverse Effect;

provided that notwithstanding the foregoing, no Event of Default or Potential Event of Default shall be deemed to have occurred or to exist as a result of an event or circumstance of the type described in clause (c), (d), (g), (i) or (j) with respect to an Other Borrower for a period of five Business Days after notice of such event or circumstance is given by the Administrative Agent to the Parent, if, within such five Business Day period (i) the principal of, and interest on, all outstanding Loans made to such Other Borrower are repaid in full and (ii) such Other Borrower and the Parent execute and deliver to the Administrative Agent an Other Borrower Removal Notice.

Section 9.02 Consequences of an Event of Default.

(a) If an Event of Default specified in clauses (a) through (h), (k) and (l) of Section 9.01 hereof shall occur or exist, then, in addition to all other rights and remedies which the Administrative Agent or any Lender may have hereunder or under any other Loan Document, at law or in equity, the Lenders shall be under no further obligation to make Loans, the Issuers shall be under no further obligation to issue or Modify Letters of Credit, and the Administrative Agent may, and upon the written request of the Required Lenders shall, by notice to the Parent, from time to time do any or all of the following:

(i) declare the Commitments terminated, whereupon the Commitments will terminate;

(ii) declare the unpaid principal amount of the Loans, interest accrued thereon and all other Obligations to be immediately due and payable without presentment, demand, protest or further notice of any kind, all of which are hereby waived and require any outstanding Letters of Credit to be cash collateralized in accordance with Section 2.11(i).

(b) If an Event of Default specified in clauses (i) or (j) of Section 9.01 hereof shall occur or exist, then, in addition to all other rights and remedies which the Administrative Agent or any Lender may have hereunder or under any other Loan Document, at law or in equity, the Commitments shall automatically terminate, the Lenders shall be under no further obligation to make Loans, the Issuers shall be under no further obligation to issue or Modify Letters of Credit, the unpaid principal amount of the Loans, interest accrued thereon and all other Obligations shall become immediately due and payable without presentment, demand, protest or notice of any kind, all of which are hereby waived, and any outstanding Letters of Credit shall be cash collateralized in accordance with Section 2.11(i).

Article X

PARENT GUARANTY

Section 10.01 Guaranty and Suretyship. The Parent hereby absolutely, unconditionally and irrevocably guarantees and becomes surety for the full and punctual payment of the Guaranteed Obligations as and when such payment shall become due (at scheduled maturity, by acceleration or otherwise) in accordance with the terms of the Loan Documents. The provisions of this Article X are an agreement of suretyship as well as of guaranty, are a guarantee of payment and not merely of collectability, and are in no way conditioned upon any attempt to collect from or proceed against any Other Borrower or any other Person or any other event or circumstance. The obligations of the Parent under this Article X are direct and primary obligations of the Parent and are independent of the Guaranteed Obligations, and a separate action or actions may be brought against the Parent regardless of whether action is brought against any Other Borrower or any other Person or whether any Other Borrower or any other Person is joined in any such action or actions. The provisions of this Article X shall not apply unless and until an Other Borrower is party to this Agreement or a Borrower Accession Instrument and shall apply for so long as any Loan to an Other Borrower or the related Guaranteed Obligations are outstanding or any Commitment remains in effect.

Section 10.02 Obligations Absolute. To the fullest extent permitted by Law, the Parent agrees that the Guaranteed Obligations will be paid strictly in accordance with the terms of the Loan Documents, regardless of any Law now or hereafter in effect in any jurisdiction affecting the Guaranteed Obligations, any of the terms of the Loan Documents or the rights of the Administrative Agent, any Lender or any other Person with respect thereto. To the fullest extent permitted by Law, the obligations of the Parent under this Article X shall be absolute, unconditional and irrevocable, irrespective of any of the following:

(a) any lack of legality, validity, enforceability or allowability (in a bankruptcy, insolvency, reorganization, dissolution or similar proceeding, or otherwise), or any avoidance or subordination, in whole or in part, of any Loan Document or any of the Guaranteed Obligations;

(b) any increase, decrease or change in the amount, nature, type or purpose of any of the Guaranteed Obligations (whether or not contemplated by the Loan Documents as presently constituted); any change in the time, manner, method or place of payment of, or in any other term of, any of the Guaranteed Obligations; any execution or delivery of any additional Loan Documents; or any amendment to, or refinancing or refunding of, any Loan Document or any of the Guaranteed Obligations;

(c) any impairment by the Administrative Agent, any Lender or any other Person of any recourse of the Parent against any Other Borrower or any other Person; any failure to assert any breach of or default under any Loan Document or any of the Guaranteed Obligations; any extensions of credit in excess of the amount committed under or contemplated by the Loan Documents, or in circumstances in which any condition to such extensions of credit has not been satisfied; any other exercise or non-exercise, or any other failure, omission, breach, default, delay or wrongful action in connection with any exercise or non-exercise, of any right or

remedy against any Other Borrower or any other Person under or in connection with any Loan Document or any of the Guaranteed Obligations; any refusal of payment of any of the Guaranteed Obligations, whether or not with any reservation of rights against the Parent; or any application of collections (including collections resulting from realization upon any direct or indirect security for the Guaranteed Obligations) to other obligations, if any, not entitled to the benefits of this Agreement, in preference to Guaranteed Obligations entitled to the benefits of this Agreement, or if any collections are applied to Guaranteed Obligations, any application to particular Guaranteed Obligations;

(d) any taking, amendment, subordination, release, loss or impairment of, or any failure to protect, perfect, or preserve the value of, or any other action or inaction by the Administrative Agent, any Lender or any other Person in respect of, any direct or indirect security for any of the Guaranteed Obligations;

(e) any merger, consolidation, liquidation, dissolution, winding-up, charter revocation or forfeiture, or other change in, restructuring or termination of the corporate structure or existence of, any Other Borrower or any other Person; any bankruptcy, insolvency, reorganization, dissolution or similar proceeding with respect to any Other Borrower or any other Person; or any action taken or election made by the Administrative Agent, any Lender (including any election under Section 1111(b)(2) of the United States Bankruptcy Code), any Other Borrower or any other Person in connection with any such proceeding;

(f) the failure of any Other Borrower to be properly organized under the Laws of its jurisdiction of organization, to take proper actions to authorize the incurrence of its Guaranteed Obligations or to comply in any respect with Laws applicable to it relating to its Guaranteed Obligations;

(g) any defense, set-off or counterclaim (including any defense of failure of consideration, breach of warranty, statute of frauds, bankruptcy, lack of legal capacity, statute of limitations, lender liability, accord and satisfaction or usury, and excluding only the defense of full, strict and indefeasible payment or performance), which may at any time be available to any Other Borrower or any other Person with respect to any Loan Document or any of the Guaranteed Obligations; or any discharge by operation of law or release of any Other Borrower or any other Person from the performance or observance of any Loan Document or any of the Guaranteed Obligations; or

(h) any other event or circumstance, whether similar or dissimilar to the foregoing, and whether known or unknown, which might otherwise constitute a legal or equitable defense available to, or limit the liability of, any Other Borrower, the Parent, a guarantor or a surety, excepting only full, strict and indefeasible payment and performance of the Guaranteed Obligations.

Section 10.03 Waivers, etc. To the fullest extent permitted by Law, the Parent hereby waives any defense to or limitation on its obligations under this Article X arising out of or based on any event or circumstance referred to in Section 10.02. Without limitation, to the fullest extent permitted by Law, the Parent waives each of the following for purposes of this Article X:

(a) all notices, disclosures and demands of any nature which otherwise might be required from time to time to preserve intact any rights against the Parent, including (i) any notice of any event or circumstance described in Section 10.02, (ii) any notice required by any Law now or hereafter in effect in any jurisdiction, (iii) any notice of nonpayment, nonperformance, dishonor, or protest under any Loan Document or any of the Guaranteed Obligations, (iv) any notice of the incurrence of any Guaranteed Obligation, (v) any notice of any default (other than notices expressly required under Article IX hereof) or any failure on the part of any Other Borrower or any other Person to comply with any Loan Document or any of the Guaranteed Obligations or any direct or indirect security for any of the Guaranteed Obligations, and (vi) any notice of any information pertaining to the business, operations, condition (financial or otherwise) or prospects of any Other Borrower or any other Person;

(b) any right to any marshalling of assets, to the filing of any claim against any Other Borrower or any other Person in the event of any bankruptcy, insolvency, reorganization, dissolution or similar proceeding, or to the exercise against any Other Borrower or any other Person of any other right or remedy under or in connection with any Loan Document or any of the Guaranteed Obligations or any direct or indirect security for any of the Guaranteed Obligations; any requirement of promptness or diligence on the part of the Administrative Agent, any Lender or any other Person; any requirement to exhaust any remedies under or in connection with, or to mitigate the damages resulting from default under, any Loan Document or any of the Guaranteed Obligations or any direct or indirect security for any of the Guaranteed Obligations; and any requirement of acceptance of this Agreement, and any requirement that the Parent receive notice of such acceptance; and

(c) any defense or other right arising by reason of any Law now or hereafter in effect in any jurisdiction pertaining to election of remedies (including anti-deficiency laws, "one action" laws or similar laws), or by reason of any election of remedies or other action or inaction by the Administrative Agent or any Lender (including commencement or completion of any judicial proceeding or nonjudicial sale or other action in respect of collateral security for any of the Guaranteed Obligations), which results in denial or impairment of the right of the Administrative Agent or Lenders to seek a deficiency against any Other Borrower or any other Person, or which otherwise discharges or impairs any of the Guaranteed Obligations or any recourse of the Parent against any Other Borrower or any other Person.

Section 10.04 Reinstatement. The obligations of the Parent under this Article X shall continue to be effective, or be automatically reinstated, as the case may be, if at any time payment of any of the Guaranteed Obligations is avoided, rescinded or must otherwise be returned by the Administrative Agent or any Lender for any reason, all as though such payment had not been made.

Section 10.05 No Stay. Without limitation of any other provision of this Agreement, if any acceleration of the time for payment of any Guaranteed Obligation, or any condition to any such acceleration, shall at any time be stayed, enjoined or prevented for any reason (including stay or injunction resulting from the pendency against any Other Borrower or any other Person of a bankruptcy, insolvency, reorganization, dissolution or similar proceeding), the Parent agrees that, for purposes of this Article X and its obligations hereunder, such

Guaranteed Obligation shall be deemed to have been accelerated, and such condition to acceleration shall be deemed to have been met.

Section 10.06 Payments. All payments to be made by the Parent pursuant to this Article X shall be made at the times, in the manner and in the currency prescribed for payments in Section 4.05 of this Agreement, without set-off, counterclaim, withholding or other deduction of any nature, except for payments and deductions permitted by Section 4.05.

Section 10.07 Subrogation, etc. Any rights which the Parent may have or acquire by way of subrogation, reimbursement, exoneration, contribution or indemnity, and any similar rights (whether arising by operation of law, by agreement or otherwise), against each Other Borrower, arising from the existence, payment, performance or enforcement of any of the obligations of the Parent under or in connection with this Agreement, shall be subordinate in right of payment to the Guaranteed Obligations, and the Parent shall not exercise any such rights until the earlier of the time when all Guaranteed Obligations and all other obligations under this Agreement have been paid in full and all Commitments shall have terminated or the time when such Other Borrower ceases to be an Other Borrower hereunder. If, notwithstanding the foregoing, any amount shall be received by the Parent on account of any such rights at any time prior to the earlier of the time when all Guaranteed Obligations under this Agreement shall have been paid in full and all Commitments shall have terminated or the time when such Other Borrower shall have ceased to be an Other Borrower hereunder, such amount shall be held by the Parent in trust for the benefit of the Lenders, segregated from other funds held by the Parent, and shall be forthwith delivered to the Administrative Agent on behalf of the Lenders in the exact form received by the Parent (with any necessary endorsement), to be applied to the Guaranteed Obligations, whether matured or unmatured, in accordance with this Agreement, or to be held by the Administrative Agent on behalf of the Lenders as security for the Guaranteed Obligations and disposed of by the Administrative Agent in any lawful manner, all as the Administrative Agent may elect in accordance with this Agreement.

Section 10.08 Continuing Agreement. The provisions of this Article X are a continuing guaranty and shall continue in full force and effect until all Guaranteed Obligations have been paid in full, and all Commitments have terminated, subject in any event to reinstatement in accordance with Section 10.04.

Article XI

THE ADMINISTRATIVE AGENT

Section 11.01 Appointment. Each Lender and Issuer hereby appoints Mizuho to act as Administrative Agent for such Lender or Issuer under this Agreement and the other Loan Documents. Each Lender and Issuer hereby irrevocably authorizes Mizuho as Administrative Agent to take such action on behalf of such Lender or Issuer under the provisions of this Agreement and the other Loan Documents, and to exercise such powers and to perform such duties, as are expressly delegated to or required of the Administrative Agent by the terms hereof or thereof, together with such powers as are reasonably incidental thereto. Mizuho hereby agrees to act as Administrative Agent on behalf of the Lenders and Issuers on the terms and conditions set forth in this Agreement and the other Loan Documents, subject to its right to resign as

provided in Section 11.10 hereof. Each Lender and Issuer hereby irrevocably authorizes the Administrative Agent to execute and deliver each of the Loan Documents and to accept delivery of such of the other Loan Documents as may not require execution by the Administrative Agent. Each Lender and Issuer agrees that the rights and remedies granted to the Administrative Agent under the Loan Documents shall be exercised exclusively by the Administrative Agent, and that no Lender or Issuer shall have any right individually to exercise any such right or remedy, except to the extent expressly provided herein or therein.

Section 11.02 General Nature of the Administrative Agent's Duties. Notwithstanding anything to the contrary elsewhere in this Agreement or in any other Loan Document:

(a) The Administrative Agent shall not have any duties or responsibilities except those expressly set forth in this Agreement and the other Loan Documents, and no implied duties or responsibilities on the part of the Administrative Agent shall be read into this Agreement or any Loan Document or shall otherwise exist.

(b) The duties and responsibilities of the Administrative Agent under this Agreement and the other Loan Documents shall be mechanical and administrative in nature, and the Administrative Agent shall not have a fiduciary relationship in respect of any Lender or Issuer.

(c) The Administrative Agent is and shall be solely the agent of the Lenders and Issuers. The Administrative Agent does not assume, and shall not at any time be deemed to have, any relationship of agency or trust with or for, or any other duty or responsibility to, any Borrower or any other Person (except only for its relationship as agent for, and its express duties and responsibilities to, the Lenders and Issuers as provided in this Agreement and the other Loan Documents).

(d) The Administrative Agent shall not be under any obligation to take any action hereunder or under any other Loan Document if the Administrative Agent believes in good faith that taking such action may conflict with any Law or any provision of this Agreement or any other Loan Document, or may require the Administrative Agent to qualify to do business in any jurisdiction where it is not then so qualified.

Section 11.03 Exercise of Powers. The Administrative Agent shall take any action of the type specified in this Agreement or any other Loan Document as being within the Administrative Agent's rights, powers or discretion in accordance with directions from the Required Lenders (or, to the extent this Agreement or such Loan Document expressly requires the direction or consent of some other Person or set of Persons, then instead in accordance with the directions of such other Person or set of Persons). In the absence of such directions, the Administrative Agent shall have the authority (but under no circumstances shall be obligated), in its sole discretion, to take any such action, except to the extent this Agreement or such Loan Document expressly requires the direction or consent of the Required Lenders or all Lenders (or some other Person or set of Persons), in which case the Administrative Agent shall not take such action absent such direction or consent. Any action or inaction pursuant to such direction, discretion or consent shall be binding on all the Lenders. The Administrative Agent shall not

have any liability to any Person as a result of (x) the Administrative Agent acting or refraining from acting in accordance with the directions of the Required Lenders (except where such direction directly contravenes an express provision hereof under which the Administrative Agent is required to give notice or apply funds), (y) the Administrative Agent refraining from acting in the absence of instructions to act from the Required Lenders (or other applicable Person or set of Persons), whether or not the Administrative Agent has discretionary power to take such action (except where such instruction directly contravenes an express provision hereof under which the Administrative Agent is required to give notice or apply funds), or (z) the Administrative Agent taking discretionary action it is authorized to take under this Section (subject, in the case of this clause (z), to the provisions of Section 11.04(a) hereof).

Section 11.04 General Exculpatory Provisions. Notwithstanding anything to the contrary elsewhere in this Agreement or any other Loan Document:

(a) The Administrative Agent shall not be liable for any action taken or omitted to be taken by it under or in connection with this Agreement or any other Loan Document, unless caused by its own gross negligence or willful misconduct, as finally determined in a non-appealable judgment by a court of competent jurisdiction.

(b) The Administrative Agent shall not be responsible to any Lender or Issuer for (i) the execution, delivery, effectiveness, enforceability, genuineness, validity or adequacy of this Agreement or any other Loan Document, (ii) any recital, representation, warranty, document, certificate, report or statement in, provided for in, or received under or in connection with, this Agreement or any other Loan Document, (iii) any failure of any Borrower or Lender to perform any of their respective obligations under this Agreement or any other Loan Document, (iv) the existence, validity, enforceability, perfection, recordation, priority, adequacy or value, now or hereafter, of any lien or other direct or indirect security afforded or purported to be afforded by any of the Loan Documents or otherwise from time to time, or (v) caring for, protecting, insuring, or paying any taxes, charges or assessments with respect to any collateral.

(c) The Administrative Agent shall not be under any obligation to ascertain, inquire or give any notice to any Lender or Issuer relating to (i) the performance or observance of any of the terms or conditions of this Agreement or any other Loan Document on the part of any Borrower, (ii) the business, operations, condition (financial or otherwise) or prospects of any Borrower or any other Person, or (iii) except to the extent set forth in Section 11.05(f) hereof, the existence of any Event of Default or Potential Event of Default.

(d) The Administrative Agent shall not be under any obligation, either initially or on a continuing basis, to provide any Lender or Issuer with any notices, reports or information of any nature, whether in its possession presently or hereafter, except for such notices, reports and other information expressly required by this Agreement or any other Loan Document to be furnished by the Administrative Agent to such Lender or Issuer.

Section 11.05 Administration by the Administrative Agent.

(a) The Administrative Agent may rely upon any notice or other communication of any nature (written or oral, including but not limited to telephone conversations, whether or not such notice or other communication is made in a manner permitted

or required by this Agreement or any Loan Document) purportedly made by or on behalf of the proper party or parties, and the Administrative Agent shall not have any duty to verify the identity or authority of any Person giving such notice or other communication.

(b) The Administrative Agent may consult with legal counsel (including, without limitation, in-house counsel for the Administrative Agent or in-house or other counsel for any Borrower), independent public accountants and any other experts selected by it from time to time, and the Administrative Agent shall not be liable for any action taken or omitted to be taken in good faith by it in accordance with the advice of such counsel, accountants or experts.

(c) The Administrative Agent may conclusively rely upon the truth of the statements and the correctness of the opinions expressed in any certificates or opinions furnished to the Administrative Agent in accordance with the requirements of this Agreement or any other Loan Document. Whenever the Administrative Agent shall deem it necessary or desirable that a matter be proved or established with respect to any Borrower or Lender, such matter may be established by a certificate of such Borrower or Lender, as the case may be, and the Administrative Agent may conclusively rely upon such certificate (unless other evidence with respect to such matter is specifically prescribed in this Agreement or another Loan Document).

(d) The Administrative Agent may fail or refuse to take any action unless it shall be indemnified to its satisfaction from time to time against any and all amounts, liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements of any kind or nature which may be imposed on, incurred by or asserted against the Administrative Agent by reason of taking or continuing to take any such action.

(e) The Administrative Agent may perform any of its duties under this Agreement or any other Loan Document by or through agents or attorneys-in-fact. The Administrative Agent shall not be responsible for the negligence or misconduct of any agents or attorneys-in fact selected by it with reasonable care.

(f) The Administrative Agent shall not be deemed to have any knowledge or notice of the occurrence of any Event of Default or Potential Event of Default unless the Administrative Agent has received notice from a Lender or any Borrower referring to this Agreement, describing such Event of Default or Potential Event of Default, and stating that such notice is a "notice of default". If the Administrative Agent receives such a notice, it shall give prompt notice thereof to each Lender and Issuer.

Section 11.06 Lender Not Relying on the Administrative Agent or Other Lenders. Each Lender acknowledges as follows:

(a) Neither the Administrative Agent nor any other Lender has made any representations or warranties to it, and no act taken hereafter by the Administrative Agent or any other Lender shall be deemed to constitute any representation or warranty by the Administrative Agent or such other Lender to it.

(b) It has, independently and without reliance upon the Administrative Agent or any other Lender, and based upon such documents and information as it has deemed appropriate, made its own credit and legal analysis and decision to enter into this Agreement and the other Loan Documents.

(c) It will, independently and without reliance upon the Administrative Agent or any other Lender, and based upon such documents and information as it shall deem appropriate at the time, make its own decisions to take or not take action under or in connection with this Agreement and the other Loan Documents.

Section 11.07 Indemnification. Each Lender agrees to reimburse and indemnify the Administrative Agent, the Sustainability Structuring Agent, each Swingline Lender, each Issuer and their respective directors, officers, employees and agents (to the extent not reimbursed by a Borrower as set forth herein and without limitation of the obligations of the Borrowers to do so as set forth herein), Pro Rata, from and against any and all amounts, losses, liabilities, claims, damages, expenses, obligations, penalties, actions, judgments, suits, costs or disbursements of any kind or nature (including, without limitation, the reasonable fees and disbursements of counsel for the Administrative Agent or such other Person in connection with any investigative, administrative or judicial proceeding commenced or threatened, whether or not the Administrative Agent or such other Person shall be designated a party thereto) that may at any time be imposed on, incurred by or asserted against the Administrative Agent or such other Person as a result of, or arising out of, or in any way related to or by reason of, this Agreement, any other Loan Document, any transaction from time to time contemplated hereby or thereby, or any transaction financed in whole or in part or directly or indirectly with the proceeds of any Loan; provided that no Lender shall be liable for any portion of such amounts, losses, liabilities, claims, damages, expenses, obligations, penalties, actions, judgments, suits, costs or disbursements resulting from the gross negligence or willful misconduct of the Administrative Agent or such other Person, as finally determined in a non-appealable judgment by a court of competent jurisdiction.

Section 11.08 The Administrative Agent in its Individual Capacity. With respect to its Commitments and the Obligations owing to it, the Administrative Agent shall have the same rights and powers under this Agreement and each other Loan Document as any other Lender and may exercise the same as though it were not the Administrative Agent, and the terms “Lenders,” “holders of Notes” and like terms shall include the Administrative Agent in its individual capacity as such. The Administrative Agent and its Affiliates may, without liability to account, make loans to, accept deposits from, acquire debt or equity interests in, act as trustee under indentures of, and engage in any other business with, any Borrower and any stockholder, subsidiary or Affiliate of any Borrower, as though the Administrative Agent were not an Administrative Agent hereunder.

Section 11.09 Lenders. The Administrative Agent may deem and treat each Lender signatory hereto as a Lender hereunder for all purposes hereof unless and until such Person assigns all of its interests hereunder pursuant to Section 12.14(c) hereof. Any authority, direction or consent of any Person who at the time of giving such authority, direction or consent is shown in the Register as being a Lender shall be conclusive and binding on each present and subsequent transferee or assignee.

Section 11.10 Successor Administrative Agent. The Administrative Agent may resign at any time by giving 10 days' prior written notice thereof to the Lenders, the Issuers and the Parent. The Administrative Agent may be removed by the Required Lenders at any time by giving 10 days' prior written notice thereof to the Administrative Agent, the Issuers, the other Lenders and the Parent. Upon any such resignation or removal, the Required Lenders shall have the right to appoint a successor Administrative Agent, subject to the consent of the Parent (which consent shall not be unreasonably withheld and shall not be required if an Event of Default has occurred and is continuing). If no successor Administrative Agent shall have been so appointed and consented to, and shall have accepted such appointment, within 30 days after such notice of resignation or removal, then the retiring Administrative Agent may, on behalf of the Lenders and Issuers, appoint a successor Administrative Agent; provided that if the Administrative Agent is resigning, the retiring Administrative Agent's resignation shall nevertheless become effective on the date that is 40 days after its initial notice of resignation and the Lenders shall assume and perform all of the duties of the Administrative Agent hereunder until such time, if any, as the Required Lenders appoint a successor agent as provided for above. Each successor Administrative Agent shall be a commercial bank or trust company organized under the laws of the United States of America or any State thereof and having a combined capital and surplus of at least \$1,000,000,000. Upon the acceptance by a successor Administrative Agent of its appointment as Administrative Agent hereunder, such successor Administrative Agent shall thereupon succeed to and become vested with all the properties, rights, powers, privileges and duties of the former Administrative Agent, without further act, deed or conveyance. Upon the effective date of resignation or removal of a retiring Administrative Agent, such Administrative Agent shall be discharged from its duties under this Agreement and the other Loan Documents, but the provisions of this Agreement shall inure to its benefit as to any actions taken or omitted by it while it was the Administrative Agent under this Agreement.

Section 11.11 Calculations. The Administrative Agent shall not be liable for any calculation, apportionment or distribution of payments made by it in good faith. If such calculation, apportionment or distribution is subsequently determined to have been made in error, the sole recourse of any Lender to whom payment was due but not made shall be to recover from the other Lenders any payment in excess of the amount to which they are determined to be entitled or, if the amount due was not paid by the appropriate Borrower, to recover such amount from the appropriate Borrower.

Section 11.12 The Administrative Agent's Fees. The Parent agrees to pay to the Administrative Agent, for its individual account, a nonrefundable Administrative Agent's fee in an amount and at such time or times as specified in the Mizuho Fee Letter.

Section 11.13 Co-Syndication Agents; Co-Documentation Agents. None of the Lenders identified in this Agreement as a "Co-Syndication Agent" or "Co-Documentation Agent" shall have any right, power, obligation, liability, responsibility or duty under this Agreement in such identified capacity other than those applicable to all Lenders as such. Without limiting the foregoing, none of such Lenders shall have or be deemed to have a fiduciary relationship with any Lender. Each Lender hereby makes the same acknowledgements with respect to such Lenders as it makes with respect to the Administrative Agent in Section 11.06.

Article XII

MISCELLANEOUS

Section 12.01 Holidays. Whenever any payment or action to be made or taken hereunder or under any other Loan Document shall be stated to be due on a day which is not a Business Day, such payment or action shall be made or taken on the next following Business Day and such extension of time shall be included in computing interest or fees, if any, in connection with such payment or action.

Section 12.02 Records. The unpaid principal amount of the Loans owing to each Lender, the unpaid interest accrued thereon, the interest rate or rates applicable to such unpaid principal amount, the duration of such applicability, each Lender's Revolving Credit Committed Amount shall at all times be ascertained from the records of the Administrative Agent, which shall be conclusive absent manifest error.

Section 12.03 Amendments and Waivers. Neither this Agreement nor any Loan Document may be amended, modified or supplemented except in accordance with the provisions of this Section. The Administrative Agent, the Required Lenders and the Borrowers may from time to time amend, modify or supplement the provisions of this Agreement or any other Loan Document for the purpose of amending, adding to, or waiving any provisions, or changing in any manner the rights and duties of any Borrower, the Administrative Agent or any Lender; provided, however, that, notwithstanding the foregoing, any amendment, modification or supplement of the provisions of this Agreement or any other Loan Document of the kind described in clauses (a) and (b) of this Section 12.03 may be entered into from time to time by the Administrative Agent, each Lender affected thereby and the Parent. Any such amendment, modification or supplement made by the Borrowers (or the Parent, as the case may be), the Required Lenders and the Administrative Agent in accordance with the provisions of this Section shall be binding upon the Borrowers, each Lender and the Administrative Agent; provided that no amendment, modification or supplement shall be effective which will:

(a) Increase the Revolving Credit Committed Amount of any Lender over the amount thereof then in effect, or extend the Revolving Credit Maturity Date or the Competitive Bid Expiration Date (except in each case in accordance with Section 4.01) or extend the expiration date of any Letter of Credit beyond the Revolving Credit Maturity Date, unless executed by each Lender affected thereby (and, with respect to Letters of Credit, the applicable Issuer);

(b) Reduce the principal amount of or extend (except in accordance with Section 4.01) the scheduled final maturity of any Loan, or reduce the amount of any LC Disbursement, or extend any scheduled payment date or prepayment date of any Loan or LC Disbursement, or reduce the rate of interest or extend the time for payment of interest borne by any Loan, or extend the time for payment of or reduce the amount of any Commitment Fee or reduce or postpone the date for payment of any other fees, expenses, indemnities or amounts payable under any Loan Document, including in each case, pursuant to the terms set forth on Annex A to Schedule I hereto, unless executed by each Lender affected thereby (and, with respect to LC Disbursements, the applicable Issuer);

(c) Change the definition of “Required Lenders”, the definition of “Defaulting Lender” or the definition of “Designated Currency” or any provision of this Agreement that states a requirement for the consent of all the Lenders or amend Section 4.12(b) or this Section 12.03, unless executed by all the Lenders;

(d) Amend the third sentence of the fourth paragraph of Section 4.05(a) or Section 12.13, unless executed by all the Lenders;

(e) Amend or waive any of the provisions of Article XI hereof, or impose additional duties upon the Administrative Agent, any Swingline Lender or any Issuer or otherwise adversely affect the rights, interests or obligations of the Administrative Agent, any Swingline Lender or any Issuer, unless executed by the Administrative Agent, such Swingline Lender or such Issuer, as the case may be; or

(f) Release the Parent from any of its obligations under Article X hereof, unless executed by all Lenders;

and provided, further, that (i) Assignment Agreements may be entered into in the manner provided in Section 12.14 hereof and (ii) any fees payable to the Administrative Agent for its own account may be waived by the Administrative Agent in its sole discretion. Any such amendment, modification or supplement must be in writing and shall be effective only to the extent set forth in such writing. Any Event of Default or Potential Event of Default waived or consented to in any such amendment, modification or supplement shall be deemed to be cured and not continuing to the extent and for the period set forth in such waiver or consent, but no such waiver or consent shall extend to any other or subsequent Event of Default or Potential Event of Default or impair any right consequent thereto. Notwithstanding the foregoing, (i) upon the execution and delivery of all documentation and receipt of all consents required by Section 2.10 to be delivered in connection with an increase in the Total Revolving Credit Commitment, this Agreement shall be deemed amended without further action by any party to reflect, as applicable, the new Lenders and their new Revolving Credit Committed Amounts and any increase in the Revolving Credit Committed Amounts of any existing Lender, (ii) the Administrative Agent and the Borrower may amend or modify this Agreement and any other Loan Document to cure any ambiguity, omission, mistake, defect or inconsistency therein and such amendment shall become effective without any further action or consent of any other party to any Loan Document; provided that prior notice of such amendment shall be given to the Lenders and (iii) the operation of Schedule 1 in accordance with its terms is not an amendment subject to this Section 12.03.

If, in connection with any proposed amendment, waiver or consent requiring the consent of “all Lenders,” “each Lender” or “each Lender directly and adversely affected thereby,” the consent of the Required Lenders is obtained, but the consent of other necessary Lenders is not obtained (any such Lender whose consent is necessary but not obtained being referred to herein as a “Non-Consenting Lender”), then the Parent may elect, at the sole cost and expense of the Borrowers, to replace a Non-Consenting Lender as a Lender party to this Agreement; provided that, concurrently with such replacement, (i) another bank or other entity (which is reasonably satisfactory to the Administrative Agent, each Swingline Lender and each Issuer) shall agree, as of such date, to purchase at par for cash the Loans due to the Non-Consenting Lender and to

become a Lender for all purposes under this Agreement and to assume all obligations of the Non-Consenting Lender to be terminated as of such date, and (ii) the Borrower shall pay to such Non-Consenting Lender in same day funds on the day of such replacement all amounts owed to it hereunder and under the other Loan Documents (including with respect to Section 4.08(c) hereof).

Section 12.04 No Implied Waiver; Cumulative Remedies. No course of dealing and no delay or failure of the Administrative Agent or any Issuer or Lender in exercising any right, power or privilege under this Agreement or any other Loan Document shall affect any other or future exercise thereof or exercise of any other right, power or privilege; nor shall any single or partial exercise of any such right, power or privilege or any abandonment or discontinuance of steps to enforce such a right, power or privilege preclude any further exercise thereof or of any other right, power or privilege. The rights and remedies under this Agreement and any other Loan Document are cumulative and not exclusive of any rights or remedies which would otherwise be available at law or in equity.

Section 12.05 Notices.

(a) Except in the case of notices and other communications expressly permitted to be given by telephone (and except as provided in clause (b) below), all notices and other communications provided for herein shall be in writing and shall be delivered by hand or overnight courier service, mailed by certified or registered mail or sent by facsimile as follows:

(i) if to the Parent or any Other Borrower, at its address or facsimile number set forth on the signature page hereof;

(ii) if to the Administrative Agent, at its address or facsimile number set forth on the signature page hereof;

(iii) if to a Lender, to it at its address or facsimile number set forth in its administrative questionnaire; and

(iv) if to an Issuer, at its address set forth in its administrative questionnaire or its signature page hereof, as applicable.

Notices sent by hand or overnight courier service, or mailed by certified or registered mail, shall be deemed to have been given when received; notices sent by facsimile shall be deemed to have been given when sent (except that, if not given during normal business hours for the recipient, shall be deemed to have been given at the opening of business on the next Business Day for the recipient). Notices delivered through electronic communications to the extent provided in clause (b) below, shall be effective as provided in said clause (b).

(b) Notices and other communications to the Lenders may be delivered or furnished by electronic communication (including e-mail and internet or intranet websites) pursuant to procedures approved by the Administrative Agent or as otherwise determined by the Administrative Agent; provided that the foregoing shall not apply to notices to any Lender pursuant to Article II if such Lender has notified the Administrative Agent that it is incapable of receiving notices under such Article by electronic communication. The

Administrative Agent or the Parent may, in its respective discretion, agree to accept notices and other communications to it hereunder by electronic communications pursuant to procedures approved by it or as it otherwise determines; provided that such determination or approval may be limited to particular notices or communications. Unless the Administrative Agent otherwise prescribes, (i) notices and other communications sent to an e-mail address shall be deemed received upon the sender's receipt of an acknowledgement from the intended recipient (such as by the "return receipt requested" function, as available, return e-mail or other written acknowledgement); provided that if such notice or other communication is not given during the normal business hours of the recipient, such notice or communication shall be deemed to have been given at the opening of business on the next Business Day for the recipient, and (ii) notices or communications posted to an Internet or intranet website shall be deemed received upon the deemed receipt by the intended recipient at its e-mail address as described in the foregoing clause (i) of notification that such notice or communication is available and identifying the website address therefor.

(c) Any party hereto may change its address or facsimile number for notices and other communications hereunder by written notice to (i) the Administrative Agent and the Parent in the case of a change by a Lender or an Issuer, (ii) the Administrative Agent and each Lender in the case of a change by any of the Borrowers or (iii) all other parties hereto in the case of a change by the Administrative Agent.

(d) Any Lender giving any notice to the Borrowers or any other party to a Loan Document shall simultaneously send a copy thereof to the Administrative Agent, and the Administrative Agent shall promptly notify the other Lenders of the receipt by it of any such notice.

(e) The Administrative Agent and each Lender may rely on any notice (whether or not such notice is made in a manner permitted or required by this Agreement or any Loan Document) purportedly made by or on behalf of the Borrowers, and neither the Administrative Agent nor Lender shall have any duty to verify the identity or authority of any Person giving such notice.

Section 12.06 Expenses; Indemnity; No Consequential Damages.

(a) The Parent agrees to pay or cause to be paid and to save the Agents harmless against liability for the payment of all reasonable and documented out-of-pocket costs and expenses incurred by the Agents from time to time arising from or relating to (i) the negotiation, preparation, execution and delivery of this Agreement and the other Loan Documents and (ii) the negotiation, preparation, execution and delivery of any requested amendments, modifications, supplements, waivers or consents (whether or not ultimately entered into or granted) to this Agreement or any Loan Document; provided that, in the case of legal expenses after the Closing Date, payment for such costs and expenses will be limited to the reasonable and documented fees and expenses of one primary counsel and one local counsel in each relevant jurisdiction (and, solely in the case of an actual or perceived conflict of interest, one additional counsel in each relevant jurisdiction to the affected Agents). The Parent agrees to pay or cause to be paid and to save each Issuer harmless against liability for the payment of all reasonable and documented out-of-pocket expenses incurred by such Issuer in connection with

its issuance, amendment, renewal or extension of any Letter of Credit or any demand for payment thereunder. The Parent agrees to pay or cause to be paid and to save the Agents, each Issuer and each Lender harmless against liability for the payment of all reasonable and documented out-of-pocket expenses (including but not limited to reasonable and documented fees and expenses of legal counsel, auditors, and all other professional, accounting, evaluation and consulting costs) reasonably incurred after the occurrence of an Event of Default by the Administrative Agent, any Issuer or any Lender from time to time arising from or relating to the enforcement or preservation of rights under this Agreement or any Loan Document; provided that, in the case of legal expenses, payment for such expenses will be limited to the reasonable and documented fees and expenses of one primary counsel and local counsel in each relevant jurisdiction (and, solely in the case of an actual or perceived conflict of interest, one additional counsel in each relevant jurisdiction to the affected Persons).

(b) The Parent hereby agrees to reimburse and indemnify each of the Indemnified Parties from and against any and all losses, liabilities, claims, damages, expenses, obligations, penalties, actions, judgments, suits, costs or disbursements of any kind or nature whatsoever (including, without limitation, the reasonable and documented fees and disbursements of one primary counsel and of local counsel in each relevant jurisdiction for such Indemnified Party in connection with any investigative, administrative or judicial proceeding commenced or threatened, whether or not such Indemnified Party shall be designated a party thereto (and, solely in the case of an actual or perceived conflict of interest, one additional counsel in each relevant jurisdiction to the affected Indemnified Parties)) that may at any time be imposed on, asserted against or incurred by such Indemnified Party as a result of, or arising out of, or in any way related to or by reason of, this Agreement or any other Loan Document, any transaction from time to time contemplated hereby or thereby, any transaction supported by any Letter of Credit or financed in whole or in part or directly or indirectly with the proceeds of any Loan or Letter of Credit or any refusal by an Issuer to honor a demand for payment under a Letter of Credit if the documents presented in connection with such demand do not strictly comply with the terms of such Letter of Credit, but excluding any such losses, liabilities, claims, damages, expenses, obligations, penalties, actions, judgments, suits, costs or disbursements to the extent they result from (i) the gross negligence or willful misconduct of such Indemnified Party or (ii) any dispute between an Indemnified Party and one or more other Indemnified Parties (other than against an Agent, Swingline Lender or Issuer acting in such a role) that does not involve an act or omission by Parent or any of its Subsidiaries. If and to the extent that the foregoing obligations of the Parent under this clause (b), or any other indemnification obligation of the Parent hereunder or under any other Loan Document, are unenforceable for any reason, the Parent hereby agrees to make the maximum contribution to the payment and satisfaction of such obligations which is permissible under applicable Law. This Section 12.06(b) shall not apply with respect to Taxes other than any Taxes that represent losses, claims, damages, etc. arising from any non-Tax claim.

(c) Without limiting the provisions of Section 12.06(a) or 12.06(b), in no event will any party hereto be liable to any other party hereto for any punitive, special, indirect or consequential damages for any matters arising out of the transactions contemplated hereby; provided, however, that the foregoing limitation shall not be deemed to impair or affect the obligations of the Parent under Section 12.06(a) or Section 12.06(b).

Section 12.07 Severability. The provisions of this Agreement are intended to be severable. If any provision of this Agreement shall be held invalid or unenforceable in whole or in part in any jurisdiction such provision shall, as to such jurisdiction, be ineffective to the extent of such invalidity or unenforceability without in any manner affecting the validity or enforceability thereof in any other jurisdiction or the remaining provisions hereof in any jurisdiction.

Section 12.08 Prior Understandings. This Agreement and the other Loan Documents supersede all prior and contemporaneous understandings and agreements, whether written or oral, among the parties hereto relating to the transactions provided for herein and therein except for the Fee Letters.

Section 12.09 Duration; Survival. All representations and warranties of each Borrower contained herein or in any other Loan Document or made in connection herewith or therewith shall survive the making of, and shall not be waived by the execution and delivery of this Agreement or any other Loan Document, any investigation by or knowledge of the Administrative Agent or any Issuer or Lender, the making of any Loan or issuance or Modification of any Letter of Credit, or any other event or condition whatever. All covenants and agreements of each Borrower contained herein or in any other Loan Document shall continue in full force and effect from and after the date hereof so long as any Borrower may borrow hereunder and until payment in full in cash of all Obligations. Without limitation, all obligations of the Borrowers hereunder or under any other Loan Document to make payments to or indemnify the Administrative Agent or any Lender shall survive the payment in full in cash of all other Obligations, termination of the Borrowers' right to borrow hereunder, and all other events and conditions whatever, including without limitation the assignment of a Lender's Commitments and Loans and LC Exposure hereunder. In addition, all obligations of each Lender to make payments to or indemnify the Administrative Agent shall survive the payment in full in cash by the Borrowers of all Obligations, termination of the Borrowers' right to borrow hereunder, and all other events or conditions whatever.

Section 12.10 Counterparts: Electronic Execution of Loan Documents. This Agreement may be executed in any number of counterparts and by the different parties hereto on separate counterparts each of which, when so executed, shall be deemed an original, but all such counterparts shall constitute but one and the same instrument. Delivery by fax or other electronic transmission of an executed counterpart of a signature page to this Agreement and each other Loan Document shall be effective as delivery of an original executed counterpart of this Agreement and such other Loan Document and the words "execution," "execute", "signed," "signature," and words of like import in or related to any document to be signed in connection with this Agreement or any other Loan Document shall be deemed to include electronic signatures, the electronic matching of assignment terms and contract formations on electronic platforms approved by the Administrative Agent, or the keeping of records in electronic form, each of which shall be of the same legal effect, validity or enforceability as a manually executed signature or the use of a paper based recordkeeping system, as the case may be, to the extent and as provided for in any applicable law, including the Federal Electronic Signatures in Global and National Commerce Act, the New York State Electronic Signatures and Records Act, or any other similar state laws based on the Uniform Electronic Transactions Act. The Administrative Agent may, in its discretion, require that any such documents and signatures executed

electronically or delivered by fax or other electronic transmission be confirmed by a manually-signed original thereof; provided that the failure to request or deliver the same shall not limit the effectiveness of any document or signature executed electronically or delivered by fax or other electronic transmission.

Section 12.11 Limitation on Payments. The parties hereto intend to conform to all applicable Laws in effect from time to time limiting the maximum rate of interest that may be charged or collected. Accordingly, notwithstanding any other provision hereof or of any other Loan Document, the Borrowers shall not be required to make any payment to or for the account of any Lender, and each Lender shall refund any payment made by the Borrowers, to the extent that such requirement or such failure to refund would violate or conflict with nonwaivable provisions of applicable Laws limiting the maximum amount of interest which may be charged or collected by such Lender.

Section 12.12 Set-Off. Each Borrower hereby agrees that if an Event of Default has occurred and is continuing, each Lender and Issuer shall have the right, without notice to such Borrower, to set off against and to appropriate and apply to such Obligation any matured indebtedness or other fixed liability or matured obligation of any nature owing to such Borrower by such Lender or Issuer, including but not limited to all deposits (whether time or demand, general or special, provisionally credited or finally credited, whether or not evidenced by a certificate of deposit) now or hereafter maintained by such Borrower with such Lender or Issuer. Such right shall be absolute and unconditional in all circumstances and, without limitation, shall exist whether or not such Lender, such Issuer or any other Person shall have given notice or made any demand to such Borrower or any other Person, and regardless of the existence or adequacy of any collateral, guaranty or any other security, right or remedy available to any Lender, Issuer or any other Person. Each Borrower hereby agrees that any Participant and any branch, subsidiary or Affiliate of any Lender or Issuer or any Participant shall have the same rights of set-off as a Lender or Issuer as provided in this Section (regardless of whether such Participant, branch, subsidiary or Affiliate would otherwise be deemed in privity with or a direct creditor of such Borrower). The rights provided by this Section are in addition to all other rights of set-off and banker's lien and all other rights and remedies which any Lender or Issuer (or any such Participant, branch, subsidiary or Affiliate) may otherwise have under this Agreement, any other Loan Document, at law or in equity, or otherwise, and nothing in this Agreement or any Loan Document shall be deemed a waiver or prohibition of or restriction on the rights of set-off or bankers' lien of any such Person.

Section 12.13 Sharing of Collections. The Lenders hereby agree among themselves that if any Lender shall receive (by voluntary payment, realization upon security, set-off or from any other source) any amount on account of the Revolving Credit Loans or Swingline Loans and interest thereon or participations in Swingline Loans or unreimbursed LC Disbursements in greater proportion (determined by reference to the aggregate Revolving Credit Exposures at such time) than any such amount received by any other Lender, then the Lender receiving such proportionately greater payment shall notify each other Lender and the Administrative Agent of such receipt, and equitable adjustment will be made in the manner stated in this Section so that, in effect, all such excess amounts will be shared ratably among all of the Lenders. The Lender receiving such excess amount shall purchase (which it shall be deemed to have done simultaneously upon the receipt of such excess amount) for cash from the

other Lenders a participation in the applicable Revolving Credit Loans and interest thereon and participations in Swingline Loans or unreimbursed LC Disbursements owed to such other Lenders in such amount as shall result in a ratable sharing by all Lenders of such excess amount (and to such extent the receiving Lender shall be a Participant). If all or any portion of such excess amount is thereafter recovered from the Lender making such purchase, such purchase shall be rescinded and the purchase price restored to the extent of such recovery, together with interest or other amounts, if any, required by Law to be paid by the Lender making such purchase. Each Borrower hereby consents to and confirms the foregoing arrangements. Each Participant shall be bound by this Section as fully as if it were a Lender hereunder.

Section 12.14 Successors and Assigns; Participations; Assignments.

(a) Successors and Assigns. The terms and provisions of the Loan Documents shall be binding upon and inure to the benefit of the Borrowers, the Administrative Agent, the Issuers and the Lenders and their respective successors and assigns permitted hereby, except that (i) the Borrowers shall not have the right to assign their respective rights or obligations under the Loan Documents without the prior written consent of each Lender (except as provided Section 9.01(f)), (ii) any assignment by any Lender must be made in compliance with Section 12.14(c), and (iii) any transfer by participation must be made in compliance with Section 12.14(b). Any attempted assignment or transfer by any party not made in compliance with this Section 12.14 shall, subject to Section 12.14(c)(iii), be null and void. The parties to this Agreement acknowledge that clause (ii) of this Section 12.14(a) relates only to absolute assignments and this Section 12.14 does not prohibit assignments creating security interests, including, without limitation, (x) any pledge or assignment by any Lender of all or any portion of its rights under this Agreement and any Note to a Federal Reserve Bank or any central bank or (y) in the case of a Lender which is a Fund, any pledge or assignment of all or any portion of its rights under this Agreement and any Note to its trustee in support of its obligations to its trustee; provided, however, that no such pledge or assignment creating a security interest shall release the Assignor Lender from its obligations hereunder unless and until the parties thereto have complied with the provisions of Section 12.14(c). The Administrative Agent may treat the Person which made any Loan or which holds any Note as the owner thereof for all purposes hereof unless and until such Person complies with Section 12.14(c); provided, however, that the Administrative Agent may in its discretion (but shall not be required to) follow instructions from the Person which made any Loan or which holds any Note to direct payments relating to such Loan or Note to another Person. Any assignee of the rights to any Loan or any Note agrees by acceptance of such assignment to be bound by all the terms and provisions of the Loan Documents. Any request, authority or consent of any Person, who at the time of making such request or giving such authority or consent is the owner of the rights to any Loan (whether or not a Note has been issued in evidence thereof), shall be conclusive and binding on any subsequent holder or assignee of the rights to such Loan.

(b) Participations.

(i) Permitted Participants; Effect. Any Lender may at any time sell to one or more banks or other entities ("Participants") participating interests in any Loan owing to such Lender, any Note held by such Lender, any Revolving Credit Commitment of such Lender or any other interest of such

Lender under the Loan Documents. In the event of any such sale by a Lender of participating interests to a Participant, such Lender's obligations under the Loan Documents shall remain unchanged, such Lender shall remain solely responsible to the other parties hereto for the performance of such obligations, such Lender shall remain the owner of its Loans and the holder of any Note issued to it in evidence thereof for all purposes under the Loan Documents, all amounts payable by the Borrowers under this Agreement shall be determined as if such Lender had not sold such participating interests, and the Borrowers, the Issuers, the Swingline Lenders and the Administrative Agent shall continue to deal solely and directly with such Lender in connection with such Lender's rights and obligations under the Loan Documents.

(ii) Voting Rights. Each Lender shall retain the sole right to approve, without the consent of any Participant, any amendment, modification or waiver of any provision of the Loan Documents other than any amendment, modification or waiver with respect to any Loan or Commitment in which such Participant has an interest which would require consent of all of the Lenders pursuant to the terms of Section 12.03(a), (b), (c), (d) or (f).

(iii) Benefit of Certain Provisions. The Parent and each of the Other Borrowers agrees that each Participant shall be entitled to the benefits of Sections 4.07, 4.08 and 4.09 to the same extent as if it were a Lender and had acquired its interest by assignment pursuant to Section 12.14(c); provided that (i) a Participant shall not be entitled to receive any greater payment under Section 4.07, 4.08 or 4.09 than the Lender who sold the participating interest to such Participant would have received had it retained such interest for its own account, unless the sale of such interest to such Participant is made with the prior written consent of the Parent, and (ii) any Participant agrees to comply with the provisions of Section 4.09 to the same extent as if it were a Lender.

(iv) Participant Register. Each Lender that sells a participation shall, acting solely for this purpose a non-fiduciary agent of the Parent, maintain a register (or an electronic equivalent thereof) on which it enters the name and address of each Participant and the principal amounts (and stated interest) of each Participant's interest in the Loans or other obligations under this Agreement (the "Participant Register"). The entries in the Participant Register shall be conclusive absent manifest error, and such Lender shall treat each Person whose name is recorded in the Participant Register as the owner of such participation for all purposes of this Agreement notwithstanding any notice to the contrary; provided that no Lender shall have any obligation to disclose all or any portion of the Participant Register to the Parent or any other Person (including the identity of any Participant or any information relating to a Participant's interest under the Loan Documents) except to the extent that such disclosure is necessary to establish that the Loans or other obligations under the Loan Documents are in registered form under Section 5f-103-1(c) of the United States Treasury Regulations (or any amended or successor version). For the avoidance of doubt,

the Administrative Agent shall have no responsibility for maintaining a Participant Register.

(c) Assignments.

(i) Permitted Assignments. Any Lender (each an “Assignor Lender”) may at any time assign to one or more banks or other entities (each an “Assignee Lender”) all or any part of its rights and obligations under the Loan Documents. Such assignment shall be substantially in the form of Exhibit E or in such other form as may be agreed to by the parties thereto (an “Assignment Agreement”). Each such assignment with respect to an Assignee Lender which is not a Lender, an Affiliate of a Lender or an Approved Fund shall either be in an amount equal to the entire applicable Revolving Credit Commitment and Loans of the Assignor Lender or (unless each of the Parent and the Administrative Agent otherwise consents) be in an aggregate amount not less than \$5,000,000; provided that such consent of the Parent shall be deemed to have been given if the Parent has not responded within fifteen (15) Business Days of a request for such consent and; provided, further, that such consent of the Parent shall not be required if an Event of Default under Section 9.01(a), (b), (i) or (j) has occurred and is continuing. The amount of the assignment shall be based on the Revolving Credit Commitment or outstanding Loans (if the Revolving Credit Commitment has been terminated) subject to the assignment, determined as of the date of such assignment or as of the “Trade Date,” if the “Trade Date” is specified in the assignment. After giving effect to any assignment, the remaining Revolving Credit Commitment of the assigning Lender (or, if the Revolving Credit Commitments have been terminated, then the aggregate principal amount of Loans held by the assigning Lender) shall either be zero or be at least \$10,000,000. Unless such assignment is consented to by the Parent or is required by applicable law, no assignment may be made to an Affiliate of the assigning Lender if such assignment would increase the amounts payable by any Borrower hereunder. No assignment may be made hereunder if such assignment violates applicable law.

(ii) Consents. The consent of the Parent shall be required prior to an assignment becoming effective unless the Assignee Lender is a Lender, an Affiliate of a Lender or an Approved Fund; provided that the consent of the Parent shall be deemed to have been given if the Parent has not responded within fifteen (15) Business Days of a request for such consent and; provided, further, that the consent of the Parent shall not be required if an Event of Default under Section 9.01(a), (b), (i) or (j) has occurred and is continuing. The consent of the Administrative Agent, each Swingline Lender and each Issuer shall be required prior to an assignment becoming effective; provided that the consent of the Administrative Agent shall not be required for an assignment to a Lender, an Affiliate of a Lender or an Approved Fund. Any consent required under this Section 12.14(c)(ii) shall not be unreasonably withheld or delayed.

(iii) Effect; Effective Date. Upon (i) delivery to the Administrative Agent of an assignment, together with any consents required by Section 12.14(c)(ii), (ii) payment of a \$3,500 fee to the Administrative Agent for processing such assignment (unless such fee is waived by the Administrative Agent) and (iii) if the Assignee Lender is not a Lender, delivery to the Administrative Agent of an administrative questionnaire in which the assignee designates one or more credit contacts to whom all syndicate-level information (which may contain material non-public information) will be made available and who may receive such information in accordance with the assignee's compliance procedures and applicable laws, including Federal, State and foreign securities laws and any tax forms required by Section 4.09, such assignment shall become effective on the effective date specified in such assignment. The assignment shall contain a representation by the Assignee Lender to the effect that none of the consideration used to make the purchase of the Revolving Credit Commitment and Loans under the applicable assignment agreement constitutes "plan assets" as defined under ERISA and that the rights and interests of the Assignee Lender in and under the Loan Documents will not be "plan assets" under ERISA. On and after the effective date of such assignment, such Assignee Lender shall for all purposes be a Lender party to this Agreement and any other Loan Document executed by or on behalf of the Lenders and shall have all the rights and obligations of a Lender under the Loan Documents, to the same extent as if it were an original party thereto, and the Assignor Lender shall be released with respect to the Revolving Credit Commitment and Loans and LC Exposure assigned to such Assignee Lender without any further consent or action by the Borrowers, the Lenders or the Administrative Agent. In the case of an assignment covering all of the Assignor Lender's rights and obligations under this Agreement, such Lender shall cease to be a Lender hereunder but shall continue to be entitled to the benefits of, and subject to, those provisions of this Agreement and the other Loan Documents which survive payment of the Obligations and termination of the applicable agreement. Any assignment or transfer by a Lender of rights or obligations under this Agreement that does not comply with this Section 12.14(c) shall be treated for purposes of this Agreement as a sale by such Lender of a participation in such rights and obligations in accordance with Section 12.14(b). Upon the consummation of any assignment to an Assignee Lender pursuant to this Section 12.14(c), the Assignor Lender, the Administrative Agent and the Borrowers shall, if the Assignor Lender or the Assignee Lender desires that its Loans be evidenced by Notes, make appropriate arrangements so that new Notes or, as appropriate, replacement Notes are issued to such Assignor Lender and new Notes or, as appropriate, replacement Notes, are issued to such Assignee Lender, in each case in principal amounts reflecting their respective Revolving Credit Commitments, as adjusted pursuant to such assignment.

(d) Register. The Administrative Agent shall maintain at its office a copy of each assignment hereunder delivered to it and a register (or an electronic equivalent thereof) (the "Register") for the recordation of the names and addresses of the Lenders and the Commitments of, and principal amount (and stated interest) of the Loans and LC Disbursements owing to, each Lender from time to time. The entries in the Register shall be conclusive absent

manifest error and the Borrowers, the Administrative Agent, the Issuers and the Lenders shall treat each Person whose name is recorded in the Register as a Lender hereunder for all purposes of the Agreement. The Register shall be available for inspection by the Borrowers or any Issuer or Lender, as to its commitment only, at any reasonable time and from time to time upon reasonable prior notice.

(e) Financial and Other Information. Each Borrower authorizes the Administrative Agent and each Issuer and Lender to disclose to any Participant, Assignee Lender or any Affiliate of such Lender (each, a “transferee”) and any prospective transferee any and all financial and other information in such Person’s possession concerning any Borrower and their respective Subsidiaries and Affiliates which has been or may be delivered to such Person by or on behalf of any Borrower in connection with this Agreement or any other Loan Document or such Person’s credit evaluation of any Borrower and their respective Subsidiaries and Affiliates; provided that such transferee or prospective transferee agrees in writing to maintain the confidentiality of any such information provided by the Parent pursuant to Section 7.01(c)(iv) hereof. At the request of any Lender, the Parent, at the Parent’s expense, shall provide to each prospective transferee the conformed copies of documents referred to in Section 7 of the form of Assignment Agreement.

Section 12.15 Judgment Currency.

(a) Judgment Currency. The specification in this Agreement and in the Notes of payment in a particular currency at the Administrative Agent’s Office is of the essence hereof and thereof. If any court or tribunal shall render a judgment or order for the payment of any amounts owing by any Borrower to any Issuer or Lender or the Administrative Agent under this Agreement or any Note or for the payment by any Borrower of damages in respect of any breach of this Agreement or any Note or under or in respect of a judgment or order of another court or tribunal for payment of such amounts or damages, and if such judgment or order is expressed in a currency (the “Judgment Currency”) other than the currency payable hereunder (the “Contractual Currency”), the Relevant Borrower shall indemnify and hold harmless such Issuer or Lender or the Administrative Agent against any deficiency in terms of the Contractual Currency in the amounts received by such Issuer or Lender or the Administrative Agent arising or resulting from any variation as between (i) the rate of exchange at which the Contractual Currency is converted into the Judgment Currency for the purposes of such judgment or order and (ii) the rate of exchange at which such Issuer or Lender or the Administrative Agent would, in accordance with normal banking procedures, purchase the Contractual Currency with the amount of the Judgment Currency actually received by such Issuer or Lender or the Administrative Agent on the Business Day following such receipt by such Issuer or Lender or the Administrative Agent.

(b) Liquidation Currency. If any Borrower shall wind up, liquidate, dissolve or become bankrupt while there remains outstanding any amounts owing by such Borrower to any Issuer or Lender or the Administrative Agent under this Agreement or any Note or any damages owing by such Borrower to any Issuer or Lender or the Administrative Agent in respect of a breach of this Agreement or any Note or any judgment or order rendered against such Borrower in respect of such amounts or damages, such Borrower shall indemnify and hold such Issuer or Lender or the Administrative Agent harmless against any deficiency in terms of

the Contractual Currency in the amounts received by such Issuer or Lender or the Administrative Agent arising or resulting from any variation as between (i) the rate of exchange at which the Contractual Currency is converted into another currency (the "Liquidation Currency") for purposes of such winding-up, liquidation, dissolution or bankruptcy with regard to the amount in the Contractual Currency due under this Agreement or any Note (other than this Section 12.15(b)) or under any judgment or order into which the relevant obligations under this Agreement or any Note shall have been merged and (ii) the rate of exchange at which such Issuer or Lender or the Administrative Agent would, in accordance with normal banking procedures, be able to purchase the Contractual Currency with the Liquidation Currency at the earlier of (A) the date of payment of such amounts or damages and (B) the final date or dates for the filing of proofs of a claim in such winding-up, liquidation, dissolution or bankruptcy. As used in the preceding sentence, the "final date or dates for the filing of proofs of a claim in a winding-up, liquidation, dissolution or bankruptcy" shall be the date fixed by the liquidator or other appropriate Person or otherwise applicable under applicable Law as being the last practicable date as of which the liabilities of the Borrower may be ascertained for such winding-up, liquidation, dissolution or bankruptcy before payment by the liquidator or other appropriate Person in respect thereof.

(c) Independent Obligations. The indemnities provided by Sections 12.15(a) and (b) hereof shall constitute obligations of each Borrower separate and independent from its other obligations under this Agreement and the Notes, shall give rise to separate and independent causes of action against each Borrower, shall apply irrespective of any indulgence granted by any Issuer or Lender or the Administrative Agent from time to time and shall continue in full force and effect notwithstanding any judgment or order or the filing of any proof or proofs in the winding-up, liquidation, dissolution or bankruptcy of any Borrower for a liquidated sum or sums in respect of other amounts due under this Agreement or any Note or any damages owing to any Issuer or Lender or the Administrative Agent in respect of a breach of this Agreement or any Note or any judgment rendered in respect of such amounts or damages.

Section 12.16 Governing Law; Submission to Jurisdiction: Waiver of Jury Trial.

(a) Governing Law. THIS AGREEMENT AND ALL OTHER LOAN DOCUMENTS (EXCEPT TO THE EXTENT, IF ANY, OTHERWISE EXPRESSLY STATED IN SUCH OTHER LOAN DOCUMENTS) SHALL BE GOVERNED BY, CONSTRUED AND ENFORCED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO CHOICE OF LAW PRINCIPLES (OTHER THAN SECTION 5-1401 OF THE NEW YORK GENERAL OBLIGATION LAW AND SUCCESSOR PROVISIONS THERETO).

(b) Certain Waivers. EACH BORROWER, LENDER, ISSUER AND THE ADMINISTRATIVE AGENT WAIVES THE RIGHT TO TRIAL BY JURY IN ANY ACTION, SUIT OR PROCEEDING BY ANY PERSON ARISING FROM OR RELATING TO THIS AGREEMENT OR ANY OTHER LOAN DOCUMENTS OR ANY STATEMENT, COURSE OF CONDUCT, ACT, OMISSION OR EVENT OCCURRING IN CONNECTION HERewith OR THEREWITH (COLLECTIVELY, "RELATED LITIGATION"). IN ADDITION, EACH BORROWER HEREBY IRREVOCABLY AND UNCONDITIONALLY:

(i) AGREES THAT ANY RELATED LITIGATION BY ANY ISSUER OR LENDER OR THE ADMINISTRATIVE AGENT MAY BE BROUGHT IN ANY STATE OR FEDERAL COURT OF COMPETENT JURISDICTION SITTING IN NEW YORK COUNTY, NEW YORK, AND SUBMITS TO THE JURISDICTION OF SUCH COURTS (BUT NOTHING HEREIN SHALL AFFECT THE RIGHT OF THE ADMINISTRATIVE AGENT OR ANY ISSUER, LENDER OR BORROWER TO BRING ANY ACTION, SUIT OR PROCEEDING IN ANY OTHER FORUM);

(ii) WAIVES ANY OBJECTION WHICH IT MAY HAVE AT ANY TIME TO THE LAYING OF VENUE OF ANY RELATED LITIGATION BROUGHT IN ANY SUCH COURT, WAIVES ANY CLAIM THAT ANY SUCH RELATED LITIGATION HAS BEEN BROUGHT IN AN INCONVENIENT FORUM, AND WAIVES ANY RIGHT TO OBJECT, WITH RESPECT TO ANY RELATED LITIGATION BROUGHT IN ANY SUCH COURT, THAT SUCH COURT DOES NOT HAVE JURISDICTION OVER SUCH BORROWER; AND

(iii) CONSENTS AND AGREES TO SERVICE OF ANY SUMMONS, COMPLAINT OR OTHER LEGAL PROCESS IN ANY RELATED LITIGATION BY REGISTERED OR CERTIFIED U.S. MAIL, POSTAGE PREPAID, TO SUCH BORROWER AT THE ADDRESS FOR NOTICES DESCRIBED IN SECTION 12.05 HEREOF, AND CONSENTS AND AGREES THAT SUCH SERVICE SHALL CONSTITUTE IN EVERY RESPECT VALID AND EFFECTIVE SERVICE (BUT NOTHING HEREIN SHALL AFFECT THE VALIDITY OR EFFECTIVENESS OF PROCESS SERVED IN ANY OTHER MANNER PERMITTED BY LAW).

Section 12.17 USA PATRIOT Act Notification. The following notification is provided to the Borrowers pursuant to the Beneficial Ownership Regulation and Section 326 of the USA PATRIOT Act:

IMPORTANT INFORMATION ABOUT PROCEDURES FOR OPENING A NEW ACCOUNT. To help the government fight the funding of terrorism and money laundering activities, Federal law requires all financial institutions to obtain, verify, and record information that identifies each person or entity that opens an account, including any deposit account, treasury management account, loan, other extension of credit, or other financial services product. What this means for the Borrowers: When the Borrower opens an account, if the Borrower is an individual, the Administrative Agent and the Lenders will ask for the Borrower's name, residential address, tax identification number, date of birth, and other information that will allow the Administrative Agent and the Lenders to identify the Borrower, and, if the Borrower is not an individual, the Administrative Agent and the Lenders will ask for the Borrower's name, tax identification number, business address, and other information that will allow the Administrative Agent and the Lenders to identify the Borrower. The Administrative Agent and the Lenders may also ask, if the Borrower is an

individual, to see the Borrower's driver's license or other identifying documents, and, if the Borrower is not an individual, to see the Borrower's legal organizational documents or other identifying documents.

Section 12.18 Confidentiality. The Administrative Agent and each Issuer and Lender agrees to hold any non-public information which it may receive from the Borrowers in connection with this Agreement in confidence, except for disclosure (i) to its Affiliates and any agents engaged in connection with this Agreement and to the Administrative Agent and any Issuer or other Lender and their respective Affiliates and any agents engaged in connection with this Agreement, (ii) to legal counsel, accountants, and other professional advisors and agents to such Person, (iii) to regulatory officials and agencies or self-regulatory body or to any credit insurance provider relating to the Borrowers and their obligations under the Loan Documents, (iv) to any Person as required by law, regulation, or legal process, (v) to any Person in connection with any legal proceeding to which it is a party to the extent such disclosure is required by law, (vi) to its direct or indirect contractual counterparties in swap agreements involving this Agreement or to legal counsel, accountants and other professional advisors to such counterparties, (vii) subject to an agreement containing provisions substantially the same as those of this Section, to any assignee of or Participant in, or any prospective assignee of or Participant in, any of its rights and obligations under this Agreement and (viii) in connection with the exercise of any remedies hereunder or under any other Loan Document or any action or proceeding relating to this Agreement or any other Loan Document or the enforcement of rights hereunder or thereunder. The Borrowers agree that the terms of this Section 12.18 shall set forth the entire agreement between the Borrowers and each Issuer and Lender (including the Administrative Agent) with respect to any confidential information previously or hereafter received by such Issuer or Lender in connection with this Agreement, and this Section 12.18 shall supersede any and all prior confidentiality agreements entered into by such Issuer or Lender with respect to such confidential information. In connection with any disclosure of confidential information pursuant to item (i), (ii) or (vi) above, the disclosing party shall inform the Persons to whom such disclosure is made of the confidential nature of such information and instruct them to keep such information confidential.

Section 12.19 Platform.

(a) The Borrowers agree that the Administrative Agent may, but shall not be obligated to, make the Communications (as defined below) available to the Issuers and the other Lenders by posting the Communications on Debt Domain, Intralinks, Syndtrak or a substantially similar electronic transmission system (the "Platform").

(b) The Platform is provided "as is" and "as available." The Agents Parties (as defined below) do not warrant the adequacy of the Platform and expressly disclaim liability for errors or omissions in the Communications. No warranty of any kind, express, implied or statutory, including, without limitation, any warranty of merchantability, fitness for a particular purpose, non-infringement of third-party rights or freedom from viruses or other code defects, is made by any Agent Party in connection with the Communications or the Platform. In no event shall the Administrative Agent or any of its Affiliates, officers, directors, employees, agents or advisors (collectively, the "Agent Parties") have any liability to the Borrowers, any Lender or any other Person or entity for damages of any kind, including, without limitation,

direct or indirect, special, incidental or consequential damages, losses or expenses (whether in tort, contract or otherwise) arising out of the Borrowers' or the Administrative Agent's transmission of communications through the Platform. "Communications" means, collectively, any notice, demand, communication, information, document or other material provided by or on behalf of the Borrowers pursuant to any Loan Document or the transactions contemplated therein which is distributed to the Administrative Agent, any Lender or any Issuer by means of electronic communications pursuant to this Section, including through the Platform.

Section 12.20 Termination of Existing Credit Agreement. Each Lender that is a party to the Existing Agreement hereby waives the requirement set forth in Section 2.05(c) of the Existing Agreement that the Parent give at least five Business Days' notice of termination of the "Total Revolving Credit Commitment" as defined in the Existing Agreement.

Section 12.21 Acknowledgement and Consent to Bail-In of Affected Financial Institutions. Notwithstanding anything to the contrary in any Loan Document or in any other agreement, arrangement or understanding among any such parties, each party hereto acknowledges that any liability of any Affected Financial Institution arising under any Loan Document, to the extent such liability is unsecured, may be subject to the write-down and conversion powers of the applicable Resolution Authority and agrees and consents to, and acknowledges and agrees to be bound by:

(a) the application of any Write-Down and Conversion Powers by the applicable Resolution Authority to any such liabilities arising hereunder which may be payable to it by any party hereto that is an Affected Financial Institution; and

(b) the effects of any Bail-In Action on any such liability, including, if applicable:

(i) reduction in full or in part or cancellation of any such liability;

(ii) a conversion of all, or a portion of, such liability into shares or other instruments of ownership in such Affected Financial Institution, its parent undertaking, or a bridge institution that may be issued to it or otherwise conferred on it, and that such shares or other instruments of ownership will be accepted by it in lieu of any rights with respect to any such liability under this Agreement or any other Loan Document; or

(iii) the variation of the terms of such liability in connection with the exercise of the write-down and conversion powers of the applicable Resolution Authority.

Section 12.22 Certain ERISA Matters.

(a) Each Lender (x) represents and warrants, as of the date such Person became a Lender party hereto, to, and (y) covenants, from the date such Person became a Lender party hereto to the date such Person ceases being a Lender party hereto, for the benefit of,

the Administrative Agent and not, for the avoidance of doubt, to or for the benefit of the Parent or any Other Borrower, that at least one of the following is and will be true:

(i) such Lender is not using “plan assets” (within the meaning of Section 3(42) of ERISA or otherwise) of one or more Benefit Plans with respect to such Lender’s entrance into, participation in, administration of and performance of the Loans, the Letters of Credit, the Commitments or this Agreement,

(ii) the transaction exemption set forth in one or more PTEs, such as PTE 84-14 (a class exemption for certain transactions determined by independent qualified professional asset managers), PTE 95-60 (a class exemption for certain transactions involving insurance company general accounts), PTE 90-1 (a class exemption for certain transactions involving insurance company pooled separate accounts), PTE 91-38 (a class exemption for certain transactions involving bank collective investment funds) or PTE 96-23 (a class exemption for certain transactions determined by in-house asset managers), is applicable with respect to such Lender’s entrance into, participation in, administration of and performance of the Loans, the Letters of Credit, the Commitments and this Agreement,

(iii)(A) such Lender is an investment fund managed by a “Qualified Professional Asset Manager” (within the meaning of Part VI of PTE 84-14), (B) such Qualified Professional Asset Manager made the investment decision on behalf of such Lender to enter into, participate in, administer and perform the Loans, the Letters of Credit, the Commitments and this Agreement, (C) the entrance into, participation in, administration of and performance of the Loans, the Letters of Credit, the Commitments and this Agreement satisfies the requirements of sub-sections (b) through (g) of Part I of PTE 84-14 and (D) to the best knowledge of such Lender, the requirements of subsection (a) of Part I of PTE 84-14 are satisfied with respect to such Lender’s entrance into, participation in, administration of and performance of the Loans, the Letters of Credit, the Commitments and this Agreement, or

(iv) such other representation, warranty and covenant as may be agreed in writing between the Administrative Agent, in its sole discretion, and such Lender.

(b) In addition, unless either (1) sub-clause (i) in the immediately preceding clause (a) is true with respect to a Lender or (2) a Lender has provided another representation, warranty and covenant in accordance with sub-clause (iv) in the immediately preceding clause (a), such Lender further (x) represents and warrants, as of the date such Person became a Lender party hereto, to, and (y) covenants, from the date such Person became a Lender party hereto to the date such Person ceases being a Lender party hereto, for the benefit of, the Administrative Agent and not, for the avoidance of doubt, to or for the benefit of the Borrower or any other Loan Party, that the Administrative Agent is not a fiduciary with respect to the assets of such Lender involved in such Lender’s entrance into, participation in, administration of and

performance of the Loans, the Letters of Credit, the Commitments and this Agreement (including in connection with the reservation or exercise of any rights by the Administrative Agent under this Agreement, any Loan Document or any documents related hereto or thereto).

Section 12.23 Acknowledgement Regarding Any Supported QFCs. To the extent that the Loan Documents provide support, through a guarantee or otherwise, for swap agreements or any other agreement or instrument that is a QFC (such support, “QFC Credit Support” and each such QFC a “Supported QFC”), the parties acknowledge and agree as follows with respect to the resolution power of the Federal Deposit Insurance Corporation under the Federal Deposit Insurance Act and Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act (together with the regulations promulgated thereunder, the “U.S. Special Resolution Regimes”) in respect of such Supported QFC and QFC Credit Support (with the provisions below applicable notwithstanding that the Loan Documents and any Supported QFC may in fact be stated to be governed by the laws of the State of New York and/or of the United States or any other state of the United States):

(a) In the event a Covered Entity that is party to a Supported QFC (each, a “Covered Party”) becomes subject to a proceeding under a U.S. Special Resolution Regime, the transfer of such Supported QFC and the benefit of such QFC Credit Support (and any interest and obligation in or under such Supported QFC and such QFC Credit Support, and any rights in property securing such Supported QFC or such QFC Credit Support) from such Covered Party will be effective to the same extent as the transfer would be effective under the U.S. Special Resolution Regime if the Supported QFC and such QFC Credit Support (and any such interest, obligation and rights in property) were governed by the laws of the United States or a state of the United States. In the event a Covered Party or a BHC Act Affiliate of a Covered Party becomes subject to a proceeding under a U.S. Special Resolution Regime, Default Rights under the Loan Documents that might otherwise apply to such Supported QFC or any QFC Credit Support that may be exercised against such Covered Party are permitted to be exercised to no greater extent than such Default Rights could be exercised under the U.S. Special Resolution Regime if the Supported QFC and the Loan Documents were governed by the laws of the United States or a state of the United States. Without limitation of the foregoing, it is understood and agreed that rights and remedies of the parties with respect to a Defaulting Lender shall in no event affect the rights of any Covered Party with respect to a Supported QFC or any QFC Credit Support.

(b) As used in this Section 12.23, the following terms have the following meanings:

“BHC Act Affiliate” of a party shall mean an “affiliate” (as such term is defined under, and interpreted in accordance with, 12 U.S.C. 1841(k)) of such party.

“Covered Entity” shall mean any of the following: (i) a “covered entity” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b); (ii) a “covered bank” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 47.3(b); or (iii) a “covered FSI” as that

term is defined in, and interpreted in accordance with, 12 C.F.R. § 382.2(b).

“Default Right” shall have the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1, as applicable.

“QFC” shall have the meaning assigned to the term “qualified financial contract” in, and shall be interpreted in accordance with, 12 U.S.C. 5390(c)(8)(D).

[signature pages follow]

IN WITNESS WHEREOF, the parties hereto, by their officers thereunto duly authorized, have executed and delivered this Agreement as of the date first above written.

PARENT

AIR PRODUCTS AND CHEMICALS, INC.

By: _____

Name:

Title:

Address for Notices:

Air Products and Chemicals, Inc.

7201 Hamilton Boulevard

Allentown, PA 18195-1501

Attention: Assistant Treasurer

Telephone: 610-481-2058

E-mail: harwickl@airproducts.com

with a copy to:

Attention: []

Email: [_____]@airproducts.com]

ADMINISTRATIVE AGENT

MIZUHO BANK, LTD.,
as Administrative Agent, a Lender, an Issuer and as Swingline Lender

By: _____

Name:

Title:

Address for Notices:

BNP PARIBAS,
as a Lender and an Issuer

By: _____
Name:
Title:

CITIBANK, N.A.,
as a Lender and an Issuer

By: _____
Name:
Title:

DEUTSCHE BANK AG NEW YORK BRANCH,
as a Lender and an Issuer

By: _____
Name:
Title:

HSBC BANK USA, N.A.,
as a Lender and an Issuer

By: _____
Name:
Title:

[Name of Lender:]

[●]

By: _____
Name:
Title:

Subsidiaries of Air Products and Chemicals, Inc.

UNITED STATES

All companies are incorporated in the State of Delaware unless otherwise indicated.

Registrant -- Air Products and Chemicals, Inc.
 7001 Hamilton Properties LLC
 Air Products and Chemicals, Inc. of Utah (Utah)
 Air Products Advanced Materials LLC
 Air Products Ammonia Distribution, LLC
 Air Products Ammonia Holdings, LLC
 Air Products Asia, Inc.
 Air Products Blue Energy
 Air Products Caribbean Holdings, Inc.
 Air Products China, Inc.
 Air Products Helium, Inc.
 Air Products Hydrogen Company, Inc.
 Air Products Industrial Gas LLC
 Air Products International LLC
 Air Products Investments, LLC
 Air Products Investments Holdings LLC
 Air Products LLC
 Air Products Manufacturing Corporation
 Air Products Manufacturing LLC
 Air Products West Coast Hydrogen LLC
 APCI (U.K.), Inc.
 East Coast Nitrogen Company LLC
 East Coast Oxygen Co.
 EPCO Carbon Dioxide Products, Inc. (Illinois)
 Gardner Cryogenics (Pennsylvania)
 Harvest Energy Technologies (California)
 Indura Holdings Colombia, LLC
 Olin DNT Limited Partnership
 Permea Inc.
 Procal (California)
 Prodair Corporation
 SCWC Corp.
 Stravinsky Investments LLC
 The Former SR Manufacturers Inc.

ARGENTINA

Indura Argentina S.A.

AUSTRIA

Air Products Gesellschaft mbH

BAHRAIN

Air Products Bahrain W.L.L

BELGIUM

ACP Zolder Invest NV
 Air Products Management BV/SRL
 Air Products S.A.
 Napro S.A.

BERMUDA

Asia Industrial Gas Company Ltd.

BRAZIL

Air Products Brasil Ltda.

CANADA

Air Products Canada Ltd./Prodair Canada Ltee
Air Products Ammonia Distribution Ltd.

CHILE

AP Services South America SpA
Centro Técnico Indura Limitada
Indura Inversiones Limitada
Indura S.A.
Indura Sociedad Comercial Limitada
Inversiones Air Products Holdings Limitada
Oxigeno Medicinal Domiciliario Limitada
Servicios Indura Limitada

CHINA

Air Products (Anshan) Gases Co., Ltd.
Air Products (Cangzhou) Co., Ltd.
Air Products (Changsha) Co., Ltd.
Air Products (Chongqing) Chem-Materials Co., Ltd.
Air Products (Dongguan) Gases Co., Ltd.
Air Products (Guangzhou) Electronics Gases Co., Ltd.
Air Products (Hangjin Qi) Co., Ltd.
Air Products (Hefei) Electronics Gases Co., Ltd.
Air Products (Hong Kong) Co., Ltd.
Air Products (Huaibei) Gases Co., Ltd.
Air Products (Inner Mongolia) Hydrogen Energy Technology Co., Ltd.
Air Products (Jiangxi) Co., Ltd.
Air Products (Jincheng) Co., Ltd.
Air Products (Jinjiang) Electronics Gases Co., Ltd.
Air Products (Kunshan) Gases Co., Ltd.
Air Products (Linfen) Co., Ltd.
Air Products (Nanjing) Electronics Gases Co., Ltd.
Air Products (Ningbo) Hi-Tech Gases Co., Ltd.
Air Products (Qindao) Gases Co., Ltd.
Air Products (Shandong) Engineering Co., Ltd.
Air Products (Shandong) Engineering Co., Ltd Nanjing Branch
Air Products (Shanxi) Co., Ltd.
Air Products (Shenyang) Gases Co., Ltd.
Air Products (Tianjin) Co., Ltd.
Air Products (Xia'men) Electronics Gases Co., Ltd.
Air Products (Xi'an) Gases Co., Ltd.
Air Products (Zhongshan) Gases Co., Ltd.
Air Products (Zhumadian) Gases Co., Ltd.
Air Products and Chemicals (Anhui) Co., Ltd.
Air Products and Chemicals (Banan) Gases Co., Ltd.
Air Products and Chemicals (Beijing) Distribution Co., Ltd.
Air Products and Chemicals (Binzhou) Co., Ltd.
Air Products and Chemicals (Chengdu) Co., Ltd.
Air Products and Chemicals (China) Investment Co. Ltd.
Air Products and Chemicals (Chongqing) Co., Ltd.
Air Products and Chemicals (Dalian) Co., Ltd.
Air Products and Chemicals (Guangzhou) Co., Ltd.
Air Products and Chemicals (Guiyang) Co., Ltd.
Air Products and Chemicals (Hefei) Co., Ltd.
Air Products and Chemicals (Hohhot) Co., Ltd.
Air Products and Chemicals (Jiyuan) Onsite Gases Co., Ltd.
Air Products and Chemicals (Lianyungang) Gases Co., Ltd.

Air Products and Chemicals (Nanjing) Co., Ltd.
Air Products and Chemicals (Nanjing) Gases Co., Ltd.
Air Products and Chemicals (Pengzhou) Co., Ltd.
Air Products and Chemicals (Putian) Co., Ltd.
Air Products and Chemicals (Qingdao) Co., Ltd.
Air Products and Chemicals (Shaanxi) Co., Ltd.
Air Products and Chemicals (Shaanxi Pucheng) Co., Ltd.
Air Products and Chemicals (Shanghai) Co., Ltd.
Air Products and Chemicals (Shanghai) Electronics Gases Co., Ltd.
Air Products and Chemicals (Shanghai) Gases Co., Ltd.
Air Products and Chemicals (Shanghai) Gases Production Co., Ltd.
Air Products and Chemicals (Shanghai) Hydrogen Energy Technology Co., Ltd.
Air Products and Chemicals (Shanghai) On-Site Gases Co., Ltd.
Air Products and Chemicals (Shanghai) Systems Co. Ltd.
Air Products and Chemicals (Shangluo) Co., Ltd.
Air Products and Chemicals (Shenzhen) Co., Ltd.
Air Products and Chemicals (Shenzhen) Gases Co., Ltd.
Air Products and Chemicals (Tangshan) Co., Ltd.
Air Products and Chemicals (Tianjin) Co., Ltd.
Air Products and Chemicals (Tongxiang) Co., Ltd.
Air Products and Chemicals (Weifang) Gases Co., Ltd.
Air Products and Chemicals (WuXi) Gases Co., Ltd.
Air Products and Chemicals (WuXi) Co., Ltd.
Air Products and Chemicals (Xi'an) Co., Ltd.
Air Products and Chemicals (Xingtai) Co., Ltd.
Air Products and Chemicals (Xinxiang) Co., Ltd.
Air Products and Chemicals (Xuzhou) Gases Co., Ltd.
Air Products and Chemicals (Yichun) Co., Ltd.
Air Products and Chemicals (Yulin) Co., Ltd.
Air Products and Chemicals (Zhangjiagang) Co., Ltd.
Air Products and Chemicals (Zhejiang) Co., Ltd.
Air Products and Chemicals (Zhuhai) Co., Ltd.
Air Products and Chemicals (Zibo) Co., Ltd.
Air Products and Chemicals (Shanghai) Gasification Technology Co., Ltd.
Air Products and Chemicals Tech Development (Beijing) Co., Ltd.
Air Products Debang (Lianyungang) Co., Ltd.
Air Products Huadong (Longkou) Co., Ltd.
Air Products Hydrogen Energy Technology (Zibo) Co., Ltd.
Air Products Lu'An (Changzhi) Co., Ltd.
Air Products SinoHytec (Beijing) Hydrogen Energy Technology
Beijing AP BAIF Gas Industry Co., Ltd.
Beijing Shuimu Tongda Transportation Co., Ltd.
Chengdu Air & Gas Products Ltd.
Chengzhi Air Products Hydrogen Energy Technology Co., Ltd.
China Shenhua Coal to Liquid and Chemical Co.
Gaolu Air Products and Chemicals (Shanghai) Energy Technology Co., Ltd.
Inner Mongolia Jiutai New Materials Technology Co., Ltd.
Permea China, Ltd.
Shanxi Lu'An Air Products (Hydrogen Energy) Co., Ltd.
WuXi Hi-Tech Gas Co., Ltd.
Zhangjiakou HyPower New Energy Technology Co., Ltd.
Zhangjiakou Jiaotou Hydrogen New Energy Technology Co., Ltd.
Zibo Chuangcheng Design

COLOMBIA

Gases Industriales de Colombia S.A. – Cryogas
Indura Holding LLC

CZECH REPUBLIC

Air Products spol s.r.o.
Green BioFuel s.r.o.

ECUADOR

Air Products Ecuador S.A.

EGYPT

Air Products Gases S.A.E.

FRANCE

Air Products SAS
Helap SAS
Lida SAS
Prodair et Cie S.C.S.
Prodair S.A.S.
SAGA SAS
Soprogaz SNC
Union Mobiliere Industrielle S.A.R.L.

GERMANY

Air Products Ammonia Distribution AD GmbH
Air Products GmbH
Air Products Holdings GmbH

INDIA

Prodair Air Products India Private Limited
INOX Air Products Pvt. Ltd.

INDONESIA

PT Air Products Indonesia
PT Air Products Indonesia Services
PT Air Products East Kalimantan

IRELAND

Air Products Ireland Limited

ISRAEL

Air Products Israel Ltd.
Gastel Limited
Gas Supply Services, Ltd.
Gas Technologies, Ltd.
Oxygen & Argon Works, Ltd.
Oxygen Center, Ltd.
Oxygen Warehouse Trade (1980), Ltd.
STS Science, Technologies and Services Ltd.

ITALY

Air Products Italia S.r.l.
Sapio Produzione Idrogeno Ossigeno S.r.l.

JAPAN

Air Products Japan, Inc.
Air Products Japan K.K.

KOREA

Air Products Korea Inc.
Korea Industrial Gases, Ltd.

LUXEMBOURG

ACP Europe SA

MALAYSIA

Air Products Malaysia Sdn Bhd
Air Products Shared Services Sdn. Bhd
Air Products Specialized Process Equipment SDN
Kulim Industrial Gases Sdn Bhd

MEXICO

Air Products and Chemicals de Mexico, S.A. de C.V.
Consolidacion Comercial Infra, S.A. de C.V.
Gazsur, S. de R.L. de C. V.

MOROCCO

Air Products Maghreb S.A.R.L.

MYANMAR

Yangon Industrial Gas (Thilawa) Company Limited
Yangnon Industrial Gas Trading Company Limited

THE NETHERLANDS

Air Products Gases Holdings B.V.
Air Products Holdings B.V.
Air Products Investments B.V.
Air Products Leasing B.V.
Air Products Nederland B.V.
Air Products Netherlands Gases B.V.
Air Products (Rozenburg) B.V.
Carbolim B.V.
KRIG Holdings B.V.

NIGERIA

Prodair Escravos Limited

NORWAY

Air Products A/S

OMAN

Air Products Majan LLC
AJWAA Gases LLC

PERU

Air Products Peru S.A.

POLAND

Air Products Sp. Z o.o.
STP & DIN Chemicals Sp. Z.o.o.

PORTUGAL

Gasin II Unipessoal LDA

QATAR

Air Products Helium Inc. Qatar Branch

RUSSIA

Air Products O.O.O.
Air Products Gas O.O.O.

SAUDI ARABIA

Abdulla Hashim Gases & Equipment Co. Limited
Air Products Middle East Industrial Gases Company Limited
Air Products PLC Branch
Air Products Qudra (GICIS)
Air Products Saudi Investment Company
Gases Integrated Company Limited (GIC)
Jazan Gas Projects Company
Jazan Integrated Gasification and Power Company (JIGPC)
Jubail Waves for Gases Company
NEOM Green Hydrogen Company

SINGAPORE

Air Products Singapore Industrial Gases Pte. Ltd.

SLOVAKIA

Air Products Slovakia s.r.o.

SOUTH AFRICA

Air Products South Africa (Proprietary) Limited

SPAIN

Air Products Iberica, S.L.
Air Products Services Europe, S.A.
Carburos Via Augusta Logistics, S.L.
Matgas 2000 A.I.E.
Sociedad Espanola de Carburos Metalicos S.A.
Vitalox Industrial S.L.U.

SWITZERLAND

Air Products Switzerland Sàrl

TAIWAN, CHINA

Air Products San Fu Co., Ltd.
Air Products Taiwan Holdings Co., Ltd.
Blue Ocean Industrial Gases Co., Ltd.
Far Eastern Industrial Gases Co., Ltd.

THAILAND

Bangkok Industrial Gas Co., Ltd.
Bangkok Cogeneration Company Limited

TRINIDAD AND TOBAGO

Caribbean Industrial Gases Unlimited
NMAP Services Unlimited

UKRAINE

Air Products Ukraina LLC
KRYVYI RIH Industrial Gas
PQ Ammonia

UNITED ARAB EMIRATES

AJWAA Emirates Gases Company LLC
Air Products (Middle East) FZE
Air Products Emirates Gases LLC
Air Products Gulf Gas LLC

UNITED KINGDOM

Air Products (BR) Limited
Air Products Equipment Limited
Air Products Group Limited
Air Products Llanwern Limited
Air Products PLC
Air Products Renewable Energy Limited
Air Products Yanbu Limited
Beer Gas Cymru Cyf
Cryoservice Limited
Dixons of Westerhope Limited
Gas Direct Limited
M&M Gases Limited
Tanasio Industrial Gases Cyf

UZBEKISTAN

Air Products Central Asia Group LLC
Markaziy Osiyo Sanoat Gaz LLC

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in Registration Statement Nos. 333-141336, 333-141337, 333-149813, 333-158102, 333-165563, 333-172889, 333-172890, 333-180122, 333-180123, 333-188643, 333-196000, 333-204387, 333-204388, 333-211476, 333-225016, 333-232847, 333-240038, and 333-252722 on Form S-8 and No. 333-250809 on Form S-3 of our report dated November 18, 2021, relating to the consolidated financial statements of Air Products and Chemicals, Inc. and subsidiaries, and the effectiveness of Air Products and Chemicals, Inc.'s internal control over financial reporting, appearing in this Annual Report on Form 10-K of Air Products and Chemicals, Inc. for the year ended September 30, 2021.

/s/ Deloitte & Touche LLP
Philadelphia, Pennsylvania
November 18, 2021

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints SEIFI GHASEMI, MELISSA N. SCHAEFFER, and SEAN D. MAJOR, and each of them acting severally, his/her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him/her and in his/her name, place and stead, in any and all capacities, to sign the Form 10-K Annual Report for the fiscal year ended 30 September 2021 and all amendments thereto and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he/she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities and Exchange Act of 1934, this Power of Attorney has been signed below by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
<hr/> <i>/s/ Seifi Ghasemi</i> Seifi Ghasemi	Director and Chairman of the Board, President and Chief Executive Officer (Principal Executive Officer)	18 November 2021
<hr/> <i>/s/ Charles I. Cogut</i> Charles I. Cogut	Director	18 November 2021
<hr/> <i>/s/ Lisa A. Davis</i> Lisa A. Davis	Director	18 November 2021
<hr/> <i>/s/ Chadwick C. Deaton</i> Chadwick C. Deaton	Director	18 November 2021
<hr/> <i>/s/ David H. Y. Ho</i> David H. Y. Ho	Director	18 November 2021
<hr/> <i>/s/ Edward L. Monser</i> Edward L. Monser	Director	18 November 2021
<hr/> <i>/s/ Matthew H. Paull</i> Matthew H. Paull	Director	18 November 2021
<hr/> <i>/s/ Wayne T. Smith</i> Wayne T. Smith	Director	18 November 2021

PRINCIPAL EXECUTIVE OFFICER'S CERTIFICATION

I, Seifi Ghasemi, certify that:

1. I have reviewed this Annual Report on Form 10-K of Air Products and Chemicals, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: 18 November 2021

/s/ Seifi Ghasemi

Seifi Ghasemi

Chairman, President and Chief Executive Officer

PRINCIPAL FINANCIAL OFFICER'S CERTIFICATION

I, Melissa N. Schaeffer, certify that:

1. I have reviewed this Annual Report on Form 10-K of Air Products and Chemicals, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: 18 November 2021

/s/ Melissa N. Schaeffer

Melissa N. Schaeffer
Senior Vice President and Chief Financial Officer

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906 OF THE
SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of Air Products and Chemicals, Inc. (the "Company") for the period ending 30 September 2021, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), we, Seifi Ghasemi, Chairman, President, and Chief Executive Officer of the Company, and Melissa N. Schaeffer, Senior Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: 18 November 2021

/s/ Seifi Ghasemi

Seifi Ghasemi
Chairman, President, and Chief Executive Officer

/s/ Melissa N. Schaeffer

Melissa N. Schaeffer
Senior Vice President and Chief Financial Officer