



May 24, 2019

Air Products and Chemicals, Inc.
7201 Hamilton Blvd.
Allentown, PA 18195

2018 Greenhouse Gas Inventory Limited Verification Statement

PURPOSE OF THE STATEMENT

WSP has conducted an independent third-party review of the 2018 calendar year greenhouse gas (GHG) emission inventory of Air Products and Chemicals, Inc., with the intention of providing limited assurance of its accuracy and completeness. For the greenhouse gas inventory, the scope of the review includes all Scope 1 and Scope 2 location-based emission sources and select Scope 3 emissions, specifically upstream fuel- and energy-related emissions (Category 3). The GHG inventory applies to all owned and leased facilities where Air Products and Chemicals, Inc., has the ability to direct financial and operating polices.

WSP provided separate “Review Findings” reports for Scopes 1 and 2 and for Scope 3 to Air Products and Chemicals, Inc., which lists in detail the specific review tasks completed and areas which were flagged for clarification or improvement. Air Products and Chemicals, Inc., has addressed all requests for clarification and has completed all necessary corrective actions. The details of the scope of this assurance review can be found in Table 1.

TABLE 1: ASSURANCE SCOPE

ASSURANCE PARAMETER	SPECIFICATION
GHG Calculation and Reporting Protocol	<ul style="list-style-type: none">▪ The Greenhouse Gas Protocol: <i>A Corporate Accounting and Reporting Standard (Revised Edition)</i>▪ The Greenhouse Gas Protocol: <i>Corporate Value Chain (Scope 3) Accounting and Reporting Standard</i>
Verification Standard	ISO 14064-3
Level of Assurance	Limited
Organizational Boundary	Operations where Air Products and Chemicals, Inc. has the ability to direct financial and operating polices of the operation
Geography	Global operations
Inventory Period and Emissions Covered	January 1, 2018 to December 31, 2018



GREENHOUSE GAS

Scope 1	17,339,022 metric tons CO ₂ e (all Scope 1 sources)
Scope 2 Location-based	9,992,043 metric tons CO ₂ e (all Scope 2 sources) ¹
Scope 3	<ul style="list-style-type: none"> ▪ <u>Category 3</u>: Upstream Fuel- and Energy-Related Emissions: 4,087,813 metric tons CO₂e²
Supporting Documents Reviewed	<ul style="list-style-type: none"> ▪ CY18 Inventory Management Plan (IMP) ▪ CY18 GHG data collection spreadsheets ▪ CY18 GHG calculations spreadsheets ▪ CY18 GHG Scope 3 Category 3 calculations spreadsheets ▪ Energy tracking systems and select energy invoice records ▪ Interviews with select site, GHG management, and energy group personnel
Date Review Complete	May 23 rd , 2019

¹ Scope 2 emissions associated with electricity at generated gas facilities and other facilities that are fully consolidated in the financial accounts of Air Products and Chemicals, Inc., but for which Air Products and Chemicals, Inc., does not pay the utility bill are excluded. Although these facilities are considered as group companies or subsidiaries for the purpose of financial consolidation and would thus be included in the Greenhouse Gas Protocol’s definition of a Financial Control organizational boundary, it is the opinion of Air Products and Chemicals, Inc., that it lacks the ability to direct the financial and operating policies of these facilities with a view to gaining economic benefits from their activities. For this reason, Air Products and Chemicals, Inc., has elected to exclude these facilities from its inventory boundary. Upstream Fuel- and Energy-related Activities emissions from these facilities are also excluded. Emissions from these facilities may be included under Scope 3 Category 13 (Downstream Leased Assets), which is not part of this assurance.

² Fuel- and Energy-related Activities (not included in scope 1 or 2) emissions include transmission and distribution losses from electricity, electricity fuel extraction, processing, and transportation emissions, and fuel extraction, processing, and transportation emissions for natural gas. Emissions associated with transmission and distribution losses from steam, steam fuel extraction, processing, and transportation emissions are excluded. As noted above, Upstream Fuel- and Energy-related Activities emissions associated with electricity at generated gas facilities and other facilities that are fully consolidated in the financial accounts of Air Products and Chemicals, Inc., but for which Air Products and Chemicals, Inc., does not pay the utility bill are excluded.



VERIFICATION PROCESS AND DOCUMENT REVIEW

WSP is issuing this limited GHG inventory assurance following the scope of verification activities which included an in-person interview with the GHG Inventory Manager and select inventory supporting staff of Air Products and Chemicals, Inc., on March 27, 2019; a remote review of a HyCO plant in India on May 7, 2019; a remote review of a U.S. HyCO plant on May 8, 2019; a desktop review of activity data and calculations; and follow-up conversations with inventory management and accounting personnel. Air Products and Chemicals, Inc., has provided all data and requested supporting documentation which includes the following types of materials:

- GHG activity data collection tools
- Inventory Management Plan (IMP)
- GHG inventory calculation protocols and tools
- Error checking and year on year comparison tools
- Selected invoices and data tracking systems

ASSURANCE FINDING

Based on these review processes and procedures, WSP has no evidence that the 2018 GHG inventory of Air Products and Chemicals, Inc., is not materially correct, is not a fair representation of the corresponding data and information, or has not been prepared in accordance with the Greenhouse Gas Protocol.

PROFESSIONAL CONDUCT

WSP has conducted this limited assurance review in its capacity as an independent third party in accordance with the ISO 14065 International Standard, *Greenhouse gases — Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition*. ISO 14065 specifies the principles and requirements employed by WSP to make this assertion. WSP has not contributed to the compilation of the 2018 GHG inventory of Air Products and Chemicals, Inc., and members of the Assurance Team are not working with the company's 2018 GHG inventory beyond what is required of this assignment.

Sincerely,

Handwritten signature of Matthew C. Aberant in black ink.

Matthew Aberant
Senior Project Director

Handwritten signature of Jeffrey Irvine in black ink.

Jeffrey Irvine
Senior Consultant and Lead Reviewer