

May 17, 2023

Stewart Larsen, Longview Site Manager
Solvay Chemicals, Inc.
3500 Industrial Way
Longview, WA 98632

RE: Final Air Discharge Permit for Installation of an Additional Carbon Bed

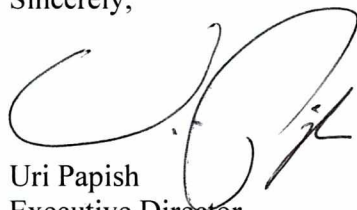
Dear Mr. Larsen:

A final determination to issue Air Discharge Permit (ADP) 23-3581 has been completed for ADP application CO-1071 pursuant to Section 400-110(4) of the General Regulations for Air Pollution Sources of the Southwest Clean Air Agency (SWCAA). Public notice for ADP Application CO-1071 was published in the permit section of SWCAA's website on April 26, 2023. SWCAA did not receive a request for a public comment period in response to the public notice and has concluded that significant public interest does not exist for this determination. Therefore, a public comment period will not be provided for this permitting action. Electronic copies of ADP 23-3581 and the associated Technical Support Document (TSD) are available for public review in the "Recent Air Discharge Permits" section under the "Air Permits" link on SWCAA's website (<http://www.swcleanair.gov>). Original copies are enclosed for your files.

ADP 23-3581 may be appealed directly to the Pollution Control Hearings Board (PCHB) at P.O. Box 40903, Olympia, Washington 98504-0903 within thirty (30) days of receipt as provided in Revised Code of Washington (RCW) 43.21B.

If you have any questions or comments, or desire additional information, please contact me or Danny Phipps at (360) 574-3058, extension 124.

Sincerely,



Uri Papish
Executive Director

UP:edp

Enclosure: Technical Support Document and Air Discharge Permit 23-3581





**AIR DISCHARGE PERMIT
23-3581**

Issued: May 17, 2023

**Solvay Chemicals
3500 Industrial Way
Longview, WA 98632**

SWCAA ID – 1225

REVIEWED BY:


Clinton Lamoreaux, Chief Engineer



APPROVED BY:


Uri Papish, Executive Director

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Appendix C Emission Monitoring Requirements Carbon Adsorber System

1. Equipment/Activity Identification

ID No.	Equipment/Activity	Control Equipment/Measure
1	Reformer 1H07 - Combustion Stack - Syngas Vent - Deaerator Vent	Low NO _x burners, O ₂ monitoring of combustion process Ultralow Sulfur Fuel (Natural Gas)
2	Reformer 2H07 - Combustion Stack - Syngas Vent - Deaerator Vent	Low NO _x burners, remotely adjustable O ₂ registers on combustion process Ultralow Sulfur Fuel (Natural Gas)
3	Hydrogen Peroxide Plant - Process Vents (oxidation, reversion and distillation) - Fugitive emissions, continuous and intermittent purges	Carbon beds for vents from oxidation, reversion and distillation. Leak detection and repair (LDAR) for fugitive emissions. Ultralow Sulfur Fuel (Natural Gas)
4	Storage Tanks, Continuous and Intermittent Purge Sources	None
5	Emergency Generator Engine	Ultralow Sulfur (≤ 15 ppm) Liquid Fuel
6	Fire Pump #1 Engine	Ultralow Sulfur (≤ 15 ppm) Liquid Fuel
7	Fire Pump #2 Engine	Ultralow Sulfur (≤ 15 ppm) Liquid Fuel
8	Fire Pump #3 Engine	Ultralow Sulfur (≤ 15 ppm) Liquid Fuel

2. Permit Requirements

The following tables detail the specific requirements of this Air Discharge Permit (ADP). In addition to the requirements listed below, equipment at this facility may be subject to other federal, state, and local regulations. The requirement number is identified in the left-hand column. The text of the requirement is contained in the middle column. The emission unit, equipment, or activity to which the requirement applies is listed in the right-hand column.

ADP 23-3581 supersedes ADP 16-3194 in its entirety.

Emission Limits

Req. No.	Emission Limits	Equipment/ Activity									
1.	<p>Emissions from Reformer 1H07 must not exceed any of the following:</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th colspan="2">Emission Limit</th> </tr> </thead> <tbody> <tr> <td>Nitrogen Oxides</td> <td>17.80 tpy</td> <td>40 ppmvd</td> </tr> <tr> <td>Carbon Monoxide</td> <td>10.00 tpy</td> <td>50 ppmvd</td> </tr> </tbody> </table> <p>The long-term emission limits are 12-month rolling sums calculated consistent with Section 6 of the Technical Support Document (TSD) for this ADP. The short-term emission limits are determined as a 1-hour average, corrected to 2% O₂.</p>	Pollutant	Emission Limit		Nitrogen Oxides	17.80 tpy	40 ppmvd	Carbon Monoxide	10.00 tpy	50 ppmvd	1
Pollutant	Emission Limit										
Nitrogen Oxides	17.80 tpy	40 ppmvd									
Carbon Monoxide	10.00 tpy	50 ppmvd									
2.	<p>Emissions from Reformer 2H07 must not exceed any of the following:</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th colspan="2">Emission Limit</th> </tr> </thead> <tbody> <tr> <td>Nitrogen Oxides</td> <td>6.78 tpy</td> <td>40 ppmvd</td> </tr> <tr> <td>Carbon Monoxide</td> <td>5.16 tpy</td> <td>50 ppmvd</td> </tr> </tbody> </table> <p>The long-term emission limits are 12-month rolling sums calculated consistent with Section 6 of the TSD for this ADP. The short-term emission limits are determined as a 1-hour average, corrected to 2% O₂.</p>	Pollutant	Emission Limit		Nitrogen Oxides	6.78 tpy	40 ppmvd	Carbon Monoxide	5.16 tpy	50 ppmvd	2
Pollutant	Emission Limit										
Nitrogen Oxides	6.78 tpy	40 ppmvd									
Carbon Monoxide	5.16 tpy	50 ppmvd									
3.	<p>Emissions of carbon monoxide from the PSA vents must not exceed the following:</p> <table border="1"> <thead> <tr> <th>Emission Unit</th> <th>CO Emission Limit</th> </tr> </thead> <tbody> <tr> <td>Reformer 1H07</td> <td>30.00 tpy</td> </tr> <tr> <td>Reformer 2H07</td> <td>13.38 tpy</td> </tr> </tbody> </table> <p>The long-term emission limits are 12-month rolling sums calculated consistent with Section 6 of the TSD for this ADP.</p>	Emission Unit	CO Emission Limit	Reformer 1H07	30.00 tpy	Reformer 2H07	13.38 tpy	1-2			
Emission Unit	CO Emission Limit										
Reformer 1H07	30.00 tpy										
Reformer 2H07	13.38 tpy										
4.	<p>Visible emissions from Reformer 1H07, Reformer 2H07, the Hydrogen Peroxide Plant, and Storage Tanks, Continuous and Intermittent Purge Sources must not exceed zero percent (0%) opacity for more than three (3) minutes in any 1-hour period as determined by a certified observer in accordance with SWCAA Method 9.</p>	1-4									
5.	<p>Visible emissions from the Emergency Generator Engine, Fire Pump Engine #1, Fire Pump Engine #2, and Fire Pump Engine #3 must not exceed five percent opacity for more than 3 minutes in any one-hour period as determined in accordance with SWCAA Method 9 (See Appendix A of SWCAA 400) except during startup. For the purposes of this requirement, the startup period ends when the earlier of the following operating events occurs:</p> <ul style="list-style-type: none"> (a) The engine has reached normal operating temperature; or (b) The engine has been operating for 15 minutes. 	5-8									
6.	<p>Emissions of toxic air pollutants from Reformer 2H07 must not exceed the Small Quantity Emission Rate listed in WAC 173-460.</p>	2									

Req. No.	Emission Limits	Equipment/Activity
7.	<p>Volatile Organic Compound (VOC) emissions from continuous and intermittent purges must not exceed 4.50 tons per year.</p> <p>Annual emissions must be assumed equal to 4.50 tons per year unless the plant configuration changes or direct measurements are made.</p>	3-4
8.	<p>Fugitive emissions of VOCs must not exceed 5.50 tons per year.</p> <p>Annual emissions must be assumed equal to 5.50 tons per year unless the plant configuration changes or direct measurements are made. Emission estimates based on direct measurements of fugitive emissions must be based on EPA approved methodology.</p>	3-4
9.	<p>Emission of VOCs from the carbon beds must not exceed the following:</p> <ul style="list-style-type: none"> (a) 3.0 parts per million by volume (ppmv), as a C₁₀ hydrocarbon (1-hour average); (b) 10.70 tons per year based on an average hydrocarbon molecular weight of 134.1. <p>The emission concentration limit applies on a clock-hour basis (e.g. 12:00 to 12:59). Emission rates must be calculated from the volatile organic compound monitor required by this ADP and air discharge rate data except during a source test. Air discharge rates may be measured directly or determined from process air rate data.</p>	3

Operating Limits and Requirements

Req. No.	Operating Limits and Requirements	Equipment/Activity
10.	Reasonable precautions must be taken at all times to prevent and minimize fugitive emissions from plant operations.	Facility-wide
11.	Operations that cause or contribute to a nuisance odor must use recognized good practice and procedures to reduce these odors to a reasonable minimum.	Facility-wide
12.	Emission units and activities identified in this ADP must be maintained and operated in total and continuous conformity with the conditions identified in this ADP. SWCAA reserves the right to take any and all appropriate action to maintain the conditions of this ADP, including directing the facility to cease operations until corrective action can be completed.	Facility-wide
13.	Each pollution control device must be operated whenever the processing equipment served by that air pollution control device is in operation. Control devices must be operated and maintained in accordance with the manufacturer's specifications. Furthermore, air pollution control devices must be operated in a manner that minimizes emissions.	Facility-wide
14.	The hourly average oxygen concentration in the exhaust from Reformer 1H07 must be at or above the oxygen concentration measured during the most recent source emissions testing or emission monitoring event that demonstrated compliance with the CO and NO _x emission limits.	1

Req. No.	Operating Limits and Requirements	Equipment/Activity
15.	The hourly average oxygen concentration in the exhaust from Reformer 2H07 must be at or above the oxygen concentration measured during the most recent source emissions testing or emission monitoring event that demonstrated compliance with the CO and NO _x emission limits.	2
16.	Reformer 1H07 and Reformer 2H07 must not fire any fuel other than natural gas, hydrogen, syngas, and PSA off-gas.	1-2
17.	The Reformer 2H07 combustion exhaust and the Reformer 2H07 PSA vent exhaust must each be discharged vertically. Any device that obstructs or prevents vertical discharge is prohibited.	2
18.	The adsorption time for each carbon adsorber must not exceed 90% of the time to achieve breakthrough (90% capacity). The breakthrough time must be determined at least once every 12 months.	3
19.	A VOC monitor must be operated in accordance with the requirements in Appendix C, to continuously monitor exhaust concentrations of VOCs from the carbon adsorber system. This system is not considered a "continuous emission monitor".	3
20.	Exhaust from continuous purges of the water wash decanter, hydrogenation solvent receiver, oxygen analyzers (other than AI E332/K), and hydrogen analyzers must be routed through condensers or coolers prior to discharge to the ambient air. All other gas discharge streams from the oxidation, reversion, and distillation operations must be passed through the carbon adsorbers.	3
21.	<p>The Permittee must conduct leak detection and repair activities that meet the following minimum requirements:</p> <ul style="list-style-type: none"> (a) A monthly plantwide survey must be performed of all equipment in VOC service for visual or olfactory evidence of a leak. At a minimum, documentation of the survey must identify each process area inspected and the results of the inspection. Valves, flanges, pumps, etc. do not need to be individually identified. (b) When a leak is detected, it must be repaired as soon as practicable, but not later than 15 calendar days after it was detected except as provided in Section C below. (c) A delay in repair of a leak is allowed if repair is technically infeasible without a process unit shutdown. Repair of this equipment must be completed before the end of the next process unit shutdown. <p>For the purpose of this requirement, "in VOC service" means that the piece of equipment contains or contacts a process fluid that is at least 10 percent VOC by weight.</p>	3
22.	The Emergency Generator Engine, Fire Pump Engine #1, Fire Pump Engine #2, and Fire Pump Engine #3 must only be fired on fuel oil with a maximum sulfur content of 15 ppmw. Any fuel other than ultra-low sulfur fuel oil must be approved by SWCAA in writing prior to use.	5-8
23.	The Emergency Generator Engine, Fire Pump Engine #1, Fire Pump Engine #2, and Fire Pump Engine #3 must be equipped with non-resettable hour meters to record hours of operation.	5-8

Req. No.	Operating Limits and Requirements	Equipment/Activity
24.	Operation of the Emergency Generator Engine, Fire Pump Engine #1, Fire Pump Engine #2, and Fire Pump Engine #3 for maintenance checks and readiness testing must not exceed 100 hours per year, each. Emergency operation of the emergency engines is not limited.	5-8
25.	Operation of the Emergency Generator Engine, Fire Pump Engine #1, Fire Pump Engine #2, and Fire Pump Engine #3 is limited to maintenance checks, readiness testing, and as necessary to provide emergency power.	5-8

Monitoring and Recordkeeping Requirements

Req. No.	Monitoring and Recordkeeping Requirements	Equipment/Activity
26.	With the exception of data logged by a computerized data acquisition system, each record required by this ADP must include the date and the name of the person making the record entry, at minimum. If a control device or process is not operating, a record must be made to that effect.	Facility-wide
27.	All records required by this ADP must be kept for a minimum period of no less than three (3) years and must be maintained in a form readily available for inspection by SWCAA representatives.	Facility-wide
28.	The following information regarding operation of each reformer must be collected, recorded at the intervals specified below, and readily available on-site for inspection for each hour of operation: (a) Average reformer exhaust oxygen content (dry volume percent); (b) The total amount of each fuel (natural gas and reformer off gas) combusted by the reformer; and (c) Reformer hydrogen production.	1-2
29.	The following information regarding the exhaust from the carbon adsorbers must be collected, recorded, and readily available on-site for inspection for each hour of operation: (a) Average hourly VOC emission concentration (ppmvw as C ₁₀ hydrocarbon); (b) Total exhaust flowrate (scfm). Exhaust flowrate may be determine from the air flow rate to the oxidizers; (c) Average oxygen concentration (%vw); and (d) VOC emissions (lbs).	3

Req. No.	Monitoring and Recordkeeping Requirements	Equipment/Activity
30.	The following information must be collected, recorded at the intervals specified below, and readily available on-site for inspection: (a) Maintenance activities with the potential to affect emissions must be recorded for each occurrence; (b) Carbon adsorber system VOC analyzer maintenance and component replacement activities must be recorded for each occurrence; (c) Carbon adsorber system VOC analyzer calibration results must be recorded for each occurrence; (d) The number of hours each emergency engine is operated must be recorded for each calendar year; and (e) Upset conditions that cause, or have the potential to cause, excess emissions must be recorded for each occurrence.	Facility-wide

Emission Monitoring and Testing Requirements

Req. No.	Emission Monitoring and Testing Requirements	Equipment/Activity
31.	Source emissions testing of Reformer 1H07 and 2H07 must be conducted no later than the end of December 2026. Subsequent emission testing must be conducted no later than December every sixty (60) months thereafter, in accordance with Appendix A. Emission testing conducted more than three (3) months prior to the established due date above does not fulfill the affected testing requirement unless approved in advance by SWCAA.	1-2
32.	Emission monitoring of Reformer 1H07 and 2H07 must be conducted once every six months in accordance with Appendix B.	1-2

Reporting Requirements

Req. No.	Reporting Requirements	Equipment/Activity
33.	Excess emissions must be reported to SWCAA as follows: (a) As soon as possible, but no later than twelve (12) hours after discovery for emissions that represent a potential threat to human health or safety; (b) As soon as possible, but no later than forty-eight (48) hours after discovery for emissions which the Permittee wishes to claim as unavoidable pursuant to SWCAA 400-107(1); and (c) No later than thirty (30) calendar days after the end of the month of discovery for all other excess emissions.	Facility-wide
34.	Deviations from permit conditions must be reported no later than 30 days after the end of the month during which the deviation is discovered.	Facility-wide

Req. No.	Reporting Requirements	Equipment/ Activity
35.	All air quality related complaints received by the Permittee must be reported to SWCAA within three (3) calendar days of receipt. Complaint reports must include the date and time of the complaint, the name and contact information (if available) for the complainant, the nature of the complaint, and any actions taken by the Permittee to address the complaint.	Facility-wide
36.	The following carbon adsorber system data must be recorded for each hour of operation and submitted to SWCAA no later than 30 days following the end of the calendar quarter: (a) Average VOC concentration (ppmvd as C ₁₀ hydrocarbon); (b) Total exhaust flowrate (scfm). Exhaust flow rate may be determined from the air flow rate to the oxidizers; (c) Average oxygen concentration (%vw); and (d) VOC emissions (pounds).	Facility-wide
37.	An annual emissions inventory report must be submitted to SWCAA by March 15 th for emissions from the previous calendar year in accordance with SWCAA 400-105(1). Each report must contain, at a minimum, the following information: (a) The annual sum of emissions of NO _x , CO, VOC, PM, PM ₁₀ , PM _{2.5} , SO ₂ , TAPs, and HAPs; (b) Total hydrogen production by each reformer; (c) The total amount of each fuel (natural gas and reformer off gas) combusted by each reformer; (d) The total amount of off gas vented from each reformer system; and (e) The number of hours each diesel engine operated.	Facility-wide
38.	The results of all emission testing required by this ADP must be reported to SWCAA in writing within forty-five (45) calendar days of test completion.	1-2
39.	Emission monitoring results must be reported to SWCAA in writing within fifteen (15) calendar days of completion.	1-2

3. General Provisions

Req. No.	General Provisions
A.	For the purpose of ensuring compliance with this ADP, duly authorized representatives of the Southwest Clean Air Agency must be permitted access to the Permittee's premises and the facilities being constructed, owned, operated and/or maintained by the Permittee for the purpose of inspecting said facilities. These inspections are required to determine the status of compliance with this ADP and applicable regulations and to perform or require such tests as may be deemed necessary.
B.	The provisions, terms, and conditions of this ADP bind the Permittee, its officers, directors, agents, servants, employees, successors and assigns, and all persons, firms, and corporations acting under or for the Permittee.
C.	The requirements of this ADP survive any transfer of ownership of the source or any portion thereof.
D.	This ADP must be posted conspicuously at or be readily available near the source.

Req. No.	General Provisions
E.	This ADP will be invalidated, in whole or in part, if construction or installation of any new or modified equipment has not commenced within eighteen (18) months from date of issuance, if construction is discontinued for a period of eighteen (18) months or more without prior SWCAA approval, or if construction is not completed within a reasonable time.
F.	This ADP does not supersede requirements of other agencies with jurisdiction and further, this ADP does not relieve the Permittee of any requirements of any other governmental agency. In addition to this ADP, the Permittee may be required to obtain permits or approvals from other agencies with jurisdiction.
G.	Compliance with the terms of this ADP does not relieve the Permittee from the responsibility of compliance with SWCAA General Regulations for Air Pollution Sources, previously issued Regulatory Orders, RCW 70A.15, Title 173 WAC or any other applicable emission control requirements, nor from the resulting liabilities and/or legal remedies for failure to comply.
H.	If any provision of this ADP is held to be invalid, all unaffected provisions of the ADP will remain in effect and be enforceable.
I.	No change in this ADP will be made or be effective except as may be specifically set forth by written order of the Southwest Clean Air Agency upon written application by the Permittee for the relief sought.
J.	The Southwest Clean Air Agency may, in accordance with RCW 70A.15, impose such conditions as are reasonably necessary to assure the maintenance of compliance with the terms of this ADP, the Washington Clean Air Act, and the applicable rules and regulations adopted under the Washington Clean Air Act.

Appendix A

Emission Testing Requirements Reformer 1H07 and Reformer 2H07

1. Background

The purpose of this testing is to quantify emissions from the reformers and to provide an adequate assurance of compliance with the terms and conditions of this ADP.

2. Test Constituents and Test Methods

<u>Constituent</u>	<u>Reference Test Method</u>	<u>Minimum Test Run Duration</u>
Volumetric flow rate	EPA Method 1	N/A
Gas velocity, temperature	EPA Method 2	N/A
Oxygen (O ₂), carbon dioxide (CO ₂)	EPA Method 3A	60 minutes
Stack Gas Moisture Content	EPA Method 4	60 minutes
Sulfur dioxide (SO ₂)	EPA Method 6C	60 minutes
Oxides of nitrogen (NO _x)	EPA Method 7E	60 minutes
Carbon monoxide (CO)	EPA Method 10	60 minutes

3. Test Plan and Notification

A comprehensive test plan must be submitted to SWCAA for review and approval a minimum of ten (10) business days prior to the proposed test date. SWCAA must be notified a minimum of three (3) business days prior to the proposed test date so that a SWCAA representative may be present during testing.

4. Test Requirements

- (a) Test Dates.
 - (1) Reformers 1H07 and 2H07: Testing must be completed no later than the end of December 2026;
Subsequent emission testing must be conducted no later than the end of December at least once within every sixty (60) month period after the date listed above.
- (b) Test Duration. Tests must include a minimum of three (3) test runs, each at least one (1) hour in duration.
- (c) Test Location. The Permittee must provide the necessary platform and sampling ports for testing personnel to perform a test of the emission unit. Testing must be performed at the exhaust of each unit.
- (d) Source Operations. Source operations during the emissions test must be representative of the maximum intended level of operation. Inability to achieve maximum level of intended operation must be preapproved by SWCAA in advance of performing the test.
- (e) Test Records. A complete record of operational parameters applicable to the testing, including but not limited to the following must be kept during emissions testing to

Appendix A
Emission Testing Requirements
Reformer 1H07 and Reformer 2H07

correlate operations with emissions and must be recorded in the final report of the test results. Parameters that must be included are as follows:

- 1) Natural gas usage by the reformer
- 2) Natural gas fed to the reformer burners
- 3) Off-gas combustion rate
- 4) Hydrogen production rate
- 5) Steam production rate
- 6) Plant flue gas O₂ indication (1-hour average)

5. Reporting Requirements

Unless otherwise directed by SWCAA, a final test report must be prepared and submitted (hard copy and electronic) to SWCAA within forty-five (45) calendar days of test completion and, at a minimum, must contain the following information:

- (a) A brief description of the purpose of the test, for example, an initial test, a periodic test required by an ADP, a test required by a federal, state, or local rule or regulation, or a test required to determine compliance with a Notice to Correct;
- (b) Description of the unit being tested, including manufacturer, model number, serial number, and design capacity of the equipment;
- (c) The location and description of the discharge point (stack, port, etc.), including the dimensions (diameter, length and width, or other) and height above ground level. A photo of the discharge point is highly recommended;
- (d) The location of the sample ports or test location and a description of how the sampling location relates to the discharge point. For example, the sampling location may be in a square duct some distance away from the discharge point, which is a round stack. A photo of the sample ports or test location is highly recommended;
- (e) Time and date of the test and identification and qualifications of the personnel involved;
- (f) Summary of results, reported in units and averaging periods consistent with the application emissions standard or unit;
- (g) Nitrogen Oxide and Carbon Monoxide Test results must be reported in:
 - (1) ppmv, dry, corrected to 2% O₂;
 - (2) lb/hr; and
 - (3) lb/lb of hydrogen produced.
- (h) Summary of air pollution control systems or equipment operating conditions during the test;
- (i) Summary of production related parameters;
- (j) A description of the test methods or procedures used, including all field data, quality assurance/quality control procedures and documentation;
- (k) A description of the analytical procedures used, including all laboratory data, quality assurance/quality control procedures and documentation;
- (l) Copies of field data and example calculations;
- (m) Chain of custody information;
- (n) Calibration documentation;
- (o) Discussion of any abnormalities associated with the results; and

Appendix A
Emission Testing Requirements
Reformer 1H07 and Reformer 2H07

- (p) A statement signed by a senior management official of the testing firm certifying the validity of the source test report. Reports with material mistakes or misinformation may be rejected by SWCAA.

6. Changes to Testing Requirements

The source test must be conducted as specified in the sections above. The Permittee may submit a written request to SWCAA for approval of minor modifications to the requirements above or the testing schedule. Upon review of the request and in accordance with EPA delegation, SWCAA will inform the Permittee in writing of any approved modifications.

Appendix B
Emission Monitoring Requirements
Reformer 1H07 and Reformer 2H07

1. Background

The purpose of emission monitoring ("tuning") is to quantify emissions from the Reformers 1H07 and 2H07.

2. Test Constituents and Test Methods

- (a) Oxygen (O₂) using a calibrated portable combustion analyzer or EPA Methods 3 or 3A;
- (b) Nitrogen oxides (NO_x) using a calibrated portable combustion analyzer or EPA Method 7E; and
- (c) Carbon monoxide (CO) using a calibrated portable combustion analyzer or EPA Method 10.

Combustion analyzers include electrochemical cell combustion analyzers, analyzers used for reference method testing, or other analyzers pre-approved by SWCAA.

3. Monitoring Requirements

- (a) Dates. Emission monitoring must be conducted at least once within every six (6) month period, while firing on natural gas, unless the reformer is not in use during that year, or a reference method source test was conducted on that unit during that year.
- (b) Source Operation. Reformer 1H07 and 2H07 operation during the emissions monitoring must be representative of the most emissive intended operating conditions.
- (c) Data Collection.
 - (1) Sampling must consist of at least one (1) test consisting of at least sixty (60) minutes of data collection following a "ramp-up phase." The ramp-up phase ends when analyzer readings have stabilized (less than 5% per minute change in emission concentration). Emission concentrations must be recorded at least once every thirty (30) seconds during the data collection phase. All test data collected following the ramp-up phase must be reported to SWCAA.
 - (2) The analyzer(s) response to span gas of a known concentration must be determined before and after testing. No more than twelve (12) hours may elapse between span gas response checks. The results of the analyzer response will not be valid if the pre and post response check results vary by more than 10% of the known span gas value.
 - (3) The CO and NO_x span gas concentrations must be no less than 50% and no more than 200% of the emission concentration corresponding to the permitted emission limits. A lower concentration span gas may be used if it is more representative of measured concentrations. Ambient air may be used to zero the CO and NO_x cells/analyzer(s) and span the oxygen cell/analyzer.
 - (4) If the monitoring results from any monitoring event indicate that emission concentrations exceed the permitted emission limits for the unit, the Permittee must either perform sixty (60) minutes of additional monitoring to more accurately quantify CO and NO_x emissions, or initiate corrective action. Additional monitoring or corrective action must be initiated as soon as practical but no later than three (3) calendar days after the exceedance is identified. Corrective action includes tuning, maintenance by service personnel, limitation of unit load, or other action taken to maintain compliance with permitted limits. Monitoring of unit emissions must be

Appendix B
Emission Monitoring Requirements
Reformer 1H07 and Reformer 2H07

conducted within three (3) calendar days following completion of any corrective action to confirm that the corrective action has been effective. Initiation of corrective action does not shield the Permittee from enforcement.

NO _x (ppmvd @ 2% O ₂)	CO (ppmvd @ 2% O ₂)
40	50

4. Reporting Requirements

Monitoring results must be reported to SWCAA within fifteen (15) calendar days of monitoring completion. The average of the results of each run is evaluated against the requirements of the ADP. Results must be submitted on forms provided by SWCAA or in an alternative format previously approved by SWCAA. The report must include the following information:

- (a) A description of the emission unit, including manufacturer, model number and facility designation;
- (b) Time and date of the emissions evaluation;
- (c) Identification of the personnel involved;
- (d) Test "tapes" or other direct information generated by the monitoring equipment;
- (e) All collected data, calculations, and final results, reported in units consistent with the applicable emission standard or limit;
- (f) Final test result concentrations will be corrected to 2% O₂;
- (g) A summary of control system or equipment operating conditions;
- (h) A description of the evaluation methods or procedures used, including all field data, quality assurance/quality control procedures and documentation; and
- (i) Calibration error checks documentation.

5. Changes to Requirements

Emission monitoring must be conducted as specified in the sections above. The Permittee may submit a written request to SWCAA for approval of minor modifications to the requirements above or the monitoring schedule. Upon review of the request and in accordance with EPA delegation, SWCAA will inform the Permittee in writing of any approved modifications.

Appendix C

Emission Monitoring Requirements

Carbon Adsorber System

1. Background

- a. The purpose of continuously monitoring the concentration of organic compounds emitted from the carbon adsorber system is to demonstrate compliance with the requirements of this Air Discharge Permit and monitor carbon adsorber system performance.

2. Requirements

- a. The permittee must install and maintain a system for monitoring the concentration of VOCs from the carbon adsorber system in accordance with the requirements and specifications found in the following regulation:
 - 40 CFR 60 Appendix B – Performance Specification 8A "Specifications and Test Procedures for Total Hydrocarbon Continuous Monitoring Systems in Stationary Sources."

Notwithstanding the requirements in the above performance specification, the following exceptions or additional requirements apply:

- The monitoring system may be spanned with methane.
- The instrument span must not exceed 100 ppmvw as methane.
- Calibration error tests, relative accuracy test audits, and absolute calibration audits are not required.
- The monitoring system must provide at least one output value every five minutes of operation.
- System availability must be at least 90% (annual basis).

**State Environmental Policy Act
DETERMINATION OF SEPA EXEMPTION 23-022**

Description of proposal:

Solvay Chemical submitted Air Discharge Permit (ADP) Application CO-1071 to the Southwest Clean Air Agency in which the facility is seeking approval to install and operate an additional carbon bed.

Proponent:

Stewart Larsen, Longview Site Manager

Location of proposal, including street address if any:

3500 Industrial Way
Longview, WA 98632

Lead agency:

Southwest Clean Air Agency

The lead agency for this proposal has determined that the proposed project is exempt from the requirements of the State Environmental Policy Act (SEPA) under Washington Administrative Code (WAC) 197-11-800(3) as follows: "The repair, remodeling, maintenance, or minor alteration of existing private or public structures, facilities or equipment, including utilities, recreation, and transportation facilities involving no material expansions or changes in use beyond that previously existing." The proposed project is identified a minor alteration of existing equipment and as such it does not have a probable significant impact on the environment. Neither an environmental checklist nor an Environmental Impact Statement is required under Revised Code of Washington (RCW) 43.21C.030(2)(c). This decision was made by SWCAA after review of the proponent's proposal and the information on file with the lead agency. This information is available to the public on request.

This project/permitting action by SWCAA is SEPA exempt.

Responsible official: Clinton Lamoreaux, P.E.

Position/title: Chief Engineer

Address: Southwest Clean Air Agency
11815 NE 99th St. Suite 1294
Vancouver, WA 98682-2322

Phone: (360) 574-3058 ext 131

Signature: _____ **Date:** _____