AIR AND RADIATION ADMINISTRATION
DRAFT PART 70 OPERATING PERMIT

DOCKET # 24-025-005

COMPANY: Evonik Corporation

LOCATION: 907 Revolution Street
Havre de Grace, Maryland

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TITLE V – PART 70 OPERATING PERMIT PROGRAM OVERVIEW

Title V of the Clean Air Act (amended) requires each state to implement a federally enforceable operating permit program for major sources of air pollution. This program, the Part 70 Permit Program, also known as the Title V Permit Program, is designed to provide a comprehensive administrative document (a Part 70 Operating Permit) that identifies all air emissions sources at a given facility and the federal air quality regulations applicable to those sources. The permit establishes the methodology by which the owner/operator will demonstrate compliance, and includes testing, monitoring, record-keeping, and reporting requirements for each emissions source.

A Part 70 Operating Permit does not authorize new construction, and does not add any new emissions limitations, standards, or work practices on an affected facility. There may, however, be additional testing, record keeping, monitoring, and reporting requirements. A Part 70 Operating Permit is a five-year renewable permit. A responsible official for each facility subject to a Part 70 Operating Permit is required to annually certify compliance with each applicable requirement for that facility.

When an application for a Part 70 Operating Permit is received, the Department will complete a technical review of the application and will prepare a draft Part 70 Operating Permit and Fact Sheet. The Fact Sheet will explain the basis and technical analysis used by the Department to develop the federally enforceable permit conditions, including the required testing, monitoring, record keeping, and reporting provisions for each emissions unit at the permitted facility. The Fact Sheet will also include a description of the facility operations and the current compliance status with applicable requirements. If there are any discrepancies between the Part 70 Operating Permit application and the draft permit, the Fact Sheet will contain a discussion of the inconsistencies and the final resolution.

Public Participation Process

The Part 70 Operating Permit Program provides the public, adjacent states, and EPA the opportunity to review and submit comments on draft permits. The public may also request a public hearing on the draft permit.

The purpose of a public hearing is to give interested parties the opportunity to submit comments for the record which are germane to the draft federally enforceable permit conditions. Comments made at the hearing, or in writing to the Department during the comment period, should address errors and deficiencies in the permit such as unidentified emissions units, incorrect or deficient regulation citation, deficient record keeping, monitoring, reporting or testing requirements and unresolved compliance issues. After the public comment period has closed, the Department will review the formal testimony as part of the final review and prepare a Response to Comments document which will be sent to the EPA along with the draft Part 70 Operating Permit and Fact Sheet.

Testimony on state-only requirements will be kept on file at the Department as part of the formal record, however, state-only rules and regulations are not federally enforceable, and therefore are not within the scope of the EPA review. The Department will keep a record of the identity of the commenters, their statements, a summary of the issues raised during the public comment period, and the Response to Comments document for at least five years.

Citizen Petition to EPA to Object to Permit Issuance

Interested parties may petition the EPA to object to the Part 70 Permit if the EPA has not already objected, within 60 days after the 45-day EPA review period has ended. The petition period will be posted on the EPA website. The EPA will only consider objections to the federally enforceable provisions of the draft permit which were raised with reasonable specificity during the public comment period, unless: (1) the petitioner demonstrates that it was impractical to raise the objections within the public comment period, or (2) the grounds for the objection arose after the comment period. If the EPA agrees with the petition, the Department will reopen, revise, or revoke the permit as determined.

Applicant Objection to Permit Issuance and Recourse

If the applicant objects to the federally enforceable permit conditions contained in the issued Part 70 Operating permit, the applicant has 15 days from receipt of the issued permit to request a contested case hearing. More information on that can be found in 40 CFR, Part 70, and COMAR 26.11.03.11.

MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION

NOTICE OF INTENT TO ISSUE PART 70 OPERATING PERMIT, OPPORTUNITY TO SUBMIT WRITTEN COMMENTS OR TO REQUEST A PUBLIC HEARING

The Department of the Environment, Air and Radiation Administration (ARA) has completed its review of the application for a Renewal Part 70 Operating Permit submitted by the Evonik Corporation. The facility consists of a food grade silica pigment production which includes tanks, dissolvers, baghouses and dryers.

The applicant is represented by: Ms. Francesca Pinczes, Manager, EHS
Evonik Corporation
907 Revolution Street
Havre de Grace, MD 21078

The Department has prepared a draft Part 70 Operating Permit for review and is now ready to receive public comment. A docket containing the application, draft permit, and supporting documentation is available for review on the Department's website, under the Air Quality Permitting Page's Title V link under "Draft Title V Permits" and may be viewed here:

https://tinyurl.com/DraftTitleV

Interested persons may submit written comments or request a public hearing on the draft permit. Written comments must be received by the Department no later than 30 days from the date of this notice. Requests for a public hearing must be submitted in writing and must also be received by the Department no later than 30 days from the date of this notice.

Comments and requests for a public hearing will be accepted by the Department if they raise issues of law or material fact regarding applicable requirements of Title V of the Clean Air Act, and/or regulations implementing the Title V Program in Maryland found in COMAR.

A Request for public hearing shall include the following:

1) The name, mailing address, and telephone number of the person making the request;

2) The names and addresses of any other persons for whom the person making the request is representing; and

3) The reason why a hearing is requested, including the air quality concern that forms the basis for the request and how this concern relates to the person making the request.

All written comments and requests for a public hearing should be directed to the attention of Ms. Shannon Heafey via email at Shannon.heafey@maryland.gov or by post at Air Quality Permits Program, Air and Radiation Administration, 1800 Washington Boulevard Suite 720, Baltimore, Maryland 21230-1720. Further information may be obtained by calling Ms. Shannon Heafey at (410) 537-4433.

EVONIK CORPORATION
907 REVOLUTION STREET
HAVRE DE GRACE, MARYLAND 21078
PERMIT NO. 24-025-0005
PART 70 OPERATING PERMIT FACT SHEET

BACKGROUND

Evonik Corporation (Evonik) manufactures inorganic pigments. The facility produces inorganic, food grade silica pigments such as Sodium Aluminum Silicate, Calcium Silicate, and Synthetic Amorphous Silica. These pigments are typically in powder form and are used in tires, toothpaste, and food additives among other things. Operations include production, warehouse and bagging, loading and shipping, and product research and development. The facility is located in Harford County, which is part of the Baltimore City severe ozone non-attainment area. The primary SIC code for this facility is 2819.

The Company has grouped the emissions units as follows:

1. Pneumatic Silica Flour Conveying and Storage,
2. Hydrous Sodium Silicate Process Line,
3. Synthetic Amorphous Silica Process line (#1 Plant Wet Processing),
4. Synthetic Amorphous Silica/ Sodium Alumino Silicate Process Line (#2 Plant Wet Processing),
5. #1 Spray Dryer System,
6. #2 Spray Dryer System,
7. Product Milling and Storage Facility,
8. Warehouse area, dry processing area, product milling and packing system, Air Milling process, and roll compaction system,
9. Sulfate Evaporator Plant and Sodium Sulfate Drying and Handling Process Line (not in service),
10. Boilers, and
11. Pilot Plant.

The following table summarizes the actual emissions from Evonik based on its Annual Emission Certification Reports:

Table 1: Actual Emissions

Year	NO_X (TPY)	SO_X (TPY)	PM_{10} (TPY)	CO (TPY)	VOC (TPY)	Total HAP (TPY)
2023	5.25	0.035	6.10	5.84	0.38	0.004
2022	5.2	0.04	5.62	5.72	0.36	0.005
2021	16.39	0.13	5.09	20.96	1.18	0.01
2020	18.91	0.15	6.79	21.49	1.41	0.01
2019	13.66	0.12	17.45	13.70	0.79	0.032

The major source threshold for triggering Title V permitting requirements in Harford County is 25 tons per year for VOC, 25 tons for NOx, 100 tons per year for any other criteria pollutants, and 10 tons for a single HAP or 25 tons per year for total HAPS. Since the potential NOx emissions from the facility are greater than the major source threshold, Evonik is required to obtain a Title V – Part 70 Operating Permit under COMAR 26.11.03.01.

In 2017 the Department administratively amended the Title V permit to reflect the change of the ownership of the facility from J.M. Huber Corporation to Evonik Corporation, effective September 1, 2017.

Evonik's current Title V – Part 70 Operating Permit was issued on February 1, 2020, and expires on January 31, 2025. This renewal Title V – Part 70 Operating Permit will be issued to replace the current permit. The facility's Title V – Part 70 Operating Permit renewal application was received by the Department on February 6, 2024. An administrative completeness review was conducted, and the application was deemed administratively complete. An administrative completeness letter was sent on March 19, 2024, granting the Evonik Corporation an application shield.

APPLICABILITY OF FEDERAL REGULATIONS

NSPS applicability – None of the facility's installations are subject to any NSPS established under 40 CFR 60. 40 CFR Subpart Dc for small steam generating units rated between 10 and 100 MMBtu/hr. maximum heat input does not apply. The two (2) natural gas fired boilers were either installed before the applicability date or they are below the minimum heat input rating of 10 MMBtu/hr. The boilers have not undergone any major modifications since their initial construction.

NESHAP Part 61 applicability – None of the facility's installations are subject to any NESHAP established under 40 CFR 61.

NESHAP Part 63 applicability – None of the facility's installations are subject to any NESHAP established under 40 CFR Part 63. Specifically, 40 CFR 63, Subpart JJJJJJ does not apply because the boilers and dryers burn natural gas and No. 2 fuel oil as a backup only.

NSR and PSD applicability – Evonik has not received an NSR or PSD approval for this facility.

CAM APPLICABILITY

Compliance Assurance Monitoring (CAM), as specified in 40 CFR, Part 64, applies to any emission unit at a Title V major source that meets all of the following criteria:

(1) The emission unit is subject to a federally enforceable emission limit or standard for a regulated pollutant.

(2) The emission unit uses a control device to achieve compliance with any such emission limitation or standard.

(3) The emission unit has the potential to emit pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source and must not otherwise be exempt from CAM.

Based on the following findings, there is no emission unit located at this premises subject to CAM:

(1) Baghouses used to recover products and/or enhance production efficiency such as in airveying processes, are "inherent process equipment" as defined in 40 CFR Part 64. "Inherent process equipment" means equipment that is necessary for the proper or safe functioning of the process, or material recovery equipment that the owner or operator documents is installed and operated primarily for purposes other than compliance with air pollution regulations. Equipment that must be operated at an efficiency higher than that achieved during normal process operations in order to comply with applicable emission limitation or standard is not inherent process

equipment. For the purposes of this part, inherent process equipment is not considered a control device."

(2) No process equipped with a control device produces uncontrolled emissions greater than any applicable major source threshold.

(3) The boilers at the facility are not equipped with control devices.

GREENHOUSE GAS (GHG) EMISSIONS

Evonik emits the following greenhouse gases (GHGs) related to Clean Air Act requirements: carbon dioxide, methane, and nitrous oxide. These GHGs originate from various processes (i.e., boilers, spray dryers) contained within the facility premises. The facility has not triggered Prevention of Significant Deterioration (PSD) requirements for GHG emissions; therefore, there are no applicable GHG Clean Air Act requirements. The Permittee shall quantify facility wide GHGs emissions and report them in accordance with Section 3 of the Part 70 permit.

The following table summarizes the actual emissions from Evonik based on its Annual Emission Certification Reports:

Table 2: Greenhouse Gases Emissions Summary

GHG	Conversion factor	2023 tpy CO_2e	2022 tpy CO_2e	2021 tpy CO_2e
Carbon dioxide CO_2	1	8219.73	8128.78	18213
Methane CH_4	28	3.36	4.2	8.96
Nitrous Oxide N_2O	298	41.72	44.7	92.38
Total GHG CO_{2eq}		**8264.81**	**8177.68**	**18314.34**

COMPLIANCE STATUS

A full compliance evaluation was conducted on January 31, 2024. Records were reviewed, equipment was observed, and no visible emissions or fugitive dust emissions were witnessed. No odors were detected near the facility. There are no stack tests required at this time. The facility was found to be in compliance with the conditions of the Title V Permit to Operate.

EMISSION UNIT IDENTIFICATION

Evonik has identified the following emission units as being subject to Title V permitting requirements and having applicable requirements.

Table 3: Emission Unit Identification

Emissions Unit Number	MDE/ARA Registration Number	Emissions Unit Description	Emissions Point ID	Emission Point Description	Date of Installation
EU-1	7-0064	Pneumatic Silica Flour Conveying and Storage	EP1	Sand Silo equipped with a bin vent baghouse. Sand Slurry Tank #3 & #4 located inside Sand Silo.	1977, 2006 Modified in 2024
			EP5A and EP5B (inside discharge)	Two (2) Sodium Hydroxide frac tanks	
EU-2	7-0028	Hydrous Sodium Silicate Process Line	EP6	Six (6) dissolvers vented to a York demister	1972
EU-3	7-0065	Synthetic Amorphous Silica Process line (#1 Plant Wet Processing)	EP7	Reactors #3, #4, #5 and #6, and two (2) digesters vented to a scrubber demister #1.	1978, Modified in 1997 and 2024
			EP9 (inside discharge)	Lime slurry tanks vented to a baghouse.	
EU-4	7-0131	Synthetic Amorphous Silica/ Sodium Alumino Silicate	EP8	Two (2) reactors, filter feed tank, acid, magnesium hydroxide and aluminum	1985

Emissions Unit Number	MDE/ARA Registration Number	Emissions Unit Description	Emissions Point ID	Emission Point Description	Date of Installation
		Process Line (#2 Plant Wet Processing)		sulfate tanks vented to scrubber demister #2.	
EU-5	7-0102	#1 Spray Dryer System	EP10	Spray Dryer #1 vented to #1 Plant baghouse.	1959, Modified in 1980, 1989 and 2004
			EP12 (inside discharge)	#1 baghouse vented to subsequent baghouse.	
EU-6	7-0069	#2 Spray Dryer System	EP11	Spray Dryer #2 vented to #2 baghouse.	1963, Modified in 1985, 2005 and 2009
			EP13 (inside discharge)	#2 baghouse vented to subsequent baghouse.	
			EP14 (inside discharge)	Silo exhaust baghouse.	
			EP25 (inside discharge)	Vacuum clean-up system.	
EU-7	7-0151	Product Milling and Storage Facility	EP15	#1 and #2 dryers conveyed to a common bunker.	1988, Modified in 1993 and 2017
			EP17	#1 and #2 dryers vented to a baghouse. Two (2) attrition mills vented to baghouses #3 and #4.	

Emissions Unit Number	MDE/ARA Registration Number	Emissions Unit Description	Emissions Point ID	Emission Point Description	Date of Installation
			EP18	#2 Silo vented to a bin vent and baghouse.	
			EP19	#3 Silo vented to a bin vent and baghouse.	
			EP20	#4 Silo vented to a bin vent and baghouse.	
			EP21	#5 Silo vented to a bin vent and baghouse.	
			EP22	#6 Silo vented to a bin vent and baghouse.	
			EP23	Railcar loading baghouse.	
			EP24	Truck loading baghouse.	
			EP49	Bulk product area baghouse.	
EU-8	7-0132	Warehouse area, dry processing area, product milling and packing system, Air Milling process, and roll compaction system	EP26	#7 Silo equipped with a bin vent filter.	1985, Modified in 1995, 1997, 2003 and 2022
			EP27	#8 Silo equipped with a bin vent filter.	
			EP28	Mill feed bunker baghouse.	
			EP29	Mills #1 and #2 baghouse.	
			EP30	Packing area baghouse.	
			EP31	Roll compaction system baghouse.	

Emissions Unit Number	MDE/ARA Registration Number	Emissions Unit Description	Emissions Point ID	Emission Point Description	Date of Installation
			EP32 (inside discharge)	Superstack station baghouse.	
			EP33 (inside discharge)	Packer baghouse.	
			EP34	Vacuum Clean-up System equipped with a baghouse.	
			EP48	#9 Silo vented to a baghouse.	
EU-9	7-0136	Sulfate Evaporator Plant and Sodium Sulfate Drying and Handling Process Line	EP35	Bag dump and precoat tank baghouse.	1985
			EP36	Sulfate evaporator plant boil out tank vent demister.	
			EP37	Sodium sulfate rotary dryer baghouse.	
			EP38	Cooled sodium sulfate baghouse.	
			EP39	SO_4 storage bunker baghouse.	
			EP40	Loading airveying system baghouse.	
EU-10	5-0032	Boiler	EP41	#1 Keeler Boiler (88 MMBtu/Hr.)	1976
	5-0013	Boiler	EP42	#2 Keeler Boiler (47 MMBtu/Hr.)	1962

Emissions Unit Number	MDE/ARA Registration Number	Emissions Unit Description	Emissions Point ID	Emission Point Description	Date of Installation
EU-11	7-0105	Pilot Plant	EP44	One (1) Spray Dryer vented to a baghouse.	1980, Modified in 1983, and 2008
			EP 47	Pilot plant pick up points go through a demister and are vented to EP 47.	

AN OVERVIEW OF THE PART 70 PERMIT

The Fact Sheet is an informational document. If there are any discrepancies between the Fact Sheet and the Part 70 permit, the Part 70 permit is the enforceable document.

Section I of the Part 70 Permit contains a brief description of the facility and an inventory list of the emissions units for which applicable requirements are identified in Section IV of the permit.

Section II of the Part 70 Permit contains the general requirements that relate to administrative permit actions. This section includes the procedures for renewing, amending, reopening, and transferring permits, the relationship to permits to construct and approvals, and the general duty to provide information and to comply with all applicable requirements.

Section III of the Part 70 Permit contains the general requirements for testing, record keeping and reporting; and requirements that affect the facility as a whole, such as open burning, air pollution episodes, particulate matter from construction and demolition activities, asbestos provisions, ozone depleting substance provisions, general conformity, and acid rain permit. This section includes the requirement to report excess emissions and deviations, to submit an annual emissions certification report and an annual compliance certification report, and results of sampling and testing.

Section IV of the Part 70 Permit identifies the emissions standards, emissions limitations, operational limitations, and work practices applicable to each emissions unit located at the facility. For each standard, limitation, and work practice, the permit identifies the basis upon which the Permittee will demonstrate compliance. The basis will include testing, monitoring, record keeping, and reporting requirements. The demonstration may include one or more of these methods.

Section V of the Part 70 Permit contains a list of insignificant activities. These activities emit very small quantities of regulated air pollutants and do not require a permit to construct or registration with the Department. For insignificant activities that are subject to a requirement under the Clean Air Act, the requirement is listed under the activity.

Section VI of the Part 70 Permit contains State-only enforceable requirements. Section VI identifies requirements that are not based on the Clean Air Act, but solely on Maryland air pollution regulations. These requirements generally relate to the prevention of nuisances and implementation of Maryland's Air Toxics Program.

MODIFICATIONS TO THE CURRENT TITLE V PERMIT

The following changes are incorporated into this Title V – Part 70 Operating Permit renewal:

(1) Emissions Unit 1 – caustic tank is no longer in service, is irreparable and cannot be used. Two (2) 21,000 gallon sodium hydroxide frac tanks have been installed. These two tanks both have a vent (5A and 5B) and discharge inside the plant.

(2) Emissions Unit 3 – minor modification in January 2024. Piping modified to allow flexibility within existing operations to move material from feed filter tanks through the belt vacuum filter or the rotary vacuum filters.

(3) Emissions Unit 8 – minor modification in August 2022 to increase flexibility of existing operations and meet customer demand. This included replacing screeners, relocating baghouses, and rerouting piping. EP33, which previously discharged outside, now discharges inside.

(4) Emissions Unit 9 – not in service, some parts have been removed and some disconnected. It is still on site.

(5) Emissions Unit 11 – EP 46, pilot plant high pressure boiler was removed and replaced with a boiler that is exempt from PTC requirements. EP 47, one (1) 10-L Henschel mixer with carbon bed adsorber has been removed. There are remaining pilot plant pick up points that vent to a demister and then discharge through EP47.

(6) Insignificant activity – 60-gallon parts washer that used VOC containing materials has been removed. It has been replaced with a parts washer that uses non-VOC containing materials.

(7) The responsible official has been changed from Mr. Marco Delgado-Nava to Mr. Michael Ocbo, Site Manager.

REGULATORY REVIEW/TECHNICAL REVIEW/COMPLIANCE METHODOLOGY

Emissions Unit Numbers:

EU-1: Pneumatic Silica Flour Conveying and Storage
EU-7: Bulk Milling, Storage, and Loading
EU-8: Warehouse area, dry processing area, product milling and packing system, Air Milling processing, and roll compaction system

Applicable Requirements:

A. Visible Emissions Limitations

COMAR 26.11.06.02C(2), which prohibits visible emissions other than water in an uncombined form.

Exceptions. **COMAR 26.11.06.02A(2)** establishes that "Section C does not apply to emissions during start-up, and process modifications or adjustments, or occasional cleaning of control equipment, if: (a) the visible emissions are not greater than 40 percent opacity; and (b) the visible emissions do not occur for more than 6 consecutive minutes in any 60-minute period."

B. Control of Particulate

COMAR 26.11.06.03B(2), which limits particulate matter emissions to 0.03 grains per standard cubic foot of dry exhaust gas.

COMAR 26.11.06.03D, which requires that reasonable precautions be taken to prevent any particulate matter from becoming airborne as a result of material being handled, transported, or stored.

Compliance Demonstration for Visible Emissions and Particulate Matter:

The Permittee shall conduct a visible emissions observation of the exhaust gases from each emission point at least monthly when the system is operating and shall record the results of each observation. If the emissions in the exhaust gases are visible, the Permittee shall perform the following:

(a) Inspect all process and/or control equipment that may affect visible emissions;

(b) Perform all necessary repairs and/or adjustments to processes or control equipment within 48 hours, so that visible emissions in the exhaust gases are eliminated;

(c) Document, in writing, the results of the inspections and the repairs and/or adjustments made to the processes and/or control equipment; and

(d) If visible emissions have not been eliminated within 48 hours, the Permittee shall perform a Method 9 observation once daily for an 18-minute period until corrective actions have eliminated the visible emissions.

The Permittee shall develop and maintain a preventative maintenance plan for the baghouse that describes the maintenance activity and time schedule for completing each activity. The Permittee shall perform maintenance activities within the timeframes established in the plan and shall maintain a log with records of the dates that maintenance was performed.

The Permittee shall maintain records of the results of the monthly inspections and records of maintenance activities for at least 5 years and make all records available to the Department upon request.

<u>EP 31 only</u>

The Permittee shall continuously measure the pressure drop across the baghouse for EP 31 when the equipment is operating. **[Authority:**

Permit to Construct #12-6-0240N issued June 28, 1995, and Permit to Construct #12-7-0132M issued August 26, 1997]

Rationale for Periodic Monitoring Strategy:

The baghouse is designed to achieve an emissions rate of less than 0.03 gr/dscf. If the baghouse is properly maintained, it will continue to achieve its designed efficiency and will not have visible emissions. In addition, pressure drop monitoring is required for the larger baghouse. The visible emission observation and/or pressure drop measurement will reveal any malfunction or lack of maintenance of the control equipment.

Emissions Unit Numbers

EU-2: Hydrous Sodium Silicate Process Line
EU-3: Synthetic Amorphous Silica Process line (#1 Plant Wet Processing)
EU-4: Synthetic Amorphous Silica/ Sodium Alumino Silicate Process Line (#2 Plant Wet Processing)

Applicable Requirements:

A. Visible Emissions Limitations

COMAR 26.11.06.02C(2) which prohibits visible emissions other than water in an uncombined form.

Exceptions. **COMAR 26.11.06.02A(2)** establishes that "Section C does not apply to emissions during start-up, and process modifications or adjustments, or occasional cleaning of control equipment, if: (a) the visible emissions are not greater than 40 percent opacity; and (b) the visible emissions do not occur for more than 6 consecutive minutes in any 60-minute period."

B. Control of Particulate

COMAR 26.11.06.03B(2), which limits particulate matter emissions to 0.03 grains per standard cubic foot of dry exhaust gas.

Compliance Demonstration for Visible Emissions and Particulate Matter:

The Permittee shall conduct a visible emissions observation of the exhaust gases from each emission point at least monthly when the system is operating and shall record the results of each observation. If the emissions in the exhaust gases are visible, the Permittee shall perform the following:

(a) Inspect all process and/or control equipment that may affect visible emissions;

(b) Perform all necessary repairs and/or adjustments to processes or control equipment within 48 hours, so that visible emissions in the exhaust gases are eliminated;

(c) Document, in writing, the results of the inspections and the repairs and/or adjustments made to the processes and/or control equipment; and

(d) If visible emissions have not been eliminated within 48 hours, the Permittee shall perform a Method 9 observation once daily for an 18-minute period until corrective actions have eliminated the visible emissions.

The Permittee shall develop and maintain a preventative maintenance plan for each demister and baghouse that describes the maintenance activity and time schedule for completing each activity. The Permittee shall perform maintenance activities within the timeframes established in the plan and shall maintain a log with records of the dates that maintenance was performed.

The Permittee shall maintain records of the results of the monthly inspections and records of maintenance activities for at least 5 years and make all records available to the Department upon request.

Rationale for Periodic Monitoring Strategy:

Each baghouse and demister are designed to achieve an emissions rate of less than 0.03 gr/dscf and prevent visible emissions. If the equipment is properly maintained, it will continue to achieve its designed efficiency and will not have visible emissions. The visible emission observation requirement will reveal any malfunction or lack of maintenance of the control equipment.

Emissions Unit Numbers

EU-5: #1 Spray Dryer System (EP 10)
EU-6: #2 Spray Dryer System (EP 11)

The Permittee uses natural gas as the primary fuel with No. 2 fuel oil as back-up on interruptions for both spray dryers.

Applicable Requirements:

EP 10 and EP 11

A. Visible Emissions Limitations

COMAR 26.11.06.02C(2) which prohibits visible emissions other than water in an uncombined form.

Exceptions. **COMAR 26.11.06.02A(2)** establishes that "Section C does not apply to emissions during start-up, and process modifications or adjustments, or occasional cleaning of control equipment, if: (a) the visible emissions are not greater than 40 percent opacity; and (b) the visible emissions do not occur for more than 6 consecutive minutes in any 60-minute period."

B. Control of Particulate

COMAR 26.11.06.03B(2), which limits particulate matter emissions to 0.03 grains per standard cubic foot of dry exhaust gas.

Compliance Demonstration for Visible Emissions and Particulate Matter:

The Permittee shall conduct a visible emissions observation of the exhaust gases from each emission point at least monthly when the system is operating and shall record the results of each observation. If the emissions in the exhaust gases are visible, the Permittee shall perform the following:

(a) Inspect all process and/or control equipment that may affect visible emissions;

(b) Perform all necessary repairs and/or adjustments to processes or control equipment within 48 hours, so that visible emissions in the exhaust gases are eliminated;

(c) Document, in writing, the results of the inspections and the repairs and/or adjustments made to the processes and/or control equipment; and

(d) If visible emissions have not been eliminated within 48 hours, the Permittee shall perform a Method 9 observation once daily for an 18-minute period until corrective actions have eliminated the visible emissions.

The Permittee shall develop and maintain a preventative maintenance plan for the baghouse that describes the maintenance activity and time schedule for completing each activity. The Permittee shall perform maintenance activities within the timeframes established in the plan and shall maintain a log with records of the dates that maintenance was performed.

The Permittee shall maintain records of the results of the monthly inspections and records of maintenance activities for at least 5 years and make all records available to the Department upon request.

EP 10 only

The Permittee shall continuously measure the particulate matter (PM) using the dual dust monitors from this emission point and record the values at least once a day. **[Authority: Permit to Construct # 025-7-0102 M issued December 1, 1989]**

The Permittee shall keep daily records of the PM emissions on site for at least five years and make all records available to the Department upon request.

Rationale for Periodic Monitoring Strategy:

Each baghouse is designed to achieve an emissions rate of less than 0.03 gr/dscf. If the baghouses are properly maintained, it will continue to achieve its designed efficiency and will not have visible emissions. The visible emission observation and/or dual dust monitoring requirements will reveal any malfunction or lack of maintenance of the control equipment.

C. Control of NO_x

COMAR 26.11.09.08J(1), which requires the Permittee to maintain good operating practices as recommended by the equipment vendor to minimize NOx emissions.

COMAR 26.11.09.08J(2), which require the Permittee to prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the particular installation.

COMAR 26.11.09.08J(3), which require the Permittee to maintain and make available to the Department, upon request, the written in-house operator training program.

COMAR 26.11.09.08J(4), which limits the Permittee to burn only gas in each installation, where gas is available, during the period May 1 through September 30 of each year.

COMAR 26.11.09.08J(5), which requires the Permittee to maintain operator training attendance records for each operator at the site for at least 2 years and make these records available to the Department upon request.

Compliance Demonstration for NO_x control:

Since the potential NO_x emissions from the Evonik facility, located in Harford County, Maryland, are greater than the major source threshold of 25 tons/year, as a result, all parts of COMAR 26.11.09.08J listed above apply.

In order to maintain compliance with the COMAR 26.11.09.08J(1), (2) and (4), The Permittee shall:

(a) maintain good operating practices as recommended by the equipment vendor to minimize NOx emissions;

(b) prepare and implement a written in-house training program for all operators of these installations that includes instruction on good operating and maintenance practices for the particular installation;

(c) use natural gas as the primary fuel with No.2 fuel oil as a back-up on interruptions for the #1 and #2 spray dryer systems unless the Permittee requests and receives an approval or permit from the Department to burn an alternate fuel [COMAR 26.11.02.09A; Compliance with this condition also satisfies the requirements of COMAR 26.11.09.08J(4), which limits

only gas in each installation, where gas is available, during the period May 1 through September 30 of each year]; and

(d) maintain records of the quantity and types of fuel burned.

The Permittee shall demonstrate compliance with the requirements of COMAR 26.11.09.08J(3) and (5), by maintaining records that provide the following information and make these records available to the Department upon request:

(a) the written in-house operator training program; and

(b) operator training attendance records for each operator at the site for at least 2 years.

Rationale for Periodic Monitoring Strategy:

By implementing (1) good operating practices as recommended by the equipment vendor to minimize NOx emissions, (2) written in-house training program for all operators that include instruction on good operating and maintenance practices for the particular installation, (3) keeping the records of fuel usages, and (4) keeping operator training attendance records for each operator, the Permittee will be able to demonstrate compliance with the requirements of COMAR 26.11.09.08J.

D. Operating Requirement

The Permittee shall use natural gas as the primary fuel with No.2 fuel oil as back-up on interruptions for both spray dryers unless the Permittee requests and receives an approval or permit from the Department to burn an alternate fuel **[Authority: COMAR 26.11.02.09A]**.

Compliance Demonstration for Operating Requirements:

The Permittee shall demonstrate compliance of operating requirements by maintaining records of the quantity and types of fuel burned for at least 5 years and make these records available to the Department upon request.

Emissions Unit Number

EU-9: Sulfate Evaporate Plant and Sodium Sulfate Drying and Handling Process Line

This line has been shut down since December 2013 but remains on site.

Applicable Requirements:

A. Visible Emissions Limitations

COMAR 26.11.06.02C(2), which prohibits visible emissions other than water in an uncombined form.

Exceptions. **COMAR 26.11.06.02A(2)** establishes that "Section C does not apply to emissions during start-up, and process modifications or adjustments, or occasional cleaning of control equipment, if: (a) the visible emissions are not greater than 40 percent opacity; and (b) the visible emissions do not occur for more than 6 consecutive minutes in any 60-minute period."

B. Control of Particulate

COMAR 26.11.06.03B(2), which limits particulate matter emissions to 0.03 grains per standard cubic foot of dry exhaust gas.

Compliance Demonstration for Visible Emissions and Particulate Matter:

The Permittee shall conduct a visible emissions observation of the exhaust gases from each emission point at least monthly when the system is operating and shall record the results of each observation.

If the emissions in the exhaust gases are visible, the Permittee shall perform the following:

(a) Inspect all process and/or control equipment that may affect visible emissions;

(b) Perform all necessary repairs and/or adjustments to processes or control equipment within 48 hours, so that visible emissions in the exhaust gases are eliminated;

(c) Document, in writing, the results of the inspections and the repairs and/or adjustments made to the processes and/or control equipment; and

(d) If visible emissions have not been eliminated within 48 hours, the Permittee shall perform a Method 9 observation once daily for an 18-minute period until corrective actions have eliminated the visible emissions.

The Permittee shall develop and maintain a preventative maintenance plan for each baghouse that describes the maintenance activity and time schedule for completing each activity. The Permittee shall perform maintenance activities within the timeframes established in the plan and shall maintain a log with records of the dates that maintenance was performed.

The Permittee shall maintain records of the results of the monthly inspections and records of maintenance activities for at least 5 years and make all records available to the Department upon request.

Rationale for Periodic Monitoring Strategy:

The baghouse is designed to achieve an emissions rate of less than 0.03 gr/dscf. If the baghouse is properly maintained, it will continue to achieve its designed efficiency and will not have visible emissions. The visible emission observation requirement will reveal any malfunction or lack of maintenance of the control equipment.

C. Operating Requirement

EP 37

The Permittee shall only burn natural gas in the Rotary Dryer**. [Authority: Permit to Construct #025-7-0136 N issued Oct. 28, 1985]**

Compliance Demonstration for Operating Requirement:

The Permittee shall demonstrate compliance with the operating requirements by maintaining records of the quantity and types of fuel burned for at least 5 years and make these records available to the Department upon request.

Emissions Unit Numbers

EU-10: Boilers

EU-10 includes EP41- Boiler #1 (88 MMBTU/hr.) and EP 42- Boiler #2 (47 MMBTU/hr.). The boilers use natural gas as the primary fuel and No. 2 fuel oil as a backup only. Propane is used as a start-up fuel only. Because the boilers are limited to using No. 2 fuel oil as a backup as defined by 40 CFR §63.11237 they are exempt from the requirements of 40 CFR 63, Subpart JJJJJJ.

The boilers were constructed prior to June 1989 and have not been modified or reconstructed since then. These boilers are, therefore, exempt from 40 CFR 60, Subpart Dc.

Applicable Requirements:

A. Visible Emissions Limitations

COMAR 26.11.09.05A(2), which requires that a person not cause or permit the discharge of emissions from any fuel burning equipment, other than water in uncombined form, which is visible to human observers.

Exceptions. **COMAR 26.11.09.05A(3)** establishes that "Section A(2) does not apply to emissions during load changing, soot blowing, start-up, or occasional cleaning of control equipment which do not exceed 40 percent opacity for a opacity or periods aggregating not more than 6 consecutive minutes in any 60 minutes."

Compliance Demonstration for Visible Emissions:
The Permittee shall properly operate and maintain the boilers in a manner to prevent visible emissions; and verify that there are no visible emissions when burning No. 2 fuel oil. The Permittee shall perform a visual observation of stack emissions for a 6-minute period once for each 168 hours that the boiler burns oil or at a minimum of once per year.

The Permittee shall perform the following, if emissions are visible:

(a) Inspect combustion control system and boiler operations;

(b) Switch to an alternate boiler or natural gas when burning No.2 fuel oil or perform all necessary adjustments and/or repairs to the boiler within 48 hours, so that visible emissions are eliminated;

(c) Document in writing the results of the inspections, adjustments and/or repairs to the boiler; and

After 48 hours, if the required adjustments and/or repairs had not eliminated the visible emissions, perform Method 9 observations once daily for a period of at least 12 minutes per evaluation until corrective actions have eliminated the visible emissions.

The Permittee shall maintain operations manual and preventive maintenance plan. The Permittee shall maintain a log of maintenance performed that relates to combustion performance. The Permittee shall report incidents of visible emissions in accordance with permit conditions number 4 (Report of Excess Emissions and Deviations), and number 9 (Compliance Certification report), of Section III, Plant Wide Conditions in the Permittee's current Part 70 operating permit. The basis for these monitoring, record keeping, and reporting requirements is the Department's authority to create periodic monitoring requirements, COMAR 26.11.03.06C.

Rationale for Periodic Monitoring Strategy:
Boilers that burn natural gas fuel, propane, or No. 2 fuel oil with a rated heat input capacity of more than 10 MM Btu/hr. and less than 100 MM Btu/hr. rarely have visible emissions if properly operated and maintained. The Permittee is required to maintain on site an operating manual, preventative maintenance plan, and records of maintenance performed that relate to combustion performance.

If visible emissions occur, it will happen when burning No. 2 fuel oil. The Permittee is required to perform a visual observation of the exhaust gases from the boiler stack for a 6-minute period, once each 168 hours that fuel oil is burned. If the total hours of burning No. 2 fuel oil is less than 168 hours per year. A minimum of one observation for visible emissions is required each year. The Permittee is required to maintain a record of the results of the observations and number of hours that No. 2 fuel oil is burned.

B. Control of Sulfur Oxides

COMAR 26.11.09.07A(2), which limits the sulfur content in distillate fuel oil to 0.3 percent by weight.

Compliance Demonstration for Sulfur Oxides:

The Permittee shall:

(a) use the distillate fuel oil with sulfur content less than 0.3 percent by weight when fire the boilers with No. 2 fuel oil.

(b) obtain from fuel oil suppliers written certification that all No. 2 fuel oil received at the facility to be burned in the two boilers complies with the limitation regarding sulfur content imposed under COMAR 26.11.09.07A(2)(b).

(c) maintain records of the quantity and types of fuel burned and make available to the Department upon request.

Rationale for Periodic Monitoring Strategy

The Sulfur Oxides emissions come from the fuels used to fire the boilers. The sulfur content of the natural gas is relatively low, and Sulfur Oxides emissions will be negligible for the boilers in this facility. The sulfur content in the distillate fuel is restricted to 0.3 percent by weight to minimum the Sulfur Oxides emissions.

The Permittee will be able to demonstrate compliance with the requirements of COMAR 26.11.09.07A by: (1)using the distillate fuel oil with sulfur content less than 0.3 percent by weight when fire the boilers with No. 2 fuel oil; (2)obtaining from fuel oil suppliers written certification that all No. 2 fuel oil received at the facility to be burned in the two boilers complies with the limitation regarding sulfur content imposed under COMAR 26.11.09.07A(2)(b); and (3)maintaining records of the quantity and types of fuel burned and make available to the Department upon request.

C. Control of Nitrogen Oxides

COMAR 26.11.09.08E, which requires that a person operates fuel burning equipment with a rated heat input capacity of 100 MMBTU per hour or less:

(1) submit to the Department an identification of each affected installation, the rate heat input capacity of each installation, and the type of fuel burned in each installation;

(2) perform a combustion analysis for each affected installation at least once each year and optimize combustion based on the analysis;

(3) maintain the results of all required combustion analyses performed at the site for at least 2 years and make this data available to the Department and the EPA upon request;

(4) once every 3 years, require each operator of the installation to attend an operator training program on combustion optimization that is sponsored by the Department, the EPA or equipment vendors; and

(5) prepare and maintain a record of training program attendance for each operator at the site and make these records available to the Department upon request.

Compliance Demonstration for Nitrogen Oxides:

In order to maintain compliance with the COMAR 26.11.09.08E(1), (2) and (4), The Permittee shall:

(1) submit to the Department an identification of each affected installation, the rate heat input capacity of each installation, and the type of fuel burned in each installation;

(2) perform a combustion analysis for each affected installation at least once each year and optimize combustion based on the analysis; and

(3) at least once every 3 years require each operator of the installation to attend an operator training program on combustion optimization that is sponsored by the Department, the EPA or equipment vendors. [In accordance with COMAR 16.11.09.08B(5)(a), the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.].

The Permittee shall demonstrate compliance with the requirements of COMAR 26.11.09.08E(3) and (5), by maintaining records that provide the following information and make these records available to the Department upon request:

(1) results of all required combustion analyses performed at the site for at least 2 years; and

(2) records of training program attendance for each operator of this installation at the site.

Note: All records must be maintained for a period of 5 years. **[Authority: COMAR 26.11.03.06C(5)(g)]**

Rationale for Periodic Monitoring Strategy:

By (1) submitting the required information of affected installation; (2) performing annual combustion analysis and optimize combustion based on the analysis; (3) conducting an operator-training program on combustion optimization; and (4) maintaining results of all required combustion analyses performed at the site for at least five years; and (5) keeping records of training program attendance for each operator at the site, the Permittee will be able to demonstrate compliance with the requirements of COMAR 26.11.09.08E.

D. Operational Limitation

(1) The Permittee shall burn only natural gas, propane, or No. 2 fuel oil in each of the two (2) boilers unless the Permittee obtains an approval from the Department to burn alternate fuels. No. 2 fuel oil may only be burned during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel. Periodic testing on liquid fuel may not exceed 48 hours during any calendar year for each boiler.

Period of gas curtailment or supply interruption means a period of time during which the supply of gaseous fuel to an affected boiler is restricted or halted for reasons beyond the control of the facility. The act of entering into a contractual agreement with a supplier of natural gas established for curtailment purposes does not constitute a reason that is under the control of the facility for the purposes of this definition. An increase in the cost or unit price of natural gas due to normal market fluctuations not during periods of supplier delivery restriction does not constitute a period of natural gas curtailment or supply interruption. On-site gaseous fuel system emergencies or equipment failures qualify as periods of supply interruption when the emergency or failure is beyond the control of the facility.
[Authority: COMAR 26.11.02.09A 40 CFR §63.11237]

(2) If the Permittee wishes to burn No. 2 fuel oil in either of the two (2) boilers at any other times other than allowed under section 5.1D of this permit, the Permittee shall comply with the requirements of 40 CFR 63, Subpart JJJJJJ.
[Authority: COMAR 26.11.02.09A 40 CFR §63.11195(e)]

Compliance Demonstration for the Operating Limitation:

The Permittee shall maintain records of natural gas, propane, and No. 2 fuel usage for the two (2) boilers including the types and amounts of fuel used, and documentation showing that No. 2 fuel was only used during periods of natural gas curtailment or for testing.

Rationale for Periodic Monitoring Strategy:

No periodic monitoring will be required for the operational fuel requirement as the Permittee is required to maintain records of the types and quantity of fuel burned to ensure that No. 2 fuel oil was only used during periods of natural gas curtailment, supply interruption or testing and to support the annual emissions certification report.

Emissions Unit Numbers

EU-11: Pilot Plant

The pilot plant (EU-11) includes a spray dryer (EP 44), a pick-up point discharge (EP 47), and a boiler that is exempt from permit to construct requirements.

Applicable Requirements:

A. Visible Emissions Limitations

EP 44 and EP 47

COMAR 26.11.06.02C(2), which prohibits visible emissions other than water in an uncombined form.

Exceptions. **COMAR 26.11.06.02A(2)** establishes that "Section C does not apply to emissions during start-up, and process modifications or adjustments, or occasional cleaning of control equipment, if: (a) the visible emissions are not greater than 40 percent opacity; and (b) the visible emissions do not occur for more than 6 consecutive minutes in any 60-minute period."

B. Control of Particulate

EP 44 only

COMAR 26.11.06.03B(2), which limits particulate matter emissions to 0.03 grains per standard cubic foot of dry exhaust gas.

Compliance Demonstration for Visible Emissions and Particulate:

The Permittee shall conduct a visible emissions observation of the exhaust gases from each emission point at least monthly when the system is operating and shall record the results of each observation. If the emissions in the exhaust gases are visible, the Permittee shall perform the following:

(a) Inspect all process and/or control equipment that may affect visible emissions;

(b) Perform all necessary repairs and/or adjustments to processes or control equipment within 48 hours, so that visible emissions in the exhaust gases are eliminated;

(c) Document, in writing, the results of the inspections and the repairs and/or adjustments made to the processes and/or control equipment; and

(d) If visible emissions have not been eliminated within 48 hours, the Permittee shall perform a Method 9 observation once daily for an 18-minute period until corrective actions have eliminated the visible emissions.

The Permittee shall maintain records of the results of the monthly inspections and records of maintenance activities for at least 5 years and make all records available to the Department upon request.

Rationale for Periodic Monitoring Strategy

The spray dryer has minimal visible emissions. The monthly visible emission observation requirement will reveal any malfunction or lack of maintenance of the control equipment.

C. Operational Limitation

EP 44

The Permittee shall use only natural gas for the spray dryer at the pilot plant unless the Permittee requests and receives an approval or permit from the Department to burn an alternate fuel **[Authority: COMAR 26.11.02.09A]**.

Compliance Demonstration for the Operational Limitation:

The Permittee shall demonstrate compliance of operating requirements by maintaining records of the quantity and types of fuel burned for at least 5 years and make these records available to the Department upon request.

Rationale for Periodic Monitoring Strategy:

No periodic monitoring will be required as the Permittee is required to maintain records of the types and quantity of fuel burned to support the annual emissions certification report.

COMPLIANCE SCHEDULE

Evonik is currently in compliance with all applicable air quality regulations.

TITLE IV – ACID RAIN

Not Applicable

TITLE VI – OZONE DEPLETING SUBSTANCES

Evonik is not subject to Title VI requirements.

SECTION 112(r) – ACCIDENTAL RELEASE

Evonik is not subject to the requirements of Section 112(r).

PERMIT SHIELD

The Evonik facility requested that a permit shield be expressly included in the Permittee's Part 70 permit. Permit shields are granted on an emission unit by emission unit basis. If an emission unit is covered by a permit shield, a permit shield statement will follow the emission unit table in Section IV - Plant Specific Conditions of the permit. In this case, a permit shield was granted for each emission unit covered by the permit.

INSIGNIFICANT ACTIVITIES

This section provides a list of insignificant emissions units that were reported in the Title V permit application. The applicable Clean Air Act requirements, if any, are listed below the insignificant activity.

(1) No. 30 Fuel burning equipment using gaseous fuels or no. 1 or no. 2 fuel oil, and having a heat input less than 1,000,000 Btu (1.06 gigajoules) per hour;

The units are subject to the following requirements:

COMAR 26.11.09.05A(2), which establishes that the Permittee may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers.

Exceptions: COMAR 26.11.09.05A(2) does not apply to emissions during load changing, soot blowing, start-up, or adjustments or occasional cleaning of control equipment if:

(a) The visible emissions are not greater than 40 percent opacity; and

(b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty-minute period.

COMAR 26.11.09.07A(2)(b), which establishes that the Permittee may not burn, sell, or make available for sale any distillate fuel with a sulfur content by weight in excess of 0.3 percent.

(2) No. 1 Stationary internal combustion engines with less than 500 brake horsepower (373 kilowatts) of power output;

The natural gas fired, 30kw emergency generator is subject to the following requirements:

(A) COMAR 26.11.09.05E(2), Emissions During Idle Mode: The Permittee may not cause or permit the discharge of

emissions from any engine, operating at idle, greater than 10 percent opacity.

(B) COMAR 26.11.09.05E(3), Emissions During Operating Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.

(C) Exceptions:

(i) COMAR 26.11.09.05E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.

(ii) COMAR 26.11.09.05E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:

(a) Engines that are idled continuously when not in service: 30 minutes
(b) all other engines: 15 minutes.

(iii) COMAR 26.11.09.05E(2) & (3) do not apply while maintenance, repair or testing is being performed by qualified mechanics.

(D) 40 CFR 63, Subpart ZZZZ which states that the Permittee must:

(i) Change oil and filter every 500 hours of operation or annually, whichever comes first;

(ii) Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;

(iii) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary;

(iv) operate and maintain the engine and keep records as specified in Subpart ZZZZ; and

(v) keep records of the hours of operation of the engine as recorded through a non-resettable hour meter.

(3) ✓ Space heaters utilizing direct heat transfer and used solely for comfort heat;

(4) ✓ Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;

(5) ✓ Brazing, soldering, or welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals and not directly related to plant maintenance, upkeep and repair or maintenance shop activities;

(6) ✓ Equipment for washing or drying products fabricated from metal or glass provided that no VOC is used in the process and that no oil or solid fuel is burned;

(7) Containers, reservoirs, or tanks used exclusively for:

(a) ✓ Storage of butane, propane, or liquefied petroleum, or natural gas;

(b) No. 2 Storage of lubricating oils;

(c) No. 1 Unheated storage of VOC with an initial boiling point of 300 °F (149 °C) or greater;

(d) No. 4 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;

(e) No. 2 The storage of VOC normally used as solvents, diluents, thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins, or other surface coatings and having individual capacities of 2,000 gallons (7.6 cubic meters) or less;

(8) ✓ First aid and emergency medical care provided at the facility, including related activities such as sterilization and medicine

preparation used in support of a manufacturing or production process;

(9) ✓ Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use;

(10) ✓ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;

(11) ✓ Laboratory fume hoods and vents (including two (2) insignificant R&D laboratory kilns); and

(12) any other emissions unit, not listed in this section, with a potential to emit less than the "de minimus" levels listed in COMAR 26.11.02.10X (list and describe units):

No. 1 Laboratory size tablet coater for R&D Lab (MDE letter to Mr. Walker on 3/19/04)

No. 1 Laboratory size spray dryer

No. 1 Air stripper to remove volatiles and stabilize pH of the incoming water to improve conformance to FDA requirements (MDE letter to Mr. Baugh on 8/21/07)

No. 1 Modification of the existing system 200 baghouse (EU 6, EP 13) to eliminate confined space entry by changing the design from a bottom loader to a top loader. The baghouse does not have a discharge external to the building (MDE letter to Mr. Wroczynski on 9/1/09)

No. 1 Laboratory sized mixer for R&D lab

STATE ONLY ENFORCEABLE REQUIREMENTS

The Permittee is subject to the following State-only enforceable requirements:

1. Applicable Regulations:

(A) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.

(B) COMAR 26.11.15.05, which requires that the Permittee implement "Best Available Control Technology for Toxics" (T – BACT) to control emissions of toxic air pollutants.

(C) COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions will unreasonably endanger human health

2. Record Keeping and Reporting:

The Permittee shall submit to the Department, by April 1 of each year during the term of this permit, a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee's facility during the previous calendar year. The analysis shall include either:

(a) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or

(b) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

EVONIK CORPORATION
907 REVOLUTION STREET
HAVRE DE GRACE, MARYLAND 21078
DRAFT PART 70 OPERATING PERMIT NO. 24-025-0005

SECTION I SOURCE IDENTIFICATION

1. DESCRIPTION OF FACILITY

Evonik Corporation manufactures inorganic pigments. The facility produces inorganic, food grade silica pigments such as Sodium Aluminum Silicate, Calcium Silicate, and Synthetic Amorphous Silica. The facility is located in Harford County, which is part of the Baltimore City ozone non-attainment area. The primary SIC code for this facility is 2819.

2. FACILITY INVENTORY LIST

Emissions Unit Number	MDE/ARA Registration Number	Emissions Unit Description	Emissions Point ID	Emission Point Description	Date of Installation
EU-1	7-0064	Pneumatic Silica Flour Conveying and Storage	EP1	Sand Silo equipped with a bin vent baghouse. Sand Slurry Tank #3 & #4 located inside Sand Silo.	1977, 2006 Modified in 2024
			EP5	Two (2) Sodium Hydroxide frac tanks	
EU-2	7-0028	Hydrous Sodium Silicate Process Line	EP6	Six (6) dissolvers vented to a York demister	1972
EU-3	7-0065	Synthetic Amorphous Silica Process line (#1 Plant Wet Processing)	EP7	Reactors #3, #4, #5 and #6, and two (2) digesters vented to a scrubber demister #1.	1978, Modified in 1997 and 2024
			EP9 (inside discharge)	Lime slurry tanks vented to a baghouse.	
EU-4	7-0131	Synthetic Amorphous	EP8	Two (2) reactors, filter	1985

Emissions Unit Number	MDE/ARA Registration Number	Emissions Unit Description	Emissions Point ID	Emission Point Description	Date of Installation
		Silica/ Sodium Alumino Silicate Process Line (#2 Plant Wet Processing)		feed tank, acid, magnesium hydroxide and aluminum sulfate tanks vented to scrubber demister #2.	
EU-5	7-0102	#1 Spray Dryer System	EP10	Spray Dryer #1 vented to #1 Plant baghouse.	1959, Modified in 1980, 1989 and 2004
			EP12 (inside discharge)	#1 baghouse vented to subsequent baghouse.	
EU-6	7-0069	#2 Spray Dryer System	EP11	Spray Dryer #2 vented to #2 baghouse.	1963, Modified in 1985, 2005 and 2009
			EP13 (inside discharge)	#2 baghouse vented to subsequent baghouse.	
			EP14 (inside discharge)	Silo exhaust baghouse.	
			EP25 (inside discharge)	Vacuum clean-up system.	
EU-7	7-0151	Product Milling and Storage Facility	EP15	#1 and #2 dryers conveyed to a common bunker.	1988, Modified in 1993 and 2017

Emissions Unit Number	MDE/ARA Registration Number	Emissions Unit Description	Emissions Point ID	Emission Point Description	Date of Installation
			EP17	#1 and #2 dryers vented to a baghouse. Two (2) attrition mills vented to baghouses #3 and #4.	
			EP18	#2 Silo vented to a bin vent and baghouse.	
			EP19	#3 Silo vented to a bin vent and baghouse.	
			EP20	#4 Silo vented to a bin vent and baghouse.	
			EP21	#5 Silo vented to a bin vent and baghouse.	
			EP22	#6 Silo vented to a bin vent and baghouse.	
			EP23	Railcar loading baghouse.	
			EP24	Truck loading baghouse.	
			EP49	Bulk product area baghouse.	
EU-8	7-0132	Warehouse area, dry processing area, product milling and packing system, Air Milling process, and roll	EP26	#7 Silo equipped with a bin vent filter.	1985, Modified in 1995, 1997, 2003 and 2022
			EP27	#8 Silo equipped with a bin vent filter.	
			EP28	Mill feed bunker baghouse.	
			EP29	Mills #1 and #2 baghouse.	

Emissions Unit Number	MDE/ARA Registration Number	Emissions Unit Description	Emissions Point ID	Emission Point Description	Date of Installation
		compaction system	EP30	Packing area baghouse.	
			EP31	Roll compaction system baghouse.	
			EP32 (inside discharge)	Superstack station baghouse.	
			EP33 (inside discharge)	Packer baghouse.	
			EP34	Vacuum Clean-up System equipped with a baghouse.	
			EP48	#9 Silo vented to a baghouse.	
EU-9	7-0136	Sulfate Evaporator Plant and Sodium Sulfate Drying and Handling Process Line	EP35	Bag dump and precoat tank baghouse.	1985
			EP36	Sulfate evaporator plant boil out tank vent demister.	
			EP37	Sodium sulfate rotary dryer baghouse.	
			EP38	Cooled sodium sulfate baghouse.	
			EP39	SO_4 storage bunker baghouse.	
			EP40	Loading airveying system baghouse.	

Emissions Unit Number	MDE/ARA Registration Number	Emissions Unit Description	Emissions Point ID	Emission Point Description	Date of Installation
EU-10	5-0032	Boiler	EP41	#1 Keeler Boiler (88 MMBtu/Hr.)	1976
	5-0013	Boiler	EP42	#2 Keeler Boiler (47 MMBtu/Hr.)	1962
EU-11	7-0105	Pilot Plant	EP44	One (1) Spray Dryer vented to a baghouse.	1980, Modified in 1983, and 2008

SECTION II GENERAL CONDITIONS

1. DEFINITIONS

[COMAR 26.11.01.01] and [COMAR 26.11.02.01]

The words or terms in this Part 70 permit shall have the meanings established under COMAR 26.11.01 and .02 unless otherwise stated in this permit.

2. ACRONYMS

ARA	Air and Radiation Administration
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEM	Continuous Emissions Monitor
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMAR	Code of Maryland Regulations
EPA	United States Environmental Protection Agency
FR	Federal Register
gr	grains
HAP	Hazardous Air Pollutant
MACT	Maximum Achievable Control Technology
MDE	Maryland Department of the Environment
MVAC	Motor Vehicle Air Conditioner
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standards
NSR	New Source Review
OTR	Ozone Transport Region
PM	Particulate Matter
PM10	Particulate Matter with Nominal Aerodynamic Diameter of 10 micrometers or less
ppm	parts per million
ppb	parts per billion
PSD	Prevention of Significant Deterioration
PTC	Permit to construct
PTO	Permit to operate (State)
SIC	Standard Industrial Classification
SO_2	Sulfur Dioxide

TAP	Toxic Air Pollutant
tpy	tons per year
VE	Visible Emissions
VOC	Volatile Organic Compounds

3. EFFECTIVE DATE

The effective date of the conditions in this Part 70 permit is the date of permit issuance, unless otherwise stated in the permit.

4. PERMIT EXPIRATION

[COMAR 26.11.03.13B(2)]

Upon expiration of this permit, the terms of the permit will automatically continue to remain in effect until a new Part 70 permit is issued for this facility provided that the Permittee has submitted a timely and complete application and has paid applicable fees under COMAR 26.11.02.16.

Otherwise, upon expiration of this permit the right of the Permittee to operate this facility is terminated.

5. PERMIT RENEWAL

[COMAR 26.11.03.02B(3)] and [COMAR 26.11.03.02E]

The Permittee shall submit to the Department a completed application for renewal of this Part 70 permit at least 12 months before the expiration of the permit. Upon submitting a completed application, the Permittee may continue to operate this facility pending final action by the Department on the renewal.

The Permittee, upon becoming aware that any relevant facts were omitted, or incorrect information was submitted in the permit application, shall submit such supplementary facts or corrected information no later than 10 days after becoming aware that this occurred. The Permittee shall also provide additional information as necessary to address any requirements that become applicable to the facility after the date a completed application was submitted, but prior to the release of a draft permit. This information shall be submitted to the Department no later than 20 days after a new requirement has been adopted.

6. CONFIDENTIAL INFORMATION

[COMAR 26.11.02.02G]

In accordance with the provisions of the State Government Article, Sec. 10-611 et seq., Annotated Code of Maryland, all information submitted in an application shall be considered part of the public record and available for inspection and copying, unless the Permittee claims that the information is confidential when it is submitted to the Department. At the time of the request for inspection or copying, the Department will make a determination with regard to the confidentiality of the information. The Permittee, when requesting confidentiality, shall identify the information in a manner specified by the Department and, when requested by the Department, promptly provide specific reasons supporting the claim of confidentiality. Information submitted to the Department without a request that the information be deemed confidential may be made available to the public. Subject to approval of the Department, the Permittee may provide a summary of confidential information that is suitable for public review. The content of this Part 70 permit is not subject to confidential treatment.

7. PERMIT ACTIONS

[COMAR 26.11.03.06E(3)] and [COMAR 26.11.03.20(A)]

This Part 70 permit may be revoked or reopened and revised for cause. The filing of an application by the Permittee for a permit revision or renewal; or a notification of termination, planned changes or anticipated noncompliance by the facility, does not stay a term or condition of this permit.

The Department shall reopen and revise, or revoke the Permittee's Part 70 permit under the following circumstances:

a. Additional requirements of the Clean Air Act become applicable to this facility and the remaining permit term is 3 years or more;

b. The Department or the EPA determines that this Part 70 permit contains a material mistake, or is based on false or inaccurate information supplied by or on behalf of the Permittee;

c. The Department or the EPA determines that this Part 70 permit must be revised or revoked to assure compliance with applicable requirements of the Clean Air Act; or

d. Additional requirements become applicable to an affected source under the Federal Acid Rain Program.

8. PERMIT AVAILABILITY

[COMAR 26.11.02.13G]

The Permittee shall maintain this Part 70 permit in the vicinity of the facility for which it was issued, unless it is not practical to do so, and make this permit immediately available to officials of the Department upon request.

9. REOPENING THE PART 70 PERMIT FOR CAUSE BY THE EPA

[COMAR 26.11.03.20B]

The EPA may terminate, modify, or revoke and reissue a permit for cause as prescribed in 40 CFR §70.7(g)

10. TRANSFER OF PERMIT

[COMAR 26.11.02.02E]

The Permittee shall not transfer this Part 70 permit except as provided in COMAR 26.11.03.15.

11. REVISION OF PART 70 PERMITS – GENERAL CONDITIONS

[COMAR 26.11.03.14] and [COMAR 26.11.03.06A(8)]

a. The Permittee shall submit an application to the Department to revise this Part 70 permit when required under COMAR 26.11.03.15 -.17.

b. When applying for a revision to a Part 70 permit, the Permittee shall comply with the requirements of COMAR 26.11.03.02 and .03 except that the application for a revision need includes only information listed that is related to the proposed change to the source and revision to the permit. This information shall be sufficient to evaluate the proposed change and to determine whether it will comply with all applicable requirements of the Clean Air Act.

c. The Permittee may not change any provision of a compliance plan or schedule in a Part 70 permit as an administrative permit amendment or as a minor permit modification unless the change has been approved by the Department in writing.

d. A permit revision is not required for a change that is provided for in this permit relating to approved economic incentives, marketable permits, emissions trading, and other similar programs.

12. SIGNIFICANT PART 70 OPERATING PERMIT MODIFICATIONS

[COMAR 26.11.03.17]

The Permittee may apply to the Department to make a significant modification to its Part 70 Permit as provided in COMAR 26.11.03.17 and in accordance with the following conditions:

a. A significant modification is a revision to the federally enforceable provisions in the permit that does not qualify as an administrative permit amendment under COMAR 26.11.03.15 or a minor permit modification as defined under COMAR 26.11.03.16.

b. This permit does not preclude the Permittee from making changes, consistent with the provisions of COMAR 26.11.03, that would make the permit or particular terms and conditions of the permit irrelevant, such as by shutting down or reducing the level of operation of a source or of an emissions unit within the source. Air pollution control equipment shall not be shut down or its level of operation reduced if doing so would violate any term of this permit.

c. Significant permit modifications are subject to all requirements of COMAR 26.11.03 as they apply to permit issuance and renewal, including the requirements for applications, public participation, and review by affected states and EPA, except:

(1) An application need include only information pertaining to the proposed change to the source and modification of this permit, including a description of the change and modification, and any new applicable requirements of the Clean Air Act that will apply if the change occurs;

(2) Public participation, and review by affected states and EPA, is limited to only the application and those federally enforceable terms and conditions of the Part 70 permit that are affected by the significant permit modification.

d. As provided in COMAR 26.11.03.15B(5), an administrative permit amendment may be used to make a change that would otherwise require a significant permit modification if procedures for enhanced preconstruction review of the change are followed that satisfy the requirements of 40 CFR 70.7(d)(1)(v).

e. Before making a change that qualifies as a significant permit modification, the Permittee shall obtain all permits-to-construct and approvals required by COMAR 26.11.02.

f. The Permittee shall not make a significant permit modification that results in a violation of any applicable requirement of the Clean Air Act.

g. The permit shield in COMAR 26.11.03.23 applies to a final significant permit modification that has been issued by the Department, to the extent applicable under COMAR 26.11.03.23.

13. MINOR PERMIT MODIFICATIONS

[COMAR 26.11.03.16]

The Permittee may apply to the Department to make a minor modification to the federally enforceable provisions of this Part 70 permit as provided in COMAR 26.11.03.16 and in accordance with the following conditions:

a. A minor permit modification is a Part 70 permit revision that:

(1) Does not result in a violation of any applicable requirement of the Clean Air Act;

(2) Does not significantly revise existing federally enforceable monitoring, including test methods, reporting, record keeping, or compliance certification requirements except by:

(a) Adding new requirements,

(b) Eliminating the requirements if they are rendered meaningless because the emissions to which the requirements apply will no longer occur, or

(c) Changing from one approved test method for a pollutant and source category to another;

(3) Does not require or modify a:

(a) Case-by-case determination of a federally enforceable emissions standard,

(b) Source specific determination for temporary sources of ambient impacts, or

(c) Visibility or increment analysis;

(4) Does not seek to establish or modify a federally enforceable permit term or condition for which there is no corresponding underlying applicable requirement of the Clean Air Act, but that the Permittee has assumed to avoid an applicable requirement to which the source would otherwise be subject, including:

(a) A federally enforceable emissions standard applied to the source pursuant to COMAR 26.11.02.03 to avoid classification as a Title I modification; and

(b) An alternative emissions standard applied to an emissions unit pursuant to regulations promulgated under Section 112(i)(5) of the Clean Air Act

(5) Is not a Title I modification; and

(6) Is not required under COMAR 26.11.03.17 to be processed as a significant modification to this Part 70 permit.

b. Application for a Minor Permit Modification

The Permittee shall submit to the Department an application for a minor permit modification that satisfies the requirements of COMAR 26.11.03.03 which includes the following:

(1) A description of the proposed change, the emissions resulting from the change, and any new applicable requirements that will apply if the change is made;

(2) The proposed minor permit modification;

(3) Certification by a responsible official, in accordance with COMAR 26.11.02.02F, that:

(a) The proposed change meets the criteria for a minor permit modification, and

(b) The Permittee has obtained or applied for all required permits-to-construct required by COMAR 26.11.03.16 with respect to the proposed change;

(4) Completed forms for the Department to use to notify the EPA and affected states, as required by COMAR 26.11.03.07-.12.

c. Permittee's Ability to Make Change

(1) For changes proposed as minor permit modifications to this permit that will require the applicant to obtain a permit to construct, the permit to construct must be issued prior to the new change.

(2) During the period of time after the Permittee applies for a minor modification but before the Department acts in accordance with COMAR 26.11.03.16F(2):

(a) The Permittee shall comply with applicable requirements of the Clean Air Act related to the change and the permit terms and conditions described in the application for the minor modification.

(b) The Permittee is not required to comply with the terms and conditions in the permit it seeks to modify. If the Permittee fails to comply with the terms and conditions in the application during this time, the terms and conditions of both this permit and the application for modification may be enforced against it.

d. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.16 is not within the scope of this regulation.

e. Minor permit modification procedures may be used for Part 70 permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, but only to the extent that the minor permit modification procedures are explicitly provided for in regulations approved by the EPA as part of the Maryland SIP or in other applicable requirements of the Clean Air Act.

14. ADMINISTRATIVE PART 70 OPERATING PERMIT AMENDMENTS

[COMAR 26.11.03.15]

The Permittee may apply to the department to make an administrative permit amendment as provided in COMAR 26.11.03.15 and in accordance with the following conditions:

a. An application for an administrative permit amendment shall:

(1) Be in writing;
(2) Include a statement certified by a responsible official that the proposed amendment meets the criteria in COMAR 26.11.03.15 for an administrative permit amendment, and

(3) Identify those provisions of this part 70 permit for which the amendment is requested, including the basis for the request.

b. An administrative permit amendment:

(1) Is a correction of a typographical error;

(2) Identifies a change in the name, address, or phone number of a person identified in this permit, or a similar administrative change involving the Permittee or other matters which are not directly related to the control of air pollution;

(3) requires more frequent monitoring or reporting by the Permittee;

(4) Allows for a change in ownership or operational control of a source for which the Department determines that no other

revision to the permit is necessary and is documented as per COMAR 26.11.03.15B(4);

(5) Incorporates into this permit the requirements from preconstruction review permits or approvals issued by the Department in accordance with COMAR 26.11.03.15B(5), but only if it satisfies 40 CFR 70.7(d)(1)(v);

(6) Incorporates any other type of change, as approved by the EPA, which is similar to those in COMAR 26.11.03.15B(1)—(4);

(7) Notwithstanding COMAR 26.11.03.15B(1)—(6), all modifications to acid rain control provisions included in this Part 70 permit are governed by applicable requirements promulgated under Title IV of the Clean Air Act; or

(8) Incorporates any change to a term or condition specified as State-only enforceable, if the Permittee has obtained all necessary permits-to-construct and approvals that apply to the change.

c. The Permittee may make the change addressed in the application for an administrative amendment upon receipt by the Department of the application, if all permits-to-construct or approvals otherwise required by COMAR 26.11.02 prior to making the change have first been obtained from the Department.

d. The permit shield in COMAR 26.11.03.23 applies to administrative permit amendments made under Section B(5) of COMAR 26.11.03.15 , but only after the Department takes final action to revise the permit.

e. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.15 is not within the scope of this regulation.

15. OFF-PERMIT CHANGES TO THIS SOURCE

[COMAR 26.11.03.19]

The Permittee may make off-permit changes to this facility as provided in COMAR 26.11.03.19 and in accordance with the following conditions:

a. The Permittee may make a change to this permitted facility that is not addressed or prohibited by the federally enforceable conditions of this Part 70 permit without obtaining a Part 70 permit revision if:

(1) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;

(2) The change is not subject to any requirements under Title IV of the Clean Air Act;

(3) The change is not a Title I modification; and

(4) The change does not violate an applicable requirement of the Clean Air Act or a federally enforceable term or condition of the permit.

b. For a change that qualifies under COMAR 26.11.03.19, the Permittee shall provide contemporaneous written notice to the Department and the EPA, except for a change to an emissions unit or activity that is exempt from the Part 70 permit application, as provided in COMAR 26.11.03.04. This written notice shall describe the change, including the date it was made, any change in emissions, including the pollutants emitted, and any new applicable requirements of the Clean Air Act that apply as a result of the change.

c. Upon satisfying the requirements of COMAR 26.11.03.19, the Permittee may make the proposed change.

d. The Permittee shall keep a record describing:

(1) Changes made at the facility that result in emissions of a regulated air pollutant subject to an applicable requirement of the Clean Air Act , but not otherwise regulated under this permit; and

(2) The emissions resulting from those changes.

e. Changes that qualify under COMAR 26.11.03.19 are not subject to the requirements for Part 70 revisions.

f. The Permittee shall include each off-permit change under COMAR 26.11.03.19 in the application for renewal of the part 70 permit.

g. The permit shield in COMAR 26.11.03.23 does not apply to off-permit changes made under COMAR 26.11.03.19.

h. The Permittee is subject to enforcement action if it is determined that an off-permit change made under COMAR 26.11.03.19 is not within the scope of this regulation.

16. ON-PERMIT CHANGES TO SOURCES

[COMAR 26.11.03.18]

The Permittee may make on-permit changes that are allowed under Section 502(b)(10) of the Clean Air Act as provided in COMAR 26.11.03.18 and in accordance with the following conditions:

a. The Permittee may make a change to this facility without obtaining a revision to this Part 70 permit if:

(1) The change is not a Title I modification;

(2) The change does not result in emissions in excess of those expressly allowed under the federally enforceable provisions of the Part 70 permit for the permitted facility or for an emissions unit within the facility, whether expressed as a rate of emissions or in terms of total emissions;

(3) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;

(4) The change does not violate an applicable requirement of the Clean Air Act;

(5) The change does not violate a federally enforceable permit term or condition related to monitoring, including test methods, record keeping, reporting, or compliance certification requirements;

(6) The change does not violate a federally enforceable permit term or condition limiting hours of operation, work practices, fuel usage, raw material usage, or production levels if the term or condition has been established to limit emissions allowable under this permit;

(7) If applicable, the change does not modify a federally enforceable provision of a compliance plan or schedule in this Part 70 permit unless the Department has approved the change in writing; and

(8) This permit does not expressly prohibit the change under COMAR 26.11.03.18.

b. The Permittee shall notify the Department and the EPA in writing of a proposed on-permit change under COMAR 26.11.03.18 not later than 7 days before the change is made. The written information shall include the following information:

(1) A description of the proposed change;

(2) The date on which the change is proposed to be made;

(3) Any change in emissions resulting from the change, including the pollutants emitted;

(4) Any new applicable requirement of the Clean Air Act; and

(5) Any permit term or condition that would no longer apply.

c. The responsible official of this facility shall certify in accordance with COMAR 26.11.02.02F that the proposed change meets the criteria for the use of on-permit changes under COMAR 26.11.03.18.

d. The Permittee shall attach a copy of each notice required by condition b. above to this Part 70 permit.

e. On-permit changes that qualify under COMAR 26.11.03.18 are not subject to the requirements for part 70 permit revisions.

f. Upon satisfying the requirements under COMAR 26.11.03.18, the Permittee may make the proposed change.

g. The permit shield in COMAR 26.11.03.23 does not apply to on-permit changes under COMAR 26.11.03.18.

h. The Permittee is subject to enforcement action if it is determined that an on-permit change made under COMAR 26.11.03.18 is not within the scope of the regulation or violates any requirement of the State air pollution control law.

17. FEE PAYMENT

[COMAR 26.11.02.16A(2) & (5)(b)]

a. The fee for this Part 70 permit is as prescribed in Regulation .19 of COMAR 26.11.02.

b. The fee is due on and shall be paid on or before each 12-month anniversary date of the permit.

c. Failure to pay the annual permit fee constitutes cause for revocation of the permit by the Department.

18. REQUIREMENTS FOR PERMITS-TO-CONSTRUCT AND APPROVALS

[COMAR 26.11.02.09.]

The Permittee may not construct or modify or cause to be constructed or modified any of the following sources without first obtaining, and having in current effect, the specified permits-to-construct and approvals:

a. New Source Review source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;

b. Prevention of Significant Deterioration source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;

c. New Source Performance Standard source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;

d. National Emission Standards for Hazardous Air Pollutants source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;

e. A stationary source of lead that discharges one ton per year or more of lead or lead compounds measured as elemental lead, permit to construct required, except for generating stations constructed by electric companies;

f. All stationary sources of air pollution, including installations and air pollution control equipment, except as listed in COMAR 26.11.02.10, permit to construct required;

g. In the event of a conflict between the applicability of (a.— e.) above and an exemption listed in COMAR 26.11.02.10, the provision that requires a permit applies.

h. Approval of a PSD or NSR source by the Department does not relieve the Permittee obtaining an approval from also obtaining all permits-to-construct required by (c.— g.) above.

19. CONSOLIDATION OF PROCEDURES FOR PUBLIC PARTICIPATION

[COMAR 26.11.02.11C] and [COMAR 26.11.03.01K]

The Permittee may request the Department to authorize special procedures for the Permittee to apply simultaneously, to the extent possible, for a permit to construct and a revision to this permit.

These procedures may provide for combined public notices, informational meetings, and public hearings for both permits but shall not adversely affect the rights of a person, including EPA and affected states, to obtain information about the application for a permit, to comment on an application, or to challenge a permit that is issued.

These procedures shall not alter any existing permit procedures or time frames.

20. PROPERTY RIGHTS

[COMAR 26.11.03.06E(4)]

This Part 70 permit does not convey any property rights of any sort, or any exclusive privileges.

21. SEVERABILITY

[COMAR 26.11.03.06A(5)]

If any portion of this Part 70 permit is challenged, or any term or condition deemed unenforceable, the remainder of the requirements of the permit continues to be valid.

22. INSPECTION AND ENTRY

[COMAR 26.11.03.06G(3)]

The Permittee shall allow employees and authorized representatives of the Department, the EPA, and local environmental health agencies, upon presentation of credentials or other documents as may be required by law, to:

a. Enter at a reasonable time without delay and without prior notification the Permittee's property where a Part 70 source is located, emissions-related activity is conducted, or records required by this permit are kept;

b. Have access to and make copies of records required by the permit;

c. Inspect all emissions units within the facility subject to the permit and all related monitoring systems, air pollution control equipment, and practices or operations regulated or required by the permit; and

d. Sample or monitor any substances or parameters at or related to the emissions units at the facility for the purpose of determining compliance with the permit.

23. DUTY TO PROVIDE INFORMATION

[COMAR 26.11.03.06E(5)]

The Permittee shall furnish to the Department, within a reasonable time specified by the Department, information requested in writing by the Department in order to determine whether the Permittee is in compliance with the federally enforceable conditions of this Part 70 permit, or whether cause exists for revising or revoking the permit. Upon request, the

Permittee shall also furnish to the Department records required to be kept under the permit.

For information claimed by the Permittee to be confidential and therefore potentially not discloseable to the public, the Department may require the Permittee to provide a copy of the records directly to the EPA along with a claim of confidentiality.

The Permittee shall also furnish to the Department, within a reasonable time specified by the Department, information or records requested in writing by the Department in order to determine if the Permittee is in compliance with the State-only enforceable conditions of this permit.

24. COMPLIANCE REQUIREMENTS

[COMAR 26.11.03.06E(1)] and [COMAR 26.11.03.06A(11)] and [COMAR 26.11.02.05]

The Permittee shall comply with the conditions of this Part 70 permit. Noncompliance with the permit constitutes a violation of the Clean Air Act, and/or the Environment Article Title 2 of the Annotated Code of Maryland and may subject the Permittee to:

a. Enforcement action,

b. Permit revocation or revision,

c. Denial of the renewal of a Part 70 permit, or

d. Any combination of these actions.

The conditions in this Part 70 permit are enforceable by EPA and citizens under the Clean Air Act except for the State-only enforceable conditions.

Under Environment Article Section 2-609, Annotated Code of Maryland, the Department may seek immediate injunctive relief against a person who violates this permit in such a manner as to cause a threat to human health or the environment.

25. CREDIBLE EVIDENCE

Nothing in this permit shall be interpreted to preclude the use of credible evidence to demonstrate noncompliance with any term of this permit.

26. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

[COMAR 26.11.03.06E(2)]

The need to halt or reduce activity in order to comply with the conditions of this permit may not be used as a defense in an enforcement action.

27. CIRCUMVENTION

[COMAR 26.11.01.06]

The Permittee may not install or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in the total weight of emissions, conceals or dilutes emissions which would otherwise constitute a violation of any applicable air pollution control regulation.

28. PERMIT SHIELD

[COMAR 26.11.03.23]

A permit shield as described in COMAR 26.11.03.23 shall apply only to terms and conditions in this Part 70 permit that have been specifically identified as covered by the permit shield. Neither this permit nor COMAR 26.11.03.23 alters the following:

a. The emergency order provisions in Section 303 of the Clean Air Act, including the authority of EPA under that section;

b. The liability of the Permittee for a violation of an applicable requirement of the Clean Air Act before or when this permit is issued or for a violation that continues after issuance;

c. The requirements of the Acid Rain Program, consistent with Section 408(a) of the Clean Air Act;

d. The ability of the Department or EPA to obtain information from a source pursuant to Maryland law and Section 114 of the Clean Air Act; or

e. The authority of the Department to enforce an applicable requirement of the State air pollution control law that is not an applicable requirement of the Clean Air Act.

29. ALTERNATE OPERATING SCENARIOS

[COMAR 26.11.03.06A(9)]

For all alternate operating scenarios approved by the Department and contained within this permit, the Permittee, while changing from one approved scenario to another, shall contemporaneously record in a log maintained at the facility each scenario under which the emissions unit is operating and the date and time the scenario started and ended.

SECTION III PLANT WIDE CONDITIONS

1. PARTICULATE MATTER FROM CONSTRUCTION AND DEMOLITION

[COMAR 26.11.06.03D]

The Permittee shall not cause or permit any building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

2. OPEN BURNING

[COMAR 26.11.07]

Except as provided in COMAR 26.11.07.04, the Permittee shall not cause or permit an open fire from June 1 through August 31 of any calendar year. Prior to any open burning, the Permittee shall request and receive approval from the Department.

3. AIR POLLUTION EPISODE

[COMAR 26.11.05.04]

When requested by the Department, the Permittee shall prepare in writing standby emissions reduction plans, consistent with good industrial practice and safe operating procedures, for reducing emissions creating air pollution during periods of Alert, Warning, and Emergency of an air pollution episode.

4. REPORT OF EXCESS EMISSIONS AND DEVIATIONS

[COMAR 26.11.01.07] and [COMAR 26.11.03.06C(7)]

The Permittee shall comply with the following conditions for occurrences of excess emissions and deviations from requirements of this permit, including those in Section VI – State-only Enforceable Conditions:

a. Report any deviation from permit requirements that could endanger human health or the environment, by orally notifying the Department immediately upon discovery of the deviation;

b. Promptly report all occurrences of excess emissions that are expected to last for one hour or longer by orally notifying the Department of the onset and termination of the occurrence;

c. When requested by the Department the Permittee shall report all deviations from permit conditions, including those attributed to malfunctions as defined in COMAR 26.11.01.07A, within 5 days of the request by submitting a written description of the deviation to the Department. The written report shall include the cause, dates and times of the onset and termination of the deviation, and an account of all actions planned or taken to reduce, eliminate, and prevent recurrence of the deviation;

d. The Permittee shall submit to the Department semi-annual monitoring reports that confirm that all required monitoring was performed, and that provide accounts of all deviations from permit requirements that occurred during the reporting periods. Reporting periods shall be January 1 through June 30 and July 1 through December 31, and reports shall be submitted within 30 days of the end of each reporting period. Each account of deviation shall include a description of the deviation, the dates and times of onset and termination, identification of the person who observed or discovered the deviation, causes and corrective actions taken, and actions taken to prevent recurrence. If no deviations from permit conditions occurred during a reporting period, the Permittee shall submit a written report that so states.

e. When requested by the Department, the Permittee shall submit a written report to the Department within 10 days of receiving the request concerning an occurrence of excess emissions. The report shall contain the information required in COMAR 26.11.01.07D(2).

5. ACCIDENTAL RELEASE PROVISIONS

[COMAR 26.11.03.03B(23)] and [40 CFR 68]

Should the Permittee become subject to 40 CFR 68 during the term of this permit, the Permittee shall submit risk management plans by the date specified in 40 CFR 68.150 and shall certify compliance with the requirements of 40 CFR 68 as part of the annual compliance certification as required by 40 CFR 70.

The Permittee shall initiate a permit revision or reopening according to the procedures of 40 CFR 70.7 to incorporate appropriate permit conditions into the Permittee's Part 70 permit.

6. GENERAL TESTING REQUIREMENTS

[COMAR 26.11.01.04]

The Department may require the Permittee to conduct, or have conducted, testing to determine compliance with this Part 70 permit. The Department, at its option, may witness or conduct these tests. This testing shall be done at a reasonable time, and all information gathered during a testing operation shall be provided to the Department.

7. EMISSIONS TEST METHODS

[COMAR 26.11.01.04]

Compliance with the emissions standards and limitations in this Part 70 permit shall be determined by the test methods designated and described below or other test methods submitted to and approved by the Department.

Reference documents of the test methods approved by the Department include the following:

a. 40 CFR 60, appendix A

b. 40 CFR 51, appendix M

c. The Department's Technical Memorandum 91-01 "Test Methods and Equipment Specifications for Stationary Sources", (January 1991), as amended through Supplement 3, (October 1, 1997)

8. EMISSIONS CERTIFICATION REPORT

[COMAR 26.11.01.05-1] and [COMAR 26.11.02.19C] and [COMAR 26.11.02.19D]

The Permittee shall certify actual annual emissions of regulated pollutants from the facility on a calendar year basis.

a. The certification shall be on forms obtained from the Department and submitted to the Department not later than April 1 of the year following the year for which the certification is required;

b. The individual making the certification shall certify that the information is accurate to the individual's best knowledge. The individual shall be:

(1) Familiar with each source for which the certifications forms are submitted, and

(2) Responsible for the accuracy of the emissions information;

c. The Permittee shall maintain records necessary to support the emissions certification including the following information if applicable:

(1) The total amount of actual emissions of each regulated pollutant and the total of all regulated pollutants;

(2) An explanation of the methods used to quantify the emissions and the operating schedules and production data that were used to determine emissions, including significant assumptions made;

(3) Amounts, types and analyses of all fuels used;

(4) Emissions data from continuous emissions monitors that are required by this permit, including monitor calibration and malfunction information;

(5) Identification, description, and use records of all air pollution control equipment and compliance monitoring equipment including:

(a) Significant maintenance performed,
(b) Malfunctions and downtime, and
(c) Episodes of reduced efficiency of all equipment;

(6) Limitations on source operation or any work practice standards that significantly affect emissions; and

(7) Other relevant information as required by the Department.

9. COMPLIANCE CERTIFICATION REPORT

[COMAR 26.11.03.06G(6) and (7)]

The Permittee shall submit to the Department and EPA Region III a report certifying compliance with each term of this Part 70 permit including each applicable standard, emissions limitation, and work practice for the previous calendar year by April 1 of each year.

a. The compliance certification shall include:

(1) The identification of each term or condition of this permit which is the basis of the certification;

(2) The compliance status;

(3) Whether the compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of each source, currently and over the reporting period; and

(5) Any other information required to be reported to the Department that is necessary to determine the compliance status of the Permittee with this permit.

b. The Permittee shall submit the compliance certification reports to the Department and EPA simultaneously.

10. CERTIFICATION BY RESPONSIBLE OFFICIAL

[COMAR 26.11.02.02F]

All application forms, reports, and compliance certifications submitted pursuant to this permit shall be certified by a responsible official as to truth, accuracy, and completeness. The Permittee shall expeditiously notify the Department of an appointment of a new responsible official.

The certification shall be in the following form:
"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

11. SAMPLING AND EMISSIONS TESTING RECORD KEEPING

[COMAR 26.11.03.06C(5)]

The Permittee shall gather and retain the following information when sampling and testing for compliance demonstrations:

a. The location as specified in this permit, and the date and time that samples and measurements are taken;

b. All pertinent operating conditions existing at the time that samples and measurements are taken;

c. The date that each analysis of a sample or emissions test is performed and the name of the person taking the sample or performing the emissions test;

d. The identity of the Permittee, individual, or other entity that performed the analysis;

e. The analytical techniques and methods used; and

f. The results of each analysis.

12. GENERAL RECORDKEEPING

[COMAR 26.11.03.06C(6)]

The Permittee shall retain records of all monitoring data and information that support the compliance certification for a period of five (5) years from the date that the monitoring, sample measurement, application, report or emissions test was completed or submitted to the Department.

These records and support information shall include:

a. All calibration and maintenance records;

b. All original data collected from continuous monitoring instrumentation;

c. Records which support the annual emissions certification; and

d. Copies of all reports required by this permit.

13. GENERAL CONFORMITY

[COMAR 26.11.26.09]

The Permittee shall comply with the general conformity requirements of 40 CFR 93, Subpart B and COMAR 26.11.26.09.

14. ASBESTOS PROVISIONS

[40 CFR 61, Subpart M]

The Permittee shall comply with 40 CFR 61, Subpart M when conducting any renovation or demolition activities at the facility.

15. OZONE DEPLETING REGULATIONS

[40 CFR 82, Subpart F]

The Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for MVACs in subpart B:

a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the prohibitions and required practices pursuant to 40 CFR 82.154 and 82.156.

b. Equipment used during the maintenance, service, repair or disposal of appliances shall comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

c. Persons performing maintenance, service, repairs or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.

d. Persons performing maintenance, service, repairs or disposal of appliances shall certify with the Administrator pursuant to 40 CFR 82.162.

e. Persons disposing of small appliances, MVACS, and MVAC-like appliances as defined in 40 CFR 82.152, shall comply with record keeping requirements pursuant to 40 CFR 82.166.

f. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.

g. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

16. ACID RAIN PERMIT

Not applicable

SECTION IV PLANT SPECIFIC CONDITIONS

This section provides tables that include the emissions standards, emissions limitations, and work practices applicable to each emissions unit located at this facility. The Permittee shall comply with all applicable emissions standards, emissions limitations and work practices included herein.

The tables also include testing, monitoring, record keeping and reporting requirements specific to each emissions unit. In addition to the requirements included here in **Section IV**, the Permittee is also subject to the general testing, monitoring, record keeping and reporting requirements included in **Section III – Plant Wide Conditions** of this permit.

Unless otherwise provided in the specific requirements for an emissions unit, the Permittee shall maintain at the facility for at least five (5) years and shall make available to the Department upon request all records that the Permittee is required under this section to establish. [**Authority: COMAR 26.11.03.06C(5)(g)**]

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Table IV – 1	EU – 1, EU – 7, and EU – 8	Storage / Warehouse
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Table IV – 1	
1.0	**Emissions Unit Number(s)** EU-1: Pneumatic Silica Flour Conveying and Storage EU-7: Bulk Milling, Storage, and Loading EU-8: Warehouse area, dry processing area, product milling and packing system, Air Milling Process, and roll compaction system
1.1	**Applicable Standards/Limits:** A. Visible Emissions Limitations COMAR 26.11.06.02C(2) which prohibits visible emissions other than water in an uncombined form. Exceptions. COMAR 26.11.06.02A(2) establishes that Section C does not apply to emissions during start-up, and process modifications or adjustments, or occasional cleaning of control equipment, if: (a) the visible emissions are not greater than 40 percent opacity; and (b) the visible emissions do not occur for more than 6 consecutive minutes in any 60-minute period. B. Control of Particulate 1. COMAR 26.11.06.03B(2) which limits particulate matter emissions to 0.03 grains per standard cubic foot of dry exhaust gas. 2. COMAR 26.11.06.03D which requires that reasonable precautions be taken to prevent any particulate matter from becoming airborne as a result of material being handled, transported, or stored.
1.2	**Testing Requirements:** A. Visible Emissions Limitations & B. Control of Particulate See Monitoring, Record Keeping and Reporting Requirements.
1.3	**Monitoring Requirements:** A. Visible Emissions Limitations - EP 1, 5, 17, 23, 26, 27, 29, 30, 31, 34, and 48

Table IV – 1

The Permittee shall conduct a visible emissions observation of the exhaust gases from each emission point at least monthly and shall record the results of each observation. If the emissions in the exhaust gases are visible, the Permittee shall perform the following:

(a) Inspect all process and/or control equipment that may affect visible emissions;

(b) Perform all necessary repairs and/or adjustments to processes or control equipment within 48 hours, so that visible emissions in the exhaust gases are eliminated;

(c) Document, in writing, the results of the inspections and the repairs and/or adjustments made to the processes and/or control equipment; and

(d) If visible emissions have not been eliminated within 48 hours, the Permittee shall perform a Method 9 observation once daily for an 18-minute period until corrective actions have eliminated the visible emissions.
[Authority: COMAR 26.11.03.06C]

B. Control of Particulate - EP 1, 5, 17, 23, 26, 27, 29, 30, 31, 33, 34, and 48

The Permittee shall develop and maintain a preventative maintenance plan for each baghouse that describes the maintenance activity and time schedule for completing each activity. The Permittee shall perform maintenance activities within the timeframes established in the plan and shall maintain a log with records of the dates that maintenance was performed.
[Authority: COMAR 26.11.03.06C]

EP 31 only

The Permittee shall continuously measure the pressure drop across the bag-house when the equipment is operating.
[Authority: Permit to Construct #025-6-0240 N issued June 28, 1995, and Permit to Construct #025-7-0132 M issued August 26, 1997]

Table IV – 1	
1.4	**Record Keeping Requirements:** A. Visible Emissions Limitations - EP 1, 5, 17, 23, 26, 27, 29, 30, 31, 34, and 48 The Permittee shall maintain a record of each visible emission check required in 1.3 of this table on site for a period of no less than five (5) years. Said record shall include the date, time, name of emission point, the applicable visible emissions requirement, the results of the check, what action(s), if any, was/were taken, and the name of the observer. B. Control of Particulate - EP 1, 5, 17, 23, 26, 27, 29, 30, 31, 33, 34, and 48 The Permittee shall keep a log of the maintenance activities on-site for at least five years and make them available to the Department upon request. EP 31 only The Permittee shall record the pressure drop across the bag-house at least once a day when the equipment is operating and keep records on site for at least five years and make them available to the Department upon request. **[Authority: COMAR 26.11.03.06C]**
1.5	**Reporting Requirements:** A. Visible Emissions Limitations – EP 1, 5, 17, 23, 26, 27, 29, 30, 31, 34, and 48 & B. Control of Particulate – EP 31 The Permittee shall report excess emissions and deviations in accordance with Section III, Condition 4 “Report of Excess Emissions and Deviations”. **[Authority: COMAR 26.11.03.06C]**

A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.

Table IV – 2	
2.0	**Emissions Unit Number(s)** EU-2: Hydrous Sodium Silicate Process Line EU-3: Synthetic Amorphous Silica Process line (#1 Plant Wet Processing) EU-4: Synthetic Amorphous Silica/ Sodium Alumino Silicate Process Line (#2 Plant Wet Processing)
2.1	**Applicable Standards/Limits:** A. Visible Emissions Limitations COMAR 26.11.06.02C(2), which prohibits visible emissions other than water in an uncombined form. Exceptions. COMAR 26.11.06.02A(2) establishes that Section C does not apply to emissions during start-up, and process modifications or adjustments, or occasional cleaning of control equipment, if: (a) the visible emissions are not greater than 40 percent opacity; and (b) the visible emissions do not occur for more than 6 consecutive minutes in any 60-minute period. B. Control of Particulate COMAR 26.11.06.03B(2), which limits particulate matter emissions to 0.03 grains per standard cubic foot of dry exhaust gas.
2.2	**Testing Requirements:** A. Visible Emissions Limitations & B. Control of Particulate See Monitoring, Record Keeping and Reporting Requirements.
2.3	**Monitoring Requirements:** A. Visible Emissions Limitations – EP 6, 7, and 8 The Permittee shall conduct a visible emissions observation of the exhaust gases from each emission point at least monthly and shall record the results of each observation. If the emissions in the exhaust gases are visible, the Permittee shall perform the following:

Table IV – 2	
	(1) Inspect all process and/or control equipment that may affect visible emissions; (2) Perform all necessary repairs and/or adjustments to processes or control equipment within 48 hours, so that visible emissions in the exhaust gases are eliminated; and (3) Document, in writing, the results of the inspections and the repairs and/or adjustments made to the processes and/or control equipment. (4) If visible emissions have not been eliminated within 48 hours, the Permittee shall perform a Method 9 observation once daily for an 18-minute period until corrective actions have eliminated the visible emissions. **[Authority: COMAR 26.11.03.06C]** B. Control of Particulate – EP 6, 7, and 8 The Permittee shall develop and maintain a preventative maintenance plan for each demister and baghouse that describes the maintenance activity and time schedule for completing each activity. The Permittee shall perform maintenance activities within the timeframes established in the plan and shall maintain a log with records of the dates that maintenance was performed. **[Authority: COMAR 26.11.03.06C]**
2.4	**Record Keeping Requirements:** A. Visible Emissions Limitations - EP 6, 7, and 8 The Permittee shall maintain a record of each visible emission check required in 2.3 of this table on site for a period of no less than five (5) years. Said record shall include the date, time, name of emission point, the applicable visible emissions requirement, the results of the check, what action(s), if any, was/were taken, and the name of the observer. **[Authority: COMAR 26.11.03.06C]** B. Control of Particulate - EP 6, 7, and 8 The Permittee shall keep a log of the maintenance activities on-site for at least five years and make them available to the Department upon request. **[Authority: COMAR 26.11.03.06C]**

Table IV – 2	
2.5	**Reporting Requirements:** A. Visible Emissions Limitations - EP 6, 7, and 8 & B. Control of Particulate – EP 6, 7, and 8 The Permittee shall report excess emissions and deviations in accordance with Section III, Condition 4 "Report of Excess Emissions and Deviations". **[Authority: COMAR 26.11.03.06C]**

A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.

Table IV – 3	
3.0	**Emissions Unit Number(s)** EU-5: #1 Spray Dryer System EU-6: #2 Spray Dryer System
3.1	**Applicable Standards/Limits:** A. Visible Emissions Limitations COMAR 26.11.06.02C(2) which prohibits visible emissions other than water in an uncombined form. Exceptions. COMAR 26.11.06.02A(2) establishes that Section C does not apply to emissions during start-up, and process modifications or adjustments, or occasional cleaning of control equipment, if: (a) the visible emissions are not greater than 40 percent opacity; and (b) the visible emissions do not occur for more than 6 consecutive minutes in any 60-minute period. B. Control of Particulate COMAR 26.11.06.03B(2) which limits particulate matter emissions to 0.03 grains per standard cubic foot of dry exhaust gas. C. Control of NOx The Permittee shall:

Table IV – 3	
	(a) maintain good operating practices as recommended by the equipment vendor to minimize NOx emissions. **[Authority: COMAR 26.11.09.08J(1)]** (b) prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the particular installation. **[Authority: COMAR 26.11.09.08J(2)]** (c) burn only natural gas in each installation, where gas is available, during the period of May 1 through September 30 of each year. **[Authority COMAR 26.11.09.08J(4)]** D. Operational Requirements The Permittee shall use natural gas as the primary fuel with No.2 fuel oil as back-up on interruptions for both spray dryers unless the Permittee requests and receives an approval or permit from the Department to burn an alternate fuel. **[Authority: COMAR 26.11.02.09A]**
3.2	**Testing Requirements:** A. – D. See Monitoring, Record Keeping and Reporting Requirements.
3.3	**Monitoring Requirements:** A. Visible Emissions Limitations – EP 10 and 11 The Permittee shall conduct a visible emissions observation of the exhaust gases from each emission point at least monthly and shall record the results of each observation. If the emissions in the exhaust gases are visible, the Permittee shall perform the following: (a) Inspect all process and/or control equipment that may affect visible emissions; (b) Perform all necessary repairs and/or adjustments to processes or control equipment within 48 hours, so that visible emissions in the exhaust gases are eliminated; and

Table IV – 3	
	(c) Document, in writing, the results of the inspections and the repairs and/or adjustments made to the processes and/or control equipment. (d) If visible emissions have not been eliminated within 48 hours, the Permittee shall perform a Method 9 observation once daily for an 18-minute period until corrective actions have eliminated the visible emissions. **[Authority: COMAR 26.11.03.06C]** B. Control of Particulate – EP 10 and 11 The Permittee shall develop and maintain a preventative maintenance plan for each baghouse that describes the maintenance activity and time schedule for completing each activity. The Permittee shall perform maintenance activities within the timeframes established in the plan and shall maintain a log with records of the dates that maintenance was performed. **[Authority: COMAR 26.11.03.06C]** EP 10 only The Permittee shall continuously measure the particulate matter using the dual dust monitors from this emission point and record the values at least once a day when the equipment is operating. **[Authority: Permit to Construct # 025-7-0102 M issued December 1, 1989].** C. Control of NOx See Record Keeping and Reporting Requirements. D. Operational Requirements See Record Keeping and Reporting Requirements.
3.4	**Record Keeping Requirements:** A. Visible Emissions Limitations – EP 10 and 11 The Permittee shall maintain a record of each visible emission check required in 3.3 of this section on site for a period of no less than five (5) years. Said record shall include the date, time, name of emission point, the applicable visible emissions requirement, the results of the check, what action(s), if any, was/were taken, and the name of the observer. **[Authority: COMAR 26.11.03.06C]**

Table IV – 3	
	B. Control of Particulate – EP 10 and 11 The Permittee shall keep a log of the maintenance activities on-site for at least five years and make them available to the Department upon request. EP 10 only The Permittee shall keep daily records of the PM emissions on site for at least five years. **[Authority: COMAR 26.11.03.06C]** C. Control of NOx – EP 10 and 11 D. Operational Requirements EP 10 and 11 The Permittee shall: (a) maintain and make available to the Department, upon request, the written in-house operator training program. **[Authority: COMAR 26.11.09.08J(3)]** (b) maintain operator training attendance records for each operator of these installations at the site for at least 2 years and make these records available to the Department upon request. **[Authority: COMAR 26.11.09.08J(5)]** (c) maintain records of the quantity and types of fuel burned for at least 5 years and make these records available to the Department upon request. **[Authority: COMAR 26.11.02.19C(1)(c)]**

Table IV – 3	
3.5	**Reporting Requirements:** A. Visible Emissions Limitations – EP 10 and 11& B. Control of NOx – EP 10 and 11 The Permittee shall report excess emissions in accordance with Section III, Condition 4 "Report of Excess Emissions and Deviations". **[Authority: COMAR 26.11.03.06C]** C. Control of NOx – EP 10 and 11 & D. Operational Requirements EP 10 and 11 The Permittee shall make available to the Department upon request any records that the Permittee is required to maintain. **[Authority: COMAR 26.11.03.06C]**

A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.

Table IV – 4	
4.0	**Emissions Unit Number(s)** EU-9: Sulfate Evaporate Plant and Sodium Sulfate Drying and Handling Process Line
4.1	**Applicable Standards/Limits:** A. Visible Emissions Limitations - EP 36, 37, 38, 39, and 40 COMAR 26.11.06.02C(2), which prohibits visible emissions other than water in an uncombined form. Exceptions. COMAR 26.11.06.02A(2) establishes that Section C does not apply to emissions during start-up, and process modifications or adjustments, or occasional cleaning of control equipment, if: (a) the visible emissions are not greater than 40 percent opacity; and (b) the visible emissions do not occur for more than 6 consecutive minutes in any 60-minute period. B. Control of Particulate - EP 36, 37, 38, 39, and 40

Table IV – 4	
	COMAR 26.11.06.03B(2), which limits particulate matter emissions to 0.03 grains per standard cubic foot of dry exhaust gas. C. Operational Requirements - EP 37 The Permittee shall only burn natural gas in the Rotary Dryer. **[Authority: Permit to Construct #025-7-0136 N issued Oct. 28, 1985]**
4.2	**Testing Requirements:** A. – C. See Monitoring, Record Keeping and Reporting Requirements.
4.3	**Monitoring Requirements:** A. Visible Emissions Limitations - EP 36, 37, 38, 39, and 40 The Permittee shall conduct a visible emissions observation of the exhaust gases from each emission point at least monthly and shall record the results of each observation. If the emissions in the exhaust gases are visible, the Permittee shall perform the following: (1) Inspect all process and/or control equipment that may affect visible emissions; (2) Perform all necessary repairs and/or adjustments to processes or control equipment within 48 hours, so that visible emissions in the exhaust gases are eliminated; (3) Document, in writing, the results of the inspections and the repairs and/or adjustments made to the processes and/or control equipment; and (4) If visible emissions have not been eliminated within 48 hours, the Permittee shall perform a Method 9 observation once daily for an 18-minute period until corrective actions have eliminated the visible emissions. **[Authority: COMAR 26.11.03.06C]** B. Control of Particulate - EP 36, 37, 38, 39, and 40

Table IV – 4	
	The Permittee shall develop and maintain a preventative maintenance plan for each dust collector (baghouse or demister) that describes the maintenance activity and time schedule for completing each activity. The Permittee shall perform maintenance activities within the timeframes established in the plan and shall maintain a log with records of the dates that maintenance was performed. C. Operational Requirements - EP 37 See Record Keeping and Reporting Requirements.
4.4	**Record Keeping Requirements:** A. Visible Emissions Limitations - EP 36, 37, 38, 39, and 40 The Permittee shall maintain a record of each visible emission check required in 4.3 of this table on site for a period of no less than five (5) years. Said record shall include the date, time, name of emission point, the applicable visible emissions requirement, the results of the check, what action(s), if any, was/were taken, and the name of the observer. **[Authority: COMAR 26.11.03.06C]** B. Control of Particulate - EP 36, 37, 38, 39, and 40 The Permittee shall keep a log of the maintenance activities on-site for at least five years and make them available to the Department upon request. **[Authority: COMAR 26.11.03.06C]** C. Operational Requirements - EP 37 The Permittee shall maintain records of the quantity and types of fuel burned in the rotary dryer for at least 5 years and make these records available to the Department upon request. **[Authority: COMAR 26.11.02.19C(1)(c)]**
4.5	**Reporting Requirements:** A. Visible Emissions Limitations - EP 36, 37, 38, 39, and 40 The Permittee shall report excess emissions and deviations in accordance with Section III, Condition 4 “Report of Excess Emissions and Deviations”.

Table IV – 4	
	[Authority: COMAR 26.11.03.06C] B. Control of Particulate - EP 36, 37, 38, 39, and 40 & C. Operational Requirements - EP 37 The Permittee shall make available to the Department upon request any records that the Permittee is required to maintain. **[Authority: COMAR 26.11.03.06C]**

A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.

Table IV – 5	
5.0	**Emissions Unit Number(s)** EU-10: Boilers EP41: #1 boiler (natural gas/propane/No. 2 fuel oil) rated at 88 MMBTU per hour EP42: #2 boiler (natural gas/propane/No. 2 fuel oil) rated at 47 MMBTU per hour
5.1	**Applicable Standards/Limits:** A. Visible Emissions Limitations COMAR 26.11.09.05A(2), which prohibits visible emissions other than water in an uncombined form. Exceptions. COMAR 26.11.09.05A(3) establishes that Section A(2) does not apply to emissions during load changing, soot blowing, start-up, or adjustments or occasional cleaning of control equipment if: (a) the visible emissions are not greater than 40 percent opacity; and (b) the visible emissions do not occur for more than 6 consecutive minutes in any sixty minutes. B. Control of Sulfur Oxides COMAR 26.11.09.07A(2), which limits the sulfur content in distillate fuel oil to 0.3 percent by weight. C. Control of Nitrogen Oxides

Table IV – 5	
	COMAR 26.11.09.08E, which requires that a person operates fuel burning equipment with a rated heat input capacity of 100 MMBTU per hour or less: (1) submit to the Department an identification of each affected installation, the rate heat input capacity of each installation, and the type of fuel burned in each installation; (2) perform a combustion analysis for each affected installation at least once each year and optimize combustion based on the analysis; and (3) at least once every 3 years require each operator of the installation to attend an operator training program on combustion optimization that is sponsored by the Department, the EPA or equipment vendors. In accordance with COMAR 16.11.09.08B(5)(a), the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation. D. <u>Operational Limitation</u> (1) The Permittee shall burn only natural gas, propane (as a start-up fuel), or No. 2 fuel oil in each of the two (2) boilers unless the Permittee obtains an approval from the Department to burn alternate fuels. No. 2 fuel oil may only be burned during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel. Periodic testing on liquid fuel may not exceed 48 hours during any calendar year for each boiler. Period of gas curtailment or supply interruption means a period of time during which the supply of gaseous fuel to an affected boiler is restricted or halted for reasons beyond the control of the facility. The act of entering into a contractual agreement with a supplier of natural gas established for curtailment purposes does not constitute a reason that is under the control of the facility for the purposes of this definition. An increase in the cost or unit price of natural gas due to normal market fluctuations not during periods of supplier delivery restriction does not constitute a period of natural gas curtailment or supply interruption. On-site gaseous fuel system emergencies or equipment failures qualify as periods of supply interruption when the emergency or failure is beyond the control of the facility.

Table IV – 5	
	[Authority: COMAR 26.11.02.09A 40 CFR §63.11237] (2) If the Permittee wishes to burn No. 2 fuel oil in either of the two (2) boilers at any other times other than allowed under section 5.1D of this table, the Permittee shall comply with the requirements of 40 CFR 63, Subpart JJJJJJ. **[Authority: COMAR 26.11.02.09A 40 CFR §63.11195(e)]**
5.2	**Testing Requirements:** A. Visible Emissions Limitations & B. Control of Sulfur Oxides See Monitoring, Record Keeping and Reporting Requirements. C. Control of Nitrogen Oxides The Permittee shall perform a combustion analysis at least once a year. **[Authority: COMAR 26.11.09.08E(2)]** D. Operational Limitation See Record Keeping and Reporting Requirements.
5.3	**Monitoring Requirements:** A. Visible Emissions Limitations The Permittee shall: (1) Properly operate and maintain the boilers in a manner to prevent visible emissions; and (2) verify no visible emissions when burning No.2 fuel oil. The Permittee shall perform a visual observation of each boiler exhaust stack for a 6-minute period once for each 168 hours that the boiler burns No. 2 fuel oil or at a minimum of once per year. If visible emissions are found during an observation, the Permittee shall: (1) inspect all process and/or control equipment with potential to contribute to the visible emissions. For combustion sources (e.g., fuel burning equipment), inspect all combustion control systems

Table IV – 5	
	and all combustion operations with potential to contribute to the visible emissions; (2) switch to an alternate boiler or natural gas when burning No.2 fuel oil or perform within 48 hours all repairs and/or adjustments to all process equipment, control equipment, combustion control systems and/or combustion sources necessary to eliminate visible emissions; (3) make written records of any switches, repairs and/or adjustments to process equipment, control equipment, combustion control systems and/or combustion sources that were necessary to eliminate visible emissions; and (4) if the Permittee is unable to switch to an alternate boiler or natural gas or the required adjustments and/or repairs to the malfunctioning boiler have not eliminated the visible emissions within 48 hours of operation, conduct at least once per day EPA Reference Method 9 visible emissions evaluations for a period of at least 12 minutes per evaluation until visible emissions have been eliminated. **[Authority: COMAR 26.11.03.06C]** B. Control of Sulfur Oxides The Permittee shall obtain from fuel oil suppliers written certification that all No. 2 fuel oil received at the facility to be burned in the two boilers complies with the limitation regarding sulfur content imposed under COMAR 26.11.09.07A(2)(b). **[Authority: COMAR 26.11.03.06C]** C. Control of Nitrogen Oxides The Permittee shall optimize combustion in the two boilers in accordance with the findings of the combustion analyses. **[Authority: COMAR 26.11.09.08E(2)]** D. Operational Limitation See Record Keeping and Reporting Requirements.
5.4	**Record Keeping Requirements:** Note: All records must be maintained for a period of 5 years.

Table IV – 5	
	[Authority: COMAR 26.11.03.06C(5)(g)] A. Visible Emissions Limitations The Permittee shall: (1) Maintain an operating manual and preventative maintenance plan on site for each boiler. (2) Maintain a record of the maintenance performed that relates to combustion performance for each boiler. (3) Make a written or printable electronic record of each required observation for visible emissions, and each such record shall include identification of the observer, the date of the observation, the time at the start of the observation, the time at the end of the observation, and an account of the observer's findings during performance of the observation. (4) Maintain a record of the hours that No. 2 fuel is burned in each boiler. **[Authority: COMAR 26.11.03.06C]** B. Control of Sulfur Oxides The Permittee shall maintain written certifications from the facility's fuel oil suppliers that all No. 2 fuel oil received at the facility to be burned in the two boilers complies with the limitation regarding sulfur content imposed under COMAR 26.11.09.07A(2)(b). **[Authority: COMAR 26.11.03.06C]** C. Control of Nitrogen Oxides The Permittee shall maintain records of: (1) All required combustion analyses performed on the two boilers; and (2) Required training of equipment operators concerning combustion optimization, such records shall include the names of all trainees, the dates on which the training was administered, and identification of the concern that provided the training. **[Authority: COMAR 26.11.09.08E(5) and COMAR 26.11.03.06C]**

Table IV – 5	
	D. Operational Limitation The Permittee shall maintain records of natural gas, propane, and No. 2 fuel usage for the two (2) boilers including the types and amounts of fuel used, and documentation showing that No. 2 fuel was only used during periods of natural gas curtailment or for testing. **[Authority: COMAR 26.11.02.19C(1)(c)]**
5.5	**Reporting Requirements:** A. Visible Emissions Limitations The Permittee shall report occurrences of visible emissions from the two boilers in accordance with conditions number 4 (Report of Excess Emissions and Deviations), and number 9 (Compliance Certification report), of Section III – Plant Wide Conditions in the Permittee's current Part 70 operating permit. B. – D. The Permittee shall make available to the Department upon request any records that the Permittee is required to maintain. **[Authority: COMAR 26.11.03.06C]**

A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.

Table IV – 6	
6.0	**Emissions Unit Number(s)** EU-11: Pilot Plant EP 44: (1) one spray dryer
6.1	**Applicable Standards/Limits:** A. Visible Emissions Limitations - EP 44 COMAR 26.11.06.02C(2) which prohibits visible emissions other than water in an uncombined form.

Table IV – 6	
	Exceptions. COMAR 26.11.06.02A(2) establishes that Section C does not apply to emissions during start-up, and process modifications or adjustments, or occasional cleaning of control equipment, if: (a) the visible emissions are not greater than 40 percent opacity; and (b) the visible emissions do not occur for more than 6 consecutive minutes in any 60-minute period. B. Control of Particulate - EP 44 COMAR 26.11.06.03B(2) which limits particulate matter emissions to 0.03 grains per standard cubic foot of dry exhaust gas. C. Operational Limitations - EP 44 The Permittee shall use only natural gas for the spray dryer at the pilot plant unless the Permittee requests and receives an approval or permit from the Department to burn an alternate fuel. **[Authority: COMAR 26.11.02.09A]**
6.2	**Testing Requirements:** A.- C. See Monitoring, Record Keeping, and Reporting Requirements.
6.3	**Monitoring Requirements:** A. Visible Emissions Limitations - EP 44 The Permittee shall conduct a visible emissions observation of the exhaust gases from the emission point at least monthly and shall record the results of each observation. If the emissions in the exhaust gases are visible, the Permittee shall perform the following: (a) Inspect all process and/or control equipment that may affect visible emissions; (b) Perform all necessary repairs and/or adjustments to processes or control equipment within 48 hours, so that visible emissions in the exhaust gases are eliminated; and

Table IV – 6	
	(c) Document, in writing, the results of the inspections and the repairs and/or adjustments made to the processes and/or control equipment. (d) If visible emissions have not been eliminated within 48 hours, the Permittee shall perform a Method 9 observation once daily for an 18-minute period until corrective actions have eliminated the visible emissions. **[Authority: COMAR 26.11.03.06C]** B. Control of Particulate - EP 44 See Reporting Requirements. C. Operational Limitations See Record Keeping and Reporting Requirements.
6.4	**Record Keeping Requirements:** A. Visible Emissions Limitations - EP 44 The Permittee shall maintain a record of each visible emission check required in 6.3 of this table on site for a period of no less than five (5) years. Said record shall include the date, time, name of emission point, the applicable visible emissions requirement, the results of the check, what action(s), if any, was/were taken, and the name of the observer. **[Authority: COMAR 26.11.03.06C]** B. Control of Particulate - EP 44 See Reporting Requirements. C. Operational Limitations – EP 44 The Permittee shall maintain records of the quantity and types of fuel burned for at least 5 years and make these records available to the Department upon request. **[Authority: COMAR 26.11.02.19C(1)(c)]**
6.5	**Reporting Requirements:** A. Visible Emissions Limitations - EP 44 B. Control of Particulate

Table IV – 6	
	The Permittee shall report excess emissions and deviations in accordance with Section III, Condition 4 “Report of Excess Emissions and Deviations”. [COMAR 26.11.03.06C] C. Control of VOC, & D. Operational Limitations The Permittee shall make available to the Department upon request any records that the Permittee is required to maintain. **[Authority: COMAR 26.11.03.06C]**

A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.

INSIGNIFICANT ACTIVITIES

This section provides a list of insignificant emissions units that were reported in the Title V permit application. The applicable Clean Air Act requirements, if any, are listed below the insignificant activity.

(1) No. 30 Fuel burning equipment using gaseous fuels or no. 1 or no. 2 fuel oil, and having a heat input less than 1,000,000 Btu (1.06 gigajoules) per hour;

The units are subject to the following requirements:

COMAR 26.11.09.05A(2), which establishes that the Permittee may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers.

Exceptions: COMAR 26.11.09.05A(2) does not apply to emissions during load changing, soot blowing, start-up, or adjustments or occasional cleaning of control equipment if:

(a) The visible emissions are not greater than 40 percent opacity; and

(b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty-minute period.

COMAR 26.11.09.07A(2)(b), which establishes that the Permittee may not burn, sell, or make available for sale any distillate fuel with a sulfur content by weight in excess of 0.3 percent.

(2) No. 1 Stationary internal combustion engines with less than 500 brake horsepower (373 kilowatts) of power output;

The natural gas fired, 30kw emergency generator is subject to the following requirements:

(A) COMAR 26.11.09.05E(2), Emissions During Idle Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.

(B) COMAR 26.11.09.05E(3), Emissions During Operating Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.

(C) Exceptions:

(i) COMAR 26.11.09.05E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.

(ii) COMAR 26.11.09.05E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:

(a) Engines that are idled continuously when not in service: 30 minutes
(b) all other engines: 15 minutes.

(iii) COMAR 26.11.09.05E(2) & (3) do not apply while maintenance, repair or testing is being performed by qualified mechanics.

(D) 40 CFR 63, Subpart ZZZZ which states that the Permittee must:

(i) Change oil and filter every 500 hours of operation or annually, whichever comes first;

(ii) Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;

(iii) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary;

(iv) operate and maintain the engine and keep records as specified in Subpart ZZZZ; and

(v) keep records of the hours of operation of the engine as recorded through a non-resettable hour meter.

(3) ✓ Space heaters utilizing direct heat transfer and used solely for comfort heat;

(4) ✓ Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;

(5) ✓ Brazing, soldering, or welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals and not directly related to plant maintenance, upkeep and repair or maintenance shop activities;

(6) ✓ Equipment for washing or drying products fabricated from metal or glass provided that no VOC is used in the process and that no oil or solid fuel is burned;

(7) Containers, reservoirs, or tanks used exclusively for:

(a) ✓ Storage of butane, propane, or liquefied petroleum, or natural gas;

(b) No. 2 Storage of lubricating oils;

(c) No. 1 Unheated storage of VOC with an initial boiling point of 300 °F (149 °C) or greater;

(d) No. 4 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;

(e) No. 2 The storage of VOC normally used as solvents, diluents, thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins, or other surface coatings and having individual capacities of 2,000 gallons (7.6 cubic meters) or less;

(8) ✓ First aid and emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation used in support of a manufacturing or production process;

(9) ✓ Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use;

(10) ✓ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;

(11) ✓ Laboratory fume hoods and vents (including two (2) insignificant R&D laboratory kilns); and

(12) any other emissions unit, not listed in this section, with a potential to emit less than the "de minimus" levels listed in COMAR 26.11.02.10X (list and describe units):

No. 1 Laboratory size tablet coater for R&D Lab (MDE letter to Mr. Walker on 3/19/04)

No. 1 Laboratory size spray dryer

No. 1 Air stripper to remove volatiles and stabilize pH of the incoming water to improve conformance to FDA requirements (MDE letter to Mr. Baugh on 8/21/07)

No. 1 Modification of the existing system 200 baghouse (EU 6, EP 13) to eliminate confined space entry by changing the design from a bottom loader to a top loader. The baghouse does not have a discharge external to the building (MDE letter to Mr. Wroczynski on 9/1/09)

No. 1 Laboratory sized mixer for R&D lab

STATE ONLY ENFORCEABLE REQUIREMENTS

The Permittee is subject to the following State-only enforceable requirements:

1. Applicable Regulations:

   (A) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.

   (B) COMAR 26.11.15.05, which requires that the Permittee implement "Best Available Control Technology for Toxics" (T – BACT) to control emissions of toxic air pollutants.

   (C) COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions will unreasonably endanger human health

2. Record Keeping and Reporting:

   The Permittee shall submit to the Department, by April 1 of each year during the term of this permit, a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee's facility during the previous calendar year. The analysis shall include either:

   (a) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or

   (b) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

Maryland
Department of
the Environment

Wes Moore, Governor
Aruna Miller, Lt. Governor

Serena McIlwain, Secretary
Suzanne E. Dorsey, Deputy Secretary

Air and Radiation Administration • Air Quality Permits Program • 1800 Washington Blvd, Ste.720 • Baltimore, MD 21230

Budget Reconciliation and Financing Act of 2003
(Commonly referred as Maryland House Bill 935)

On July 1, 2003, House Bill 935, Chapter 203 amended § 1-203 of the Environment Article, Annotated Code of Maryland, as follows:

Section 1-203(b).

(1) A license or permit is considered renewed for purposes of this subsection if the license or permit is issued by a unit of State government to a person for the period immediately following a period for which the person previously possessed the same or a substantially similar license.

(2) Before any license or permit may be renewed under this article, **the issuing authority shall verify through the office of the Comptroller (emphasis added)** that the applicant has paid all undisputed taxes and the unemployment insurance contributions payable to the Comptroller or the Secretary of Labor Licensing, and Regulation or that the applicant has provided for payment in a manner satisfactory to the unit responsible for collection.

In order for the Maryland Department of the Environment (MDE) to verify this compliance, we would need you to provide the following information before we can process or issue your renewal license, permit, or certification:

Current MDE License/Permit No: 24-025-0005

Licensee Company Name/Permit Holder: EVONIK CORPORATION

Address: 907 REVOLUTION STREET
HAVRE DE GRACE, MD 21078

Contact Name: FRANCESCA PINCZES **Title:** ESH MANAGER

Contact Telephone Number: 410-939-7224

Contact Email: FRANCESCA.PINCZES@EVONIK.COM

Privacy Act Notice: This Notice is provided pursuant to the Federal Privacy Act of 1974, 5 U.S.C. § 552a. Disclosure of your Social Security or Federal Tax Identification on this form is mandatory pursuant to the provisions of § 1-203 (2003) of Environment Article, Annotated Code of Maryland, which requires MDE to verify that an applicant for a permit or license has paid all undisputed taxes and unemployment insurance. Social Security and Federal Tax Identification Nos. will not be used for any purposes other than those described in this Notice.

Federal Employer Identification Number (FEIN): 63-0673043

Certification: I certify that the above information is true and correct to the best of my knowledge.

Signature: Francesca Pinczes **Date:** 1/29/2024

Complete and return this form to the above address. Call 410-537-3230 if you have questions.

NON CONFIDENTIAL

EVONIK CORPORATION

PART 70 PERMIT

RENEWAL APPLICATION

907 Revolution Street

Havre de Grace, Maryland

Plant Manager: Michael Ocbo

Phone: 410-939-7317

24-Hour Phone: 410-939-7230

January 2024

TABLE OF CONTENTS

MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION
RENEWAL TITLE V APPLICATION CHECKLIST

VI .Application Completeness Checklist

The purpose of this part is to list the information required to achieve a Part 70 application shield.

Cover Page

(x) Name and address of owner or operator, including telephone number.

(x) Name and address of facility, including the plant manager's name and telephone number.

(x) A 24-hour emergency telephone number for air pollution matters.

Section 1 CERTIFICATION STATEMENTS

(x) The certification statement completed and signed by a responsible official.

Section 2 FACILITY DESCRIPTION SUMMARY

(x) A brief description of each of the source's process(es), including all applicable SIC codes and end products.

(x) Flow diagrams indicating all emissions units, emission points, and control devices.

(x) A plot plan of the entire facility.

(x) Emission Certification Report.

(x) General Emissions Information.

Section 3 EMISSIONS UNIT DESCRIPTIONS –

This section must be completed for each emissions unit.

Part A

(x) Emissions unit number.

(x) Detailed description of unit, including all emission points.

(x) Federally enforceable limit(s) on the operating schedule.

(X) Fuel consumption information for <u>any</u> emissions unit that consumes fuel including the type of fuel, percent sulfur, and annual usage of fuel.

Part B

(X) A citation and description of each federally enforceable requirement, including all emission standards, for each emissions unit.

(X) A statement of compliance demonstration techniques for each requirement, including a description of monitoring, record keeping, reporting requirements, and test methods.

(X) The frequency of submittal of the compliance demonstration during the permit term.

Part C

(X) Emissions unit number.

(X) Permit to construct number.

(X) Emissions point number(s).

(X) Date(s) the permit to construct was issued.

(X) Condition number(s) as indicated on the permit to construct.

(X) Description of the permit condition(s) and the reason(s) why they are believed to be obsolete, extraneous, or insignificant.

Part D

(X) Description of all alternate operating scenarios that apply to an emissions unit.

(X) Number assigned to each scenario.

(X) Emissions unit number.

(X) Description of the operating parameters for the emissions unit and other information which describes the how the operation of the unit will change under the different scenario.

Part E

(X) A citation and description of each federally enforceable requirement triggered by an operating scenario, including all emission standards, for each emissions unit.

(X) As an attachment, the date and results of the most recent compliance demonstration for each emission standard and/or emissions certification report with relevant supporting documentation.

(X) A statement of compliance demonstration techniques for each requirement, including a description of monitoring, record keeping, reporting requirements, and test methods.

(X) The frequency of submittal of the compliance demonstration during the permit term.

Section 4 CONTROL EQUIPMENT

(X) The type of each piece of air pollution control equipment

(X) The capture and control efficiencies of the control equipment.

Section 5 SUMMARY SHEET OF POTENTIAL EMISSIONS

(X) Quantity of potential emissions for criteria pollutants and HAPs emitted in tons per year for each emissions unit.

(X) Fugitive emission estimations for the entire facility for criteria pollutants and HAPs emitted in tons per year.

(X) Basis for all emission calculations.

Section 6 AN EXPLANATION OF PROPOSED EXEMPTIONS FROM OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

(X) An explanation of the proposed exemption.

MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION
RENEWAL TITLE V APPLICATION CHECKLIST

Section 7 COMPLIANCE SCHEDULE FOR NONCOMPLYING EMISSIONS UNITS

(X) Identification of emissions unit(s) not in compliance, including the requirement being violated and the effective compliance date.

(X) Detailed description of methods to be used to achieve compliance.

(X) A schedule of remedial measures, including an enforceable sequence of actions with milestones.

Attachment

(X) Checklist of Insignificant Activities

( ) CAM Plan (If Applicable)

MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Boulevard Baltimore MD 21230
(410) 537-3000 1-800-633-6101 http://www.mde.state.md.us

PART 70 PERMIT APPLICATION FOR RENEWAL

AIR AND RADIATION MANAGEMENT ADMINISTRATION

Facilities required to obtain a Part 70 permit under COMAR 26.11.03.01 must complete and return this form. Applications are incomplete unless all applicable information required by COMAR 26.11.03.03 and 26.11.03.13 is supplied. Failure to supply additional information required by the Department to enable it to act on the application may result in loss of the application shield and denial of this application.

Owner and Operator:

Name of Owner or Operator: Evonik Corporation		
Street Address: 2 Turner Place		
City: Piscataway	State: NJ	Zip Code: 08854
Telephone Number 732-981-5000		Fax Number

Facility Information:

Name of Facility: Evonik Corporation		
Street Address: 907 Revolution Street		
City: Havre de Grace	State: MD	Zip Code: 21078
Plant Manager: Michael Ocbo	Telephone Number: 410-939-7317	Fax Number:
24-Hour Emergency Telephone Number for Air Pollution Matters: 410-939-7230		

List, on a separate page, the names and telephone numbers of other facility owners and persons with titles.

EVONIK
Leading Beyond Chemistry

CERTIFICATION STATEMENTS

SECTION 1

SECTION 1. CERTIFICATION STATEMENTS

1. Compliance Status with Applicable Enhanced Monitoring and Compliance Certification Requirements

The emissions units identified in this application are in compliance with applicable enhanced monitoring and compliance certification requirements.

2. Certification of Current Compliance with All Applicable Federally Enforceable Requirements

Except for the requirements identified in Section 7 of this application, for which compliance is not achieved, I hereby certify, based on information and belief formed after reasonable inquiry, that the facility is currently in compliance with all applicable federally enforceable requirements and agree that the facility will continue to comply with those requirements during the permit term.

You must complete a Section 7 form for each non-complying emissions unit.

3. Statement of Compliance with Respect to All New Applicable Requirements Effective During the Permit Term

I hereby state, based on information and belief formed after reasonable inquiry, that the facility agrees to meet, in a timely manner, all applicable federally enforceable requirements that become effective during the permit term, unless a more detailed schedule is expressly required by the applicable requirement.

4. Risk Management Plan Compliance

I hereby certify that, based on information and belief formed after reasonable inquiry, that a Risk Management Plan as required under 112(r) of the Clean Air Act:

☐ has been submitted;

☐ will be submitted at a future date; or

☑ does not need to be submitted.

5. Statement of Truth, Accuracy, and Completeness

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision and in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

RESPONSIBLE OFFICIAL

X Michael Ocbo 1-29-24

SIGNATURE DATE

Michael Ocbo

PRINTED NAME

Site Manager

TITLE

EVONIK
Leading Beyond Chemistry

FACILITY DESCRIPTION SUMMARY

SECTION 2

SECTION 2. FACILITY DESCRIPTION SUMMARY

1. Major Activities of Facility

Briefly describe the major activities, including the applicable SIC Code(s) and end product(s).

The Evonik facility in Havre de Grace produces inorganic pigments such as Sodium Aluminum Silicate, Calcium Silicate and Synthetic Amorphous Silicas. These are typically in a powder form and some are used in food application.

Evonik Corporation operates under SIC code 2819.

2. Facility-Wide Emissions

A. This facility is required to obtain a Part 70 Operating Permit because it is: Check appropriate box:

- ☐ Actual Major
- ☑ Potential Major
- ☐ Solid Waste Incineration Unit Requiring Permit Under § 129(e) of CAA

B. List the actual facility-wide emissions below:

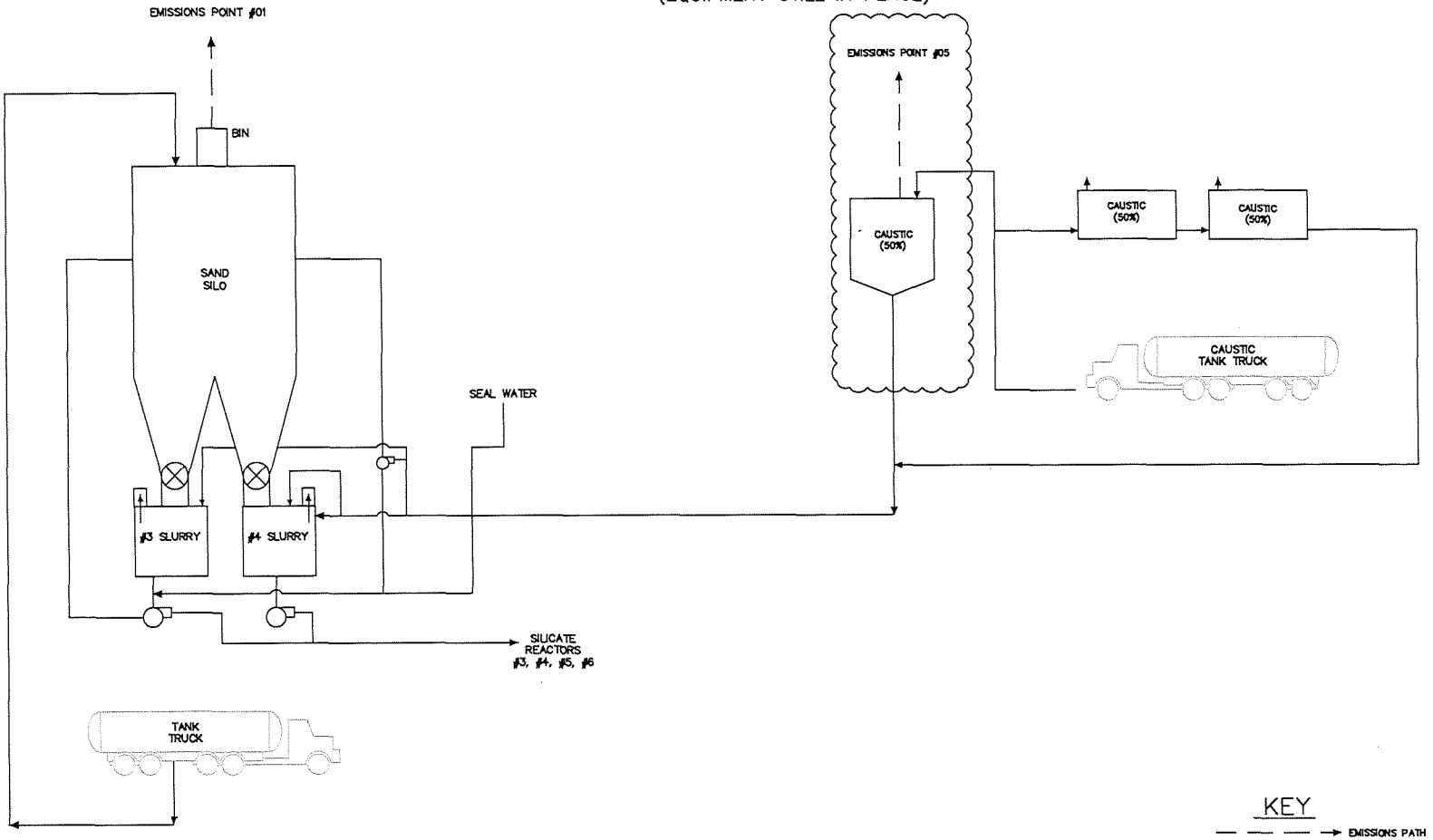
PM10 4.63 NOx 5.20 VOC 0.37 SOx 0.04 CO 5.72 HAPs 0.01

based on CY 2022

3. Include With the Application:

Flow Diagrams showing all emissions units, emission points, and control devices;
Emissions Certification Report (copy of the most recent submitted to the Department.)

AREA OUT OF SERVICE
(EQUIPMENT STILL IN PLACE)



KEY

— — — → EMISSIONS PATH

——————→ PRODUCT PATH

* INSIDE DISCHARGE

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1/31/2018	ALS	AS-BUILT
1/24/2024	TRT	UPDATED TO AS-BUILT

EVONIK INDUSTRIES

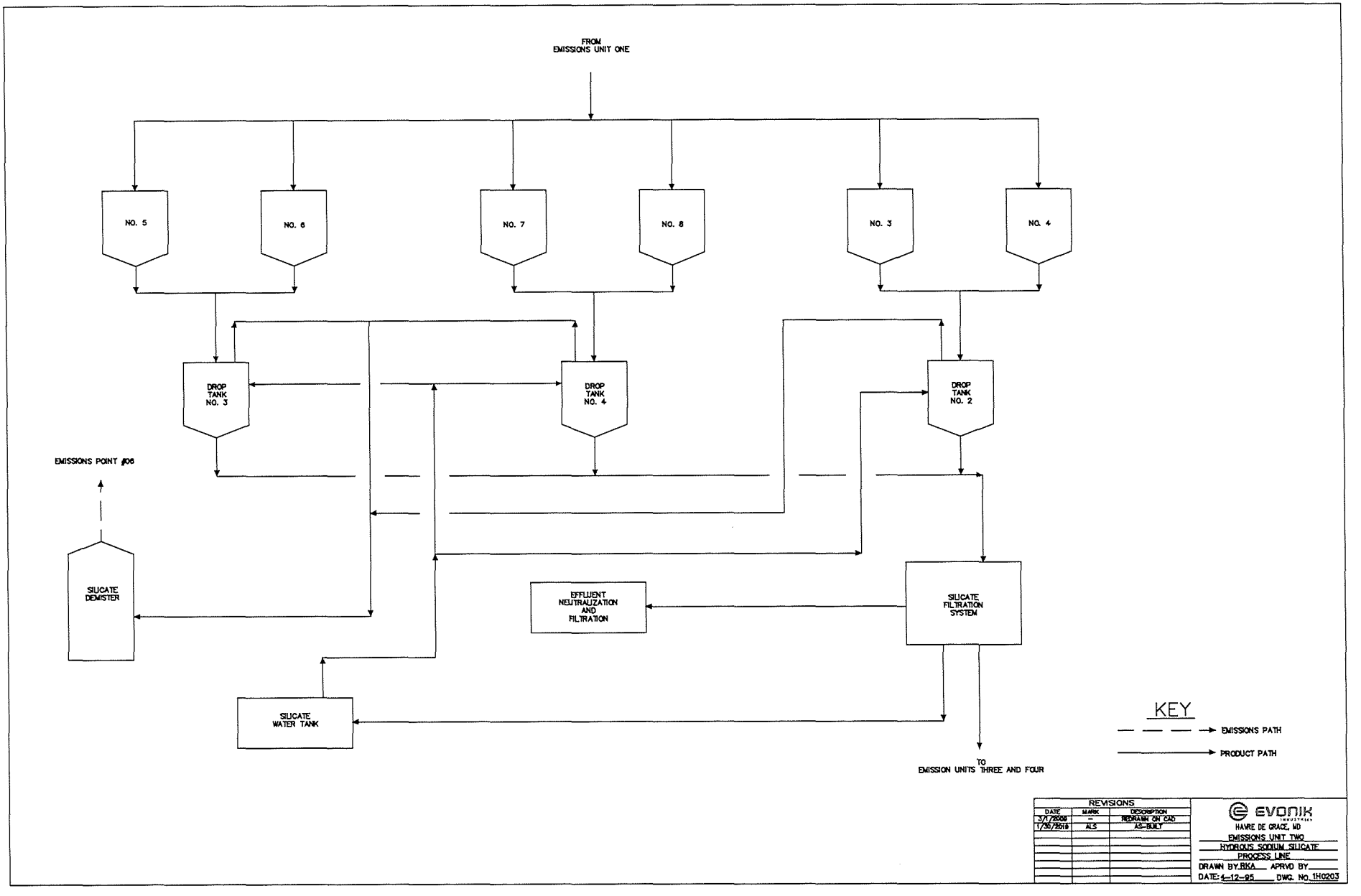
HAVRE DE GRACE, MD

EMISSIONS UNIT ONE

PNEUMATIC SILICA FLOUR CONVEYING AND STORAGE

DRAWN BY RKA APRVD BY

DATE 4-12-95 DWG. NO. 1H0202



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1/30/2019	ALS	AS-BUILT

EVONIK INDUSTRIES
HAVRE DE GRACE, MD
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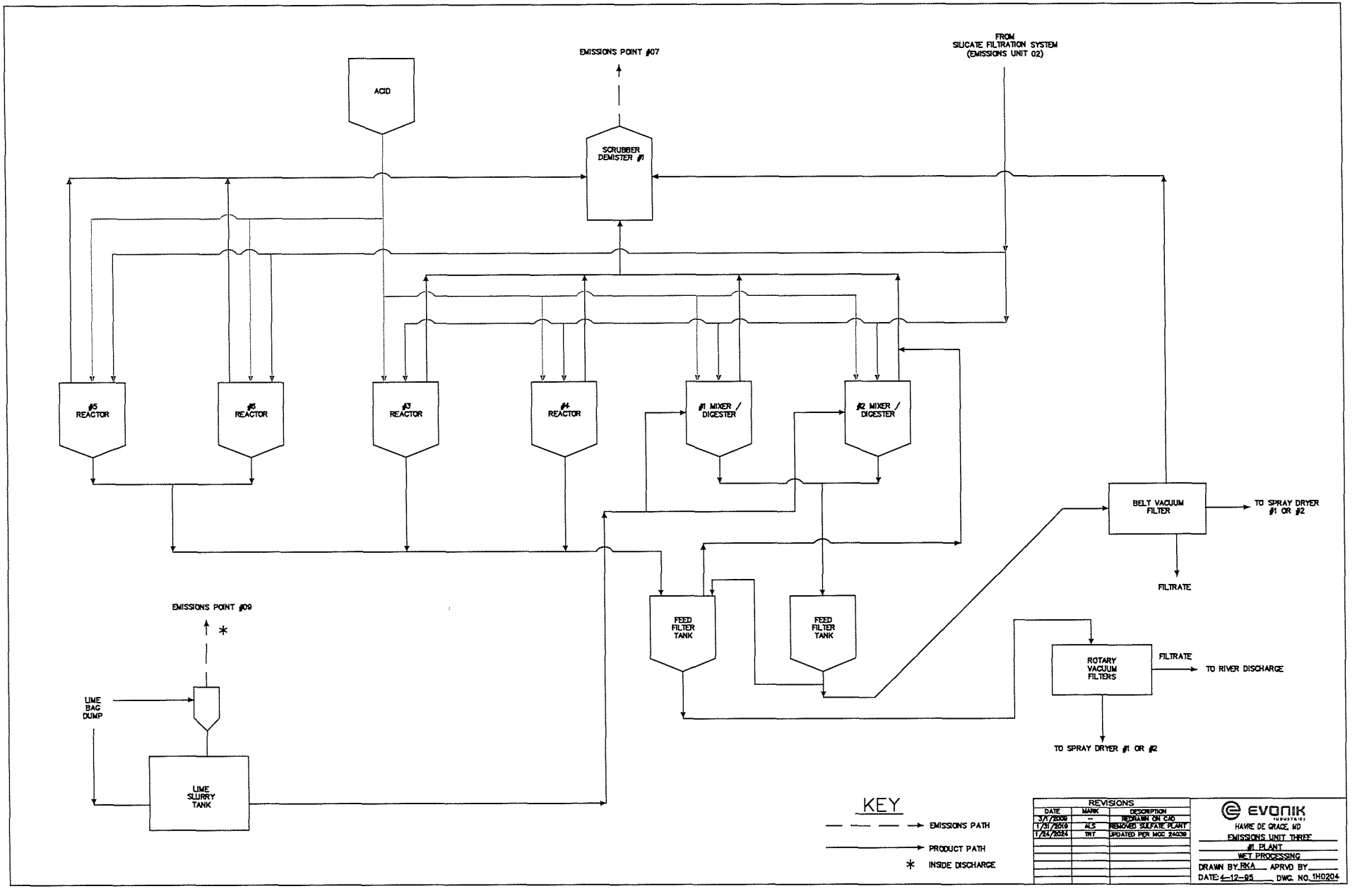
PROCESS LINE
DRAWN BY: RKA APRVD BY:
DATE: 4-12-95 DWG. NO. 1H0203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(EMISSIONS UNIT 02)
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#5
REACTOR
#6
REACTOR
#3
REACTOR
#4
REACTOR
#1 MIXER /
DIGESTER
#2 MIXER /
DIGESTER
BELT VACUUM
FILTER
TO SPRAY DRYER
#1 OR #2
FILTRATE
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ROTARY
VACUUM
FILTERS
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TO RIVER DISCHARGE
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TO SPRAY DRYER #1 OR #2
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PRODUCT PATH
INSIDE DISCHARGE
REVISIONS
DATE
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DESCRIPTION
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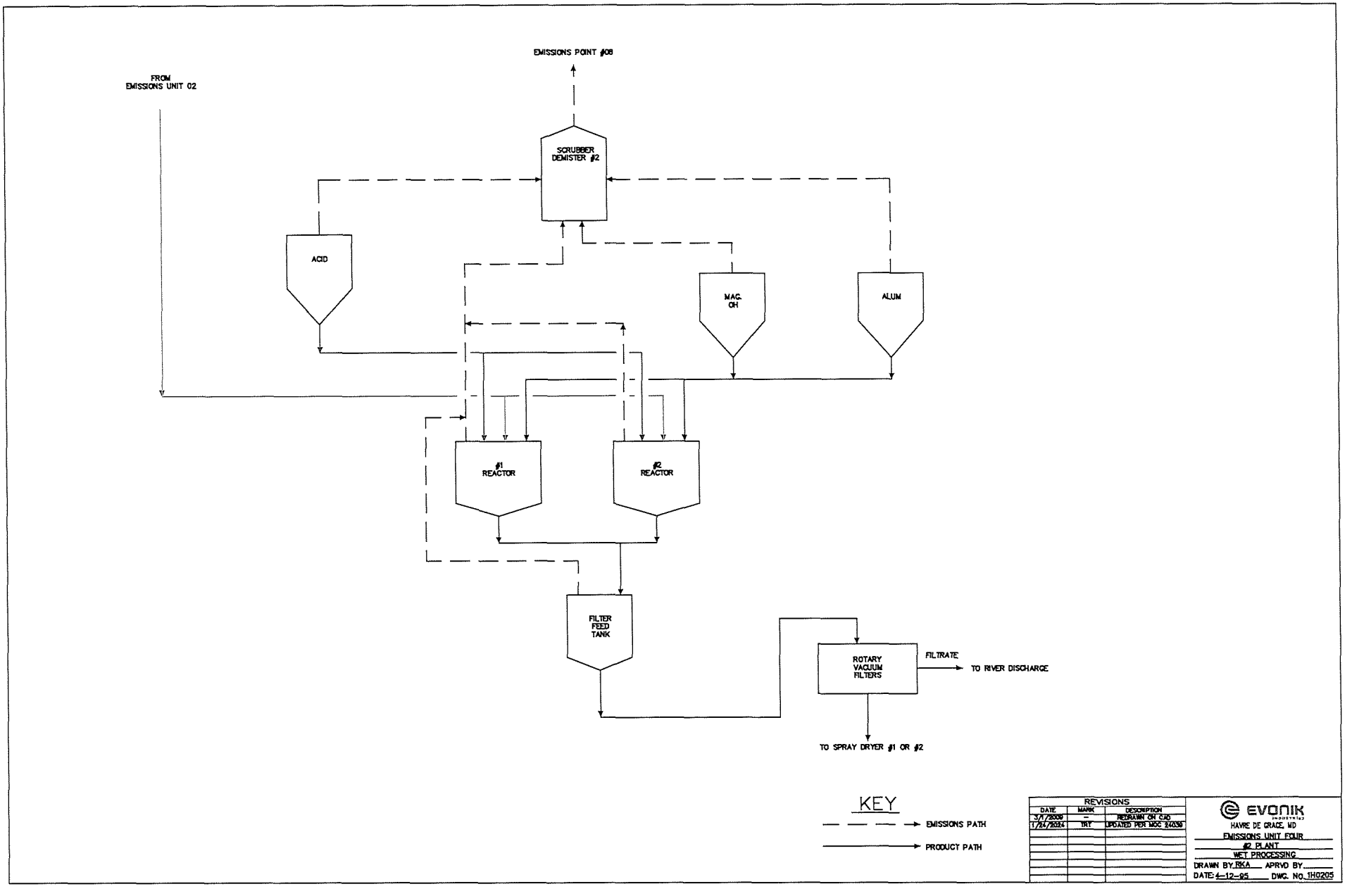
REDRAWN ON CAD
1/21/2019
ALS
REMOVED SULFATE PLANT
1/24/2024
TRT
UPDATED PER MOC 24039
EVONIK
INDUSTRIES
HAVRE DE GRACE, MD
EMISSIONS UNIT THREE
#1 PLANT
WET PROCESSING
DRAWN BY: RKA
APRVD BY:
DATE: 4-12-95
DWG. NO. 1H0204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VACUUM
FILTERS
FILTRATE
TO RIVER DISCHARGE
TO SPRAY DRYER #1 OR #2
KEY
EMISSIONS PATH
PRODUCT PATH
REVISIONS
DATE
MARK
DESCRIPTION
5/1/2009
-
REDRAWN ON CAD
1/24/2024
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EVONIK
HAVRE DE GRACE, MD
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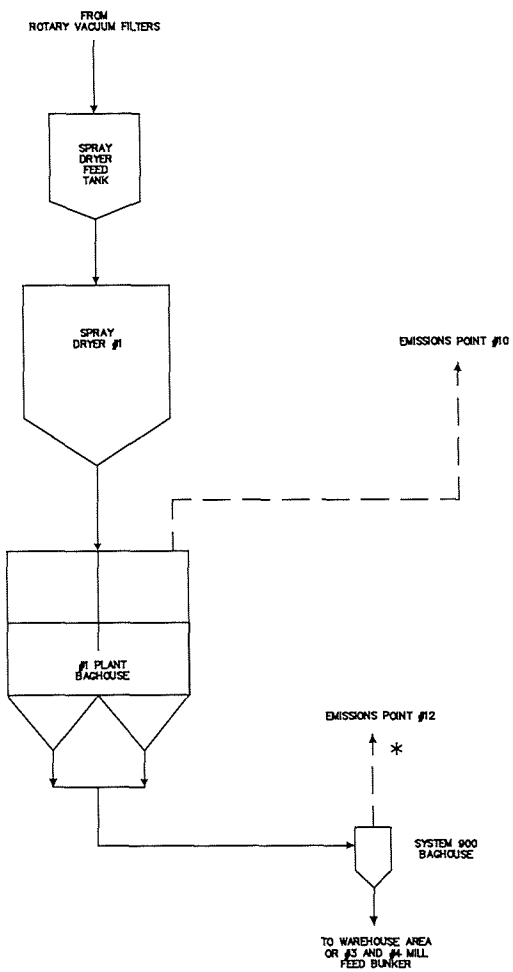
APRVD BY
DATE 4-12-95
DWG. NO. 1H0205



KEY

EMISSIONS PATH

PRODUCT PATH

* INSIDE DISCHARGE

REVISIONS		
DATE	MARK	DESCRIPTION
3/1/2008	--	REDRAWN ON CAD

EVONIK INDUSTRIES

HAVRE DE GRACE, MD

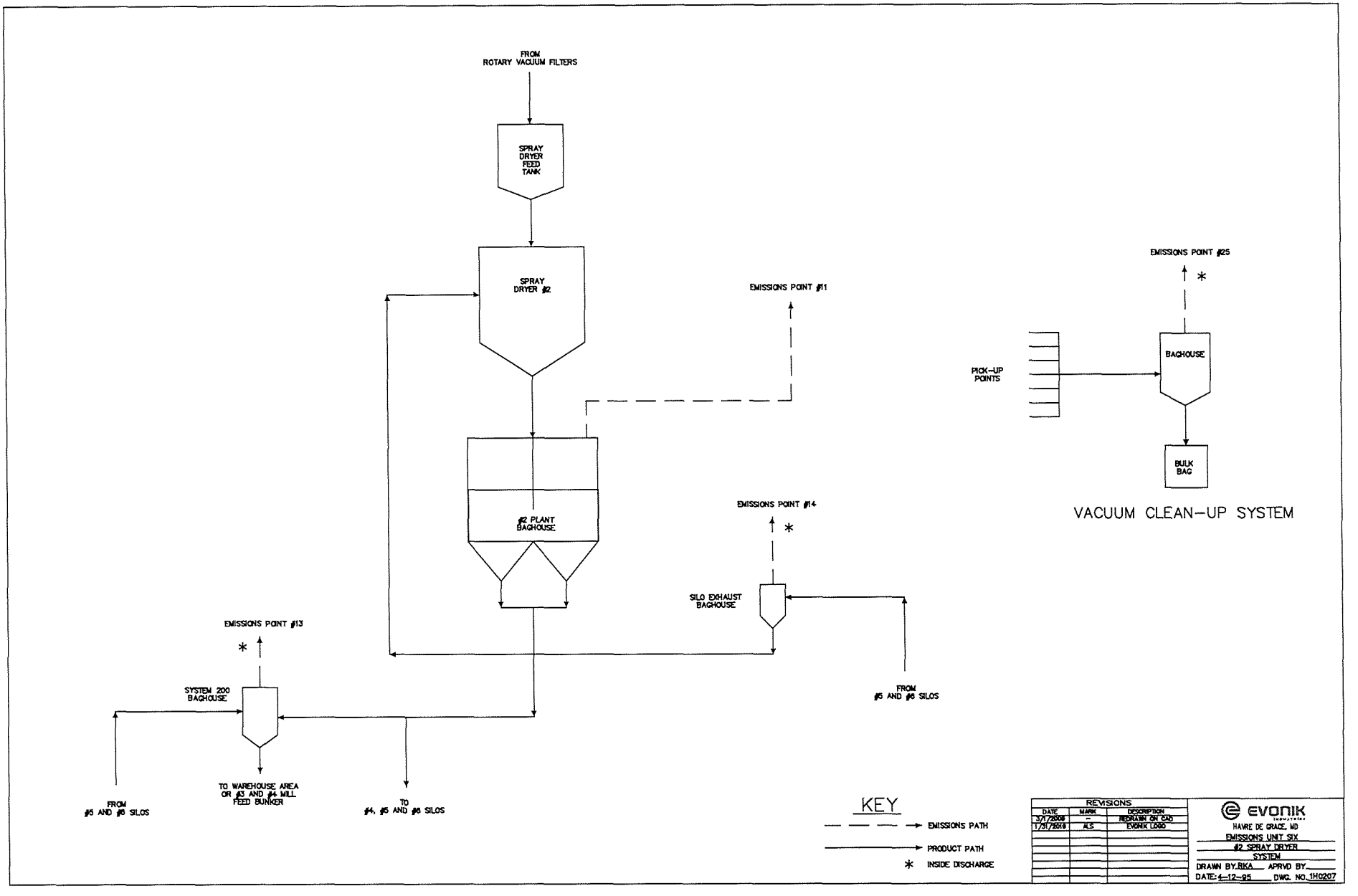
EMISSIONS UNIT FIVE

#1 SPRAY DRYER

SYSTEM

DRAWN BY: RKA APRVD BY:

DATE: 4-12-95 DWG. NO. 1H0206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DRYER
FEED
TANK
SPRAY
DRYER #2
EMISSIONS POINT #11
#2 PLANT
BAGHOUSE
EMISSIONS POINT #14
SILO EXHAUST
BAGHOUSE
FROM
#5 AND #6 SILOS
EMISSIONS POINT #13
SYSTEM 200
BAGHOUSE
TO WAREHOUSE AREA
OR #3 AND #4 MILL
FEED BUNKER
FROM
#5 AND #6 SILOS
TO
#4, #5 AND #6 SILOS
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PICK-UP
POINTS
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BULK
BAG
VACUUM CLEAN-UP SYSTEM
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EMISSIONS PATH
PRODUCT PATH
INSIDE DISCHARGE
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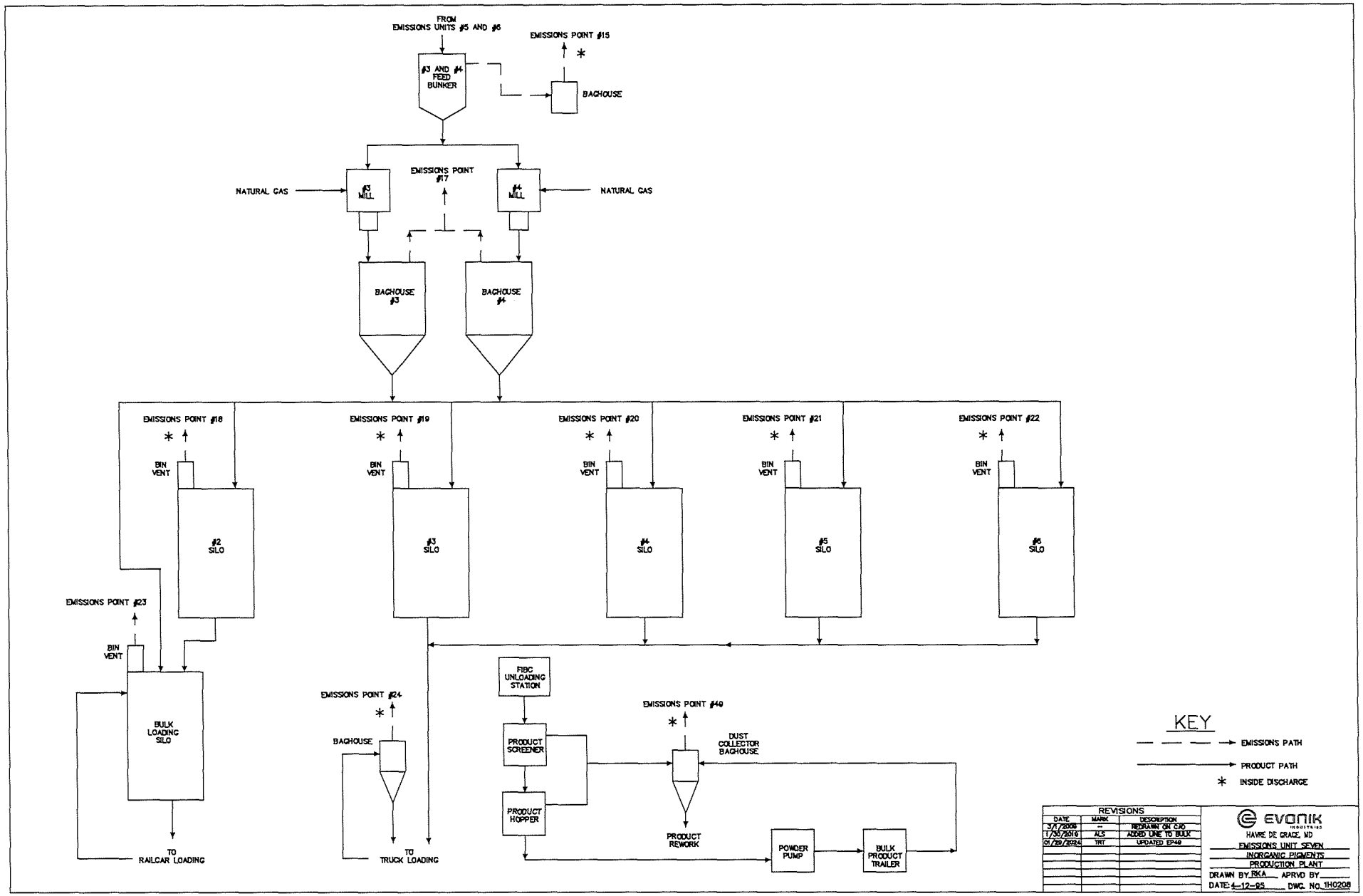
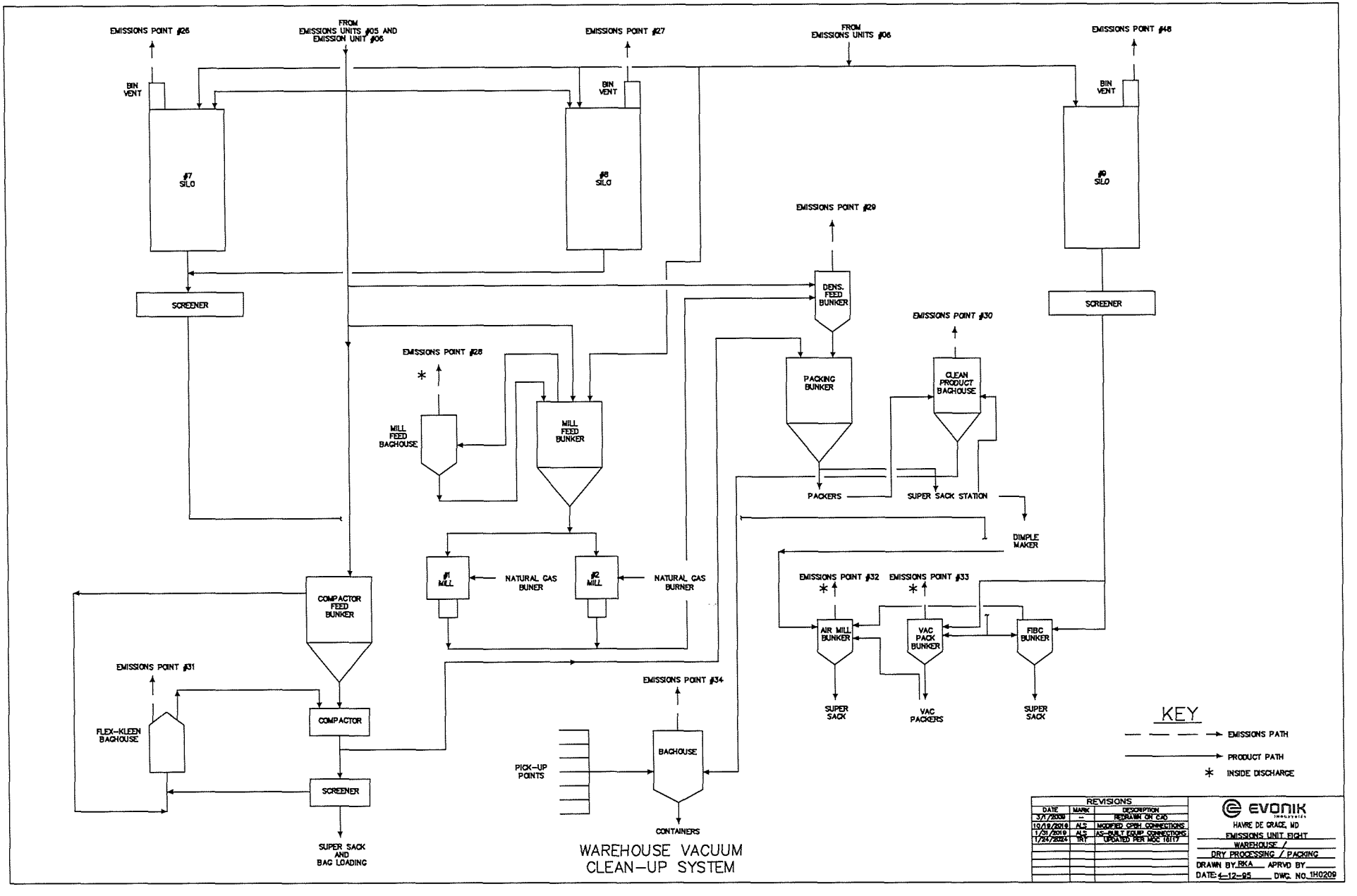
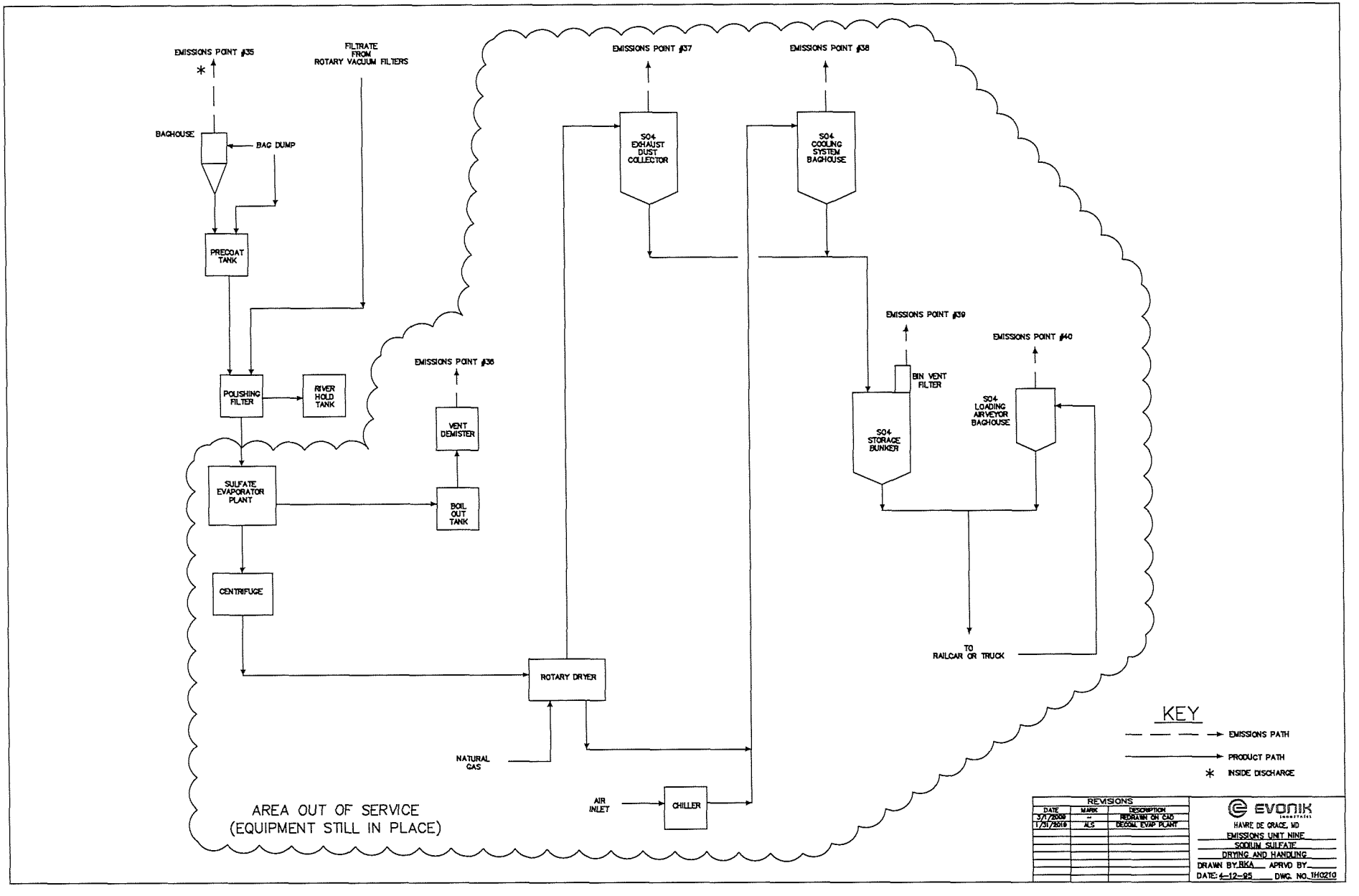
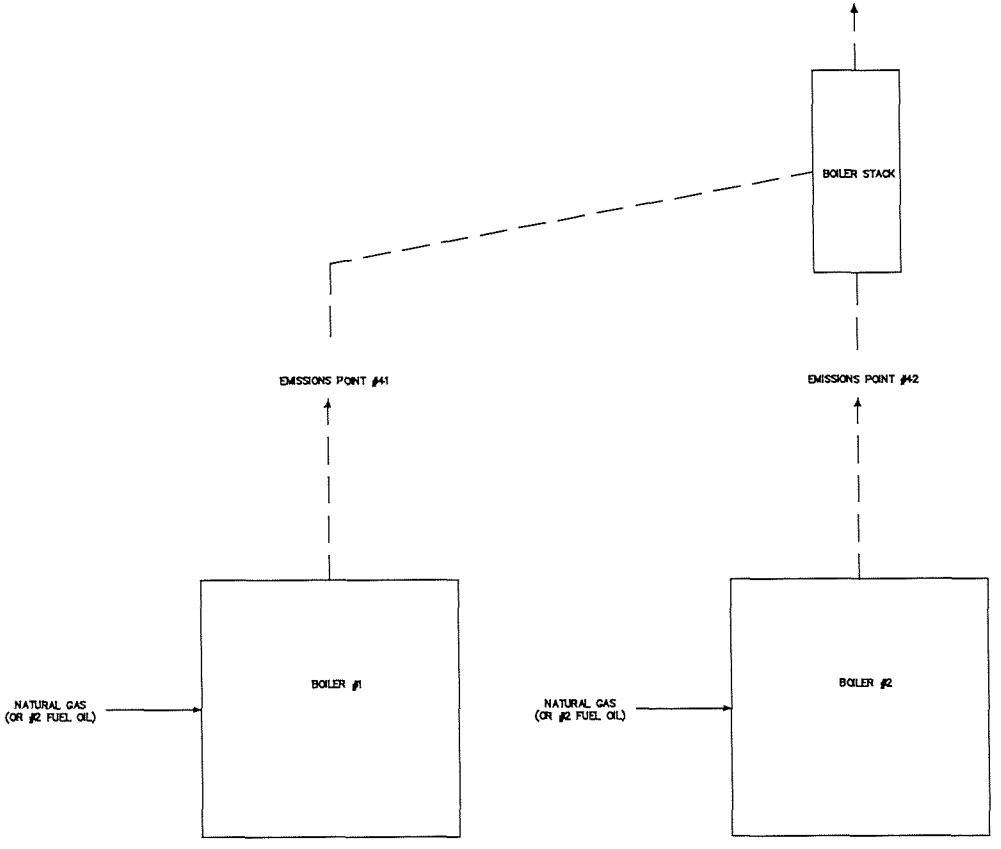
–
REDRAWN ON CAD
1/31/2018
ALS
EVONIK LOGO
evonik
HAVRE DE GRACE, MD
EMISSIONS UNIT SIX
#2 SPRAY DRYER
SYSTEM
DRAWN BY: RKA
APRVD BY:
DATE: 4-12-95
DWG. NO. 1H0207


FROM EMISSIONS UNITS #5 AND #6
EMISSIONS POINT #15
#3 AND #4 FEED BUNKER
BAGHOUSE
NATURAL GAS
#3 MILL
EMISSIONS POINT #17
#4 MILL
NATURAL GAS
BAGHOUSE #3
BAGHOUSE #4
EMISSIONS POINT #18
EMISSIONS POINT #19
EMISSIONS POINT #20
EMISSIONS POINT #21
EMISSIONS POINT #22
BIN VENT
#2 SILO
#3 SILO
#4 SILO
#5 SILO
#6 SILO
EMISSIONS POINT #23
BULK LOADING SILO
TO RAILCAR LOADING
EMISSIONS POINT #24
BAGHOUSE
TO TRUCK LOADING
FIBC UNLOADING STATION
PRODUCT SCREENER
PRODUCT HOPPER
EMISSIONS POINT #49
DUST COLLECTOR BAGHOUSE
PRODUCT REWORK
POWDER PUMP
BULK PRODUCT TRAILER
KEY
EMISSIONS PATH
PRODUCT PATH
INSIDE DISCHARGE
REVISIONS
DATE | MARK | DESCRIPTION
3/1/2005 | -- | REDRAWN ON CAD
1/30/2016 | ALS | ADDED LINE TO BULK
01/29/2024 | TRT | UPDATED EP49
evonik INDUSTRIES
HAVRE DE GRACE, MD
EMISSIONS UNIT SEVEN
INORGANIC PIGMENTS
PRODUCTION PLANT
DRAWN BY RKA APRVD BY
DATE: 4-12-05 DWG. NO. 1H0208



WAREHOUSE VACUUM CLEAN-UP SYSTEM


EMISSIONS POINT #35
FILTRATE FROM ROTARY VACUUM FILTERS
EMISSIONS POINT #37
EMISSIONS POINT #38
BAGHOUSE
BAG DUMP
SO4 EXHAUST DUST COLLECTOR
SO4 COOLING SYSTEM BAGHOUSE
PRECOAT TANK
EMISSIONS POINT #39
EMISSIONS POINT #40
EMISSIONS POINT #36
BIN VENT FILTER
POLISHING FILTER
RIVER HOLD TANK
VENT DEMISTER
SO4 LOADING AIRVEYOR BAGHOUSE
SO4 STORAGE BUNKER
SULFATE EVAPORATOR PLANT
BOIL OUT TANK
CENTRIFUGE
TO RAILCAR OR TRUCK
ROTARY DRYER
NATURAL GAS
AIR INLET
CHILLER
AREA OUT OF SERVICE
(EQUIPMENT STILL IN PLACE)
KEY
EMISSIONS PATH
PRODUCT PATH
INSIDE DISCHARGE
REVISIONS
DATE
MARK
DESCRIPTION
3/1/2009
--
REDRAWN ON CAD
1/31/2018
ALS
DECOM. EVAP. PLANT
EVONIK
HAVRE DE GRACE, MD
EMISSIONS UNIT NINE
SODIUM SULFATE
DRYING AND HANDLING
DRAWN BY: RKA
APRVD BY:
DATE: 4-12-95
DWG. NO. TH0210



KEY

EMISSIONS PATH

PRODUCT PATH

REVISIONS		
DATE	MARK	DESCRIPTION
3/1/2008	–	REDRAWN ON CAD
1/31/2019	ALS	REMOVED #3 BOILER

EVONIK INDUSTRIES

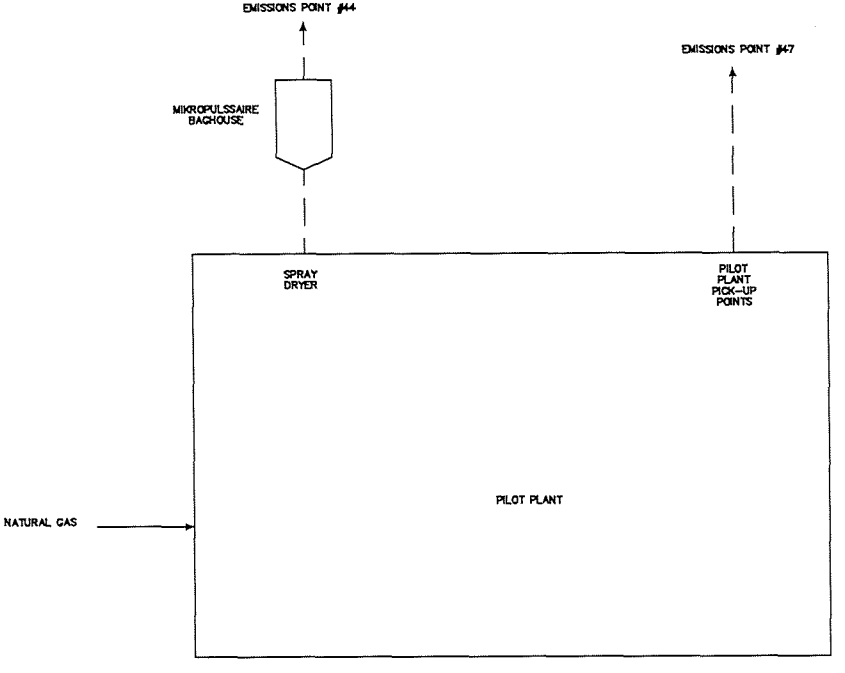
HAVRE DE GRACE, MD

EMISSIONS UNIT TEN

BOILERS

DRAWN BY: RKA APRVD BY:

DATE: 4-12-95 DWG. NO. 1H0211



KEY

EMISSIONS PATH

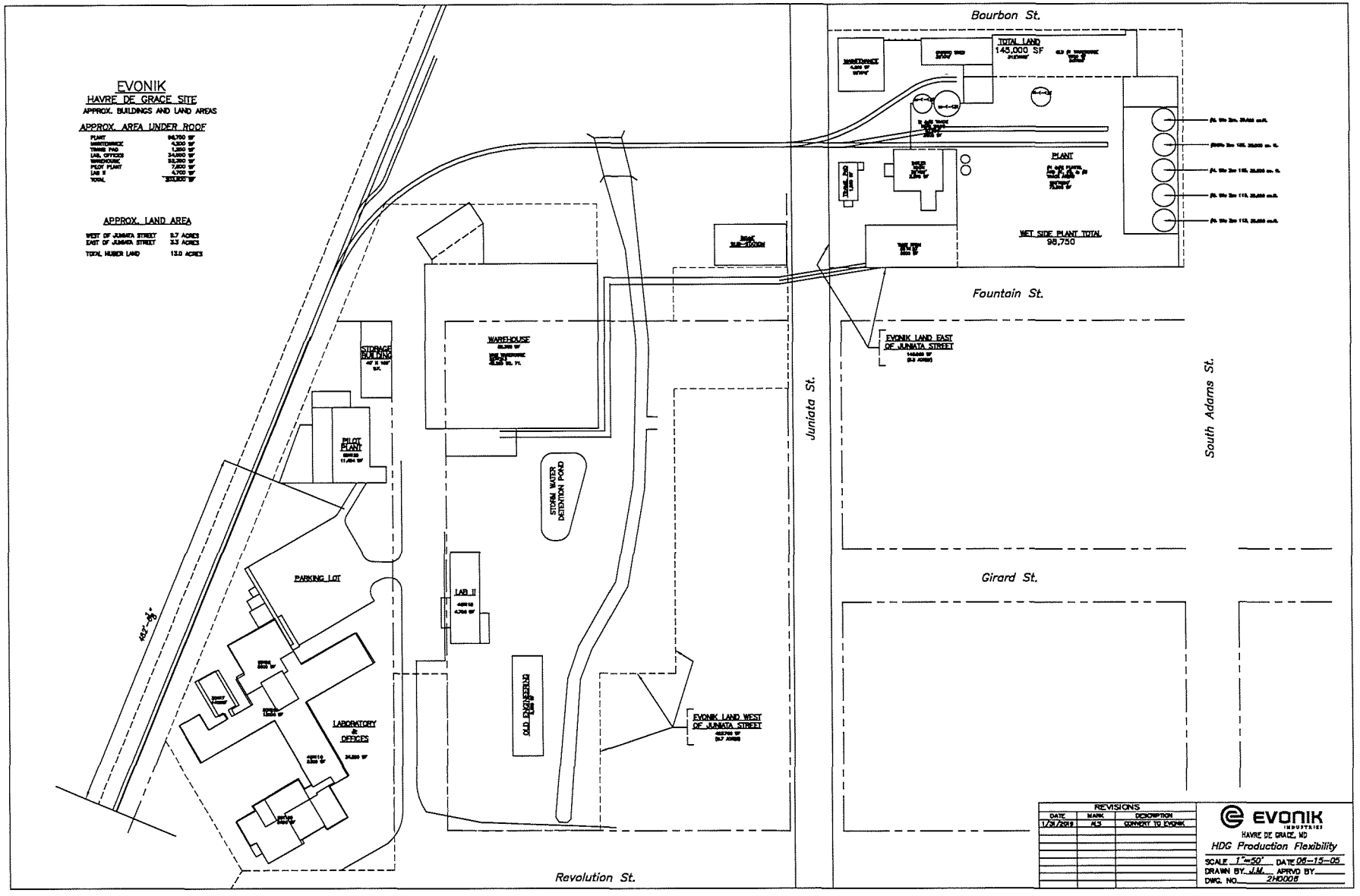
PRODUCT PATH

REVISIONS		
DATE	MARK	DESCRIPTION
3/1/2009	–	REDRAWN ON CAD
1/31/2018	ALS	REMOVED LP BOILER
1/24/2024	TNT	UPATED PER MOC 128823

EVONIK INDUSTRIES
HAVRE DE GRACE, MD

EMISSIONS UNIT ELEVEN
PILOT PLANT

DRAWN BY RKA APRVD BY
DATE: 4-12-95 DWG. NO. 1H0212


EVONIK
HAVRE DE GRACE SITE
APPROX. BUILDINGS AND LAND AREAS
APPROX. AREA UNDER ROOF
PLANT 96,700 SF
MAINTENANCE 4,200 SF
TANK FAD 1,200 SF
LAB, OFFICES 34,000 SF
WAREHOUSE 53,250 SF
PILOT PLANT 7,200 SF
LAB II 4,700 SF
TOTAL 201,050 SF
APPROX. LAND AREA
WEST OF JUNIATA STREET 9.7 ACRES
EAST OF JUNIATA STREET 3.3 ACRES
TOTAL NUMBER LAND 13.0 ACRES
Bourbon St.
TOTAL LAND
145,000 SF
MAINTENANCE
PLANT
WET SIDE PLANT TOTAL
98,750
Fountain St.
EVONIK LAND EAST OF JUNIATA STREET
Juniata St.
South Adams St.
Girard St.
WAREHOUSE
STORAGE BUILDING
PILOT PLANT
STORM WATER DETENTION POND
PARKING LOT
LAB II
OLD ENGINEERING
LABORATORY & OFFICES
EVONIK LAND WEST OF JUNIATA STREET
Revolution St.
REVISIONS
DATE
MARK
DESCRIPTION
1/31/2018
ACS
SUBMISSION TO EVONIK
EVONIK INDUSTRIES
HAVRE DE GRACE, MD
HDG Production Flexibility
SCALE 1"=50'
DATE 06-15-05
DRAWN BY JM
APPRVD BY
DWG. NO. 2H0008

EVONIK
Leading Beyond Chemistry

Maryland Department of the Environment
Air and Radiation Management Administration
1800 Washington Boulevard, Suite 715
Baltimore, Maryland 21230-1720

March 31, 2023

Phone 410-939-7224
Fax 410-939-7303
Mobile 251-751-9913
francesca.pinczes@evonik.com

Evonik Corporation (24-025-0005) Annual Emissions Certification 2022

Evonik Corporation is submitting the Annual Emissions Certification for 2022 per the requirements of Title V permit #24-025-0005. The Title V permit was issued to this facility on January 30, 2020 and covers the period from January 1, 2022 through December 31, 2022.

Enclosed you will find Forms 1, 2, 3, 4, 5 and 6 for General Facility Information, Criteria Air Pollutants, Criteria Air Pollutants - PM, Toxic Air Pollutants, Billable Toxic Air Pollutants and GHG emissions. Supporting calculations and assumptions are included.

If you have any questions, please contact my office at contact information listed above.

Sincerely,

Francesca Pinczes

Francesca Pinczes
Environmental, Safety and Health Manager

[internal]

MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Boulevard, Suite 715 • Baltimore Maryland 21230-1720
410-537-3000 • 1-800-633-6101 • http://www.mde.state.md.us
Air and Radiation Management Administration
Air Quality Compliance Program
410-537-3220

FORM 1:

GENERAL FACILITY INFORMATION
EMISSIONS CERTIFICATION REPORT

Calendar Year: 2022

	Do Not Write in This Space
A. FACILITY IDENTIFICATION Facility Name Evonik Corporation	Date Received Regional
Address 907 Revolution Street	Date Received State
City Havre de Grace County Harford Zip Code 21078	AIRS Code
B. Briefly describe the major function of the facility	FINDS Code
Production of inorganic pigments: Sodium Aluminum Silicate, Calcium	SIC Code
Silicate and Synthetic Amorphous Silica. These are in powder form and some are used in	Facility Number:
food conditioning and pharmaceutical products.	
	TEMPO ID:
C. SEASONAL PRODUCTION (%, if applicable)	Reviewed by:
Winter *(Dec.-Feb.)* _____ Spring *(Mar – May)* _____ Summer *(Jun – Aug)* _____ Fall *(Sept – Nov)* _____	Name Date

D. Explain any increases or decreases in emissions from the previous calendar year for each registration at this facility.

E. CONTROL DEVICE INFORMATION (for NOx and VOC sources only)

Control Device	Capture Efficiency	Removal Efficiency

I am familiar with the facility and the installations and sources for which this report is submitted. I have personally examined the information in this report, which consists of 34 pages (including attachments), and certify that the information is correct to the best of my knowledge.

Michael R Ocbo	Site Manager	March 31, 2023
Name (Print/Type)	Title	Date
Signature		410-939-7317 Telephone

1/09/08

EPA United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2022

Federal Operating Permit Program (40 CFR Part 71)
CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS (CTAC)

This form must be completed, signed by the "Responsible Official" designated for the facility or emission unit, and sent with each submission of documents (i.e., application forms, updates to applications, reports, or any information required by a part 71 permit).

A. Responsible Official

Name: (Last) Ocbo (First) Michael (MI) R

Title Site Manager

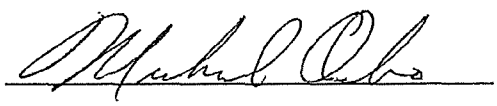
Street or P.O. Box 907 Revolution Street

City Havre de Grace State MD ZIP 21078 - ____

Telephone (410) 939 - 7317 Ext. ____ Facsimile (____) ____ - ____

B. Certification of Truth, Accuracy and Completeness (to be signed by the responsible official)

I certify under penalty of law, based on information and belief formed after reasonable inquiry, the statements and information contained in these documents are true, accurate and complete.

Name (signed) 

Name (typed) Michael R Ocbo Date: 03 /31 /2023

INSTRUCTIONS FOR CTAC
CERTIFICATION OF TRUTH, ACURACY, and COMPLETENESS

Information Collection Burden Estimates

The public reporting and recordkeeping burden for this collection of information is estimated to average 247 hours per respondent per year. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

DETAILED INSTRUCTIONS

This form is for the responsible official to certify that submitted documents (i.e., permit applications, updates to application, reports, and any other information required to be submitted as a condition of a permit) are true, accurate, and complete.

This form should be completed and submitted with each set of documents sent to the permitting authority. It may be used at time of initial application, at each step of a phased application submittal, for application updates, as well as to accompany routine submittals required as a term or condition of a permit.

Section A - Title V permit applications must be signed by a responsible official. The definition of responsible official can be found at 40 CFR 70.2.

Section B - The responsible official must sign and date the certification of truth, accuracy and completeness. This should be done after all application forms are complete and the responsible official has reviewed the information. Normally this would be the last form completed before the package of forms is mailed to the permitting authority.

CERTIFICATION OF PLANT-WIDE CONDITIONS
(SECTION III OF PART 70 OPERATING PERMIT)

Indicate compliance with the following requirements of Section III of your Part 70 Operating Permit in the space provided below:

1. Particulate Matter from Construction and Demolition

   In 2022, Evonik Corporation, Havre de Grace, Maryland facility did not permit any building, its appurtenances, or a road to be used, constructed, altered, repaired or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

2. Open Burning

   Except as provided in COMAR 26.11.07.04, the Permittee may not cause or permit an open fire from June 1 through August 31 of any calendar year. Prior to open burning, the Permittee must request and receive approval from the Department.

   Evonik Corporation, Havre de Grace, Maryland facility did not cause or permit an open fire from June 1 through August 31, 2022. The facility did not conduct any open burning in the 2022 calendar year.

3. Air Pollution Episode (N/A)

   When requested by the Department, the Permittee shall prepare in writing standby emissions reduction plans, consistent with good industrial practice and safe operating procedures, for reducing emissions creating air pollution during periods of Alert, Warning, and Emergency of an air pollution episode.

   An air pollution episode did not occur in 2022 and the Department did not request a plan from the facility.

4. Report of Excess Emissions and Deviations
   (All deviations from permit requirements should be clearly identified in quarterly monitoring reports.)

   Evonik Corporation, Havre de Grace, did not report any instances of visible emissions for 2022.

5. Accidental Release Provisions (if applicable)

   Should the Permittee, as defined in 40 CFR Part 68.3, become subject to 40 CFR Part 68.3 during the term of this permit, the owner or operator shall submit a risk management plan by the date specified in 40 CFR Part 68.10 and shall certify compliance with the requirements of 40 CFR Part 68 as part of the annual compliance certification as required by 40 CFR Part 70.

Evonik Corporation, Havre de Grace, Maryland facility did not become subject to 40 CFR Part 68.3 in 2022.

6. General Testing Requirements

The Department may require the Permittee to conduct, or have conducted, testing to determine compliance with this Part 70 permit. The Department, at its option, may witness or conduct these tests. This testing shall be done at a reasonable time, and all information gathered during a testing operation would be provided to the Department.

The Department did not request Evonik Corporation in Havre de Grace, Maryland to conduct or have conducted, testing to determine compliance with this Part 70 permit in 2022.

7. Emissions Test Methods

Compliance with the emissions standards and limitations in this Part 70 permit shall be determined by the test methods designated and described in Permit Condition III.7.a-c (i.e., 40 CFR 60 App. A/40 CFR App. M/MDE Technical Memorandum 91-01) or other test methods submitted to and approved by the Department.

Evonik Corporation, Havre de Grace, Maryland conducted monthly visible emissions observations according to 40 CFR 60, Appendix A, Method 22 to determine compliance with the relevant emissions standards and limitations in the Part 70 permit in 2022.

8. Emission Certification Report

Permittee shall certify actual annual emissions of regulated pollutants from the facility on a calendar year basis.

Evonik Corporation, Havre de Grace, Maryland submitted its Emissions Certification Report for 2022 on March 31, 2023.

9. Compliance Certification Report

The Permittee shall send to the Department and EPA Region III a report certifying compliance with each of this Part 70 permit including each applicable standard, emission limitation, and work practice for the previous calendar year by April 1 of each year.

On March 31, 2023, Evonik Corporation, Havre de Grace, Maryland submitted to the Department and EPA Region III its annual compliance certification report for 2022.

10. Certification by Responsible Official

All application forms, reports, and compliance certifications submitted pursuant this permit shall be certified by a responsible official as to truth, accuracy, and completeness. The Permittee shall expeditiously notify the Department of an appointment of a new responsible official.

All application forms, reports, and compliance certifications submitted in 2022 were certified by a responsible official from the Evonik Corporation, Havre de Grace, MD.

11. Sampling and Emissions Testing Record Keeping

The Permittee shall gather and retain the information in Permit Condition 11a-f when sampling and testing for compliance demonstrations.

Evonik Corporation, Havre de Grace, Maryland facility was not required to conduct sampling and emission testing in 2022.

12. General Record Keeping

The Permittee shall retain records of all monitoring data and support information that supports the compliance certification for a period of five years from the date that the monitoring sample, measurement, application, report or emissions test was completed or submitted to the Department. These records and support information shall include all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, records which support the annual emissions certification, and copies of all reports required by this permit.

Evonik Corporation, Havre de Grace, Maryland facility maintains the records for a period of five years. Records for the previous five years have been retained except as noted in previous annual compliance certifications.

13. General Conformity (N/A except for federal facilities)

Not applicable for the Evonik Corporation, Havre de Grace, Maryland facility.

14. Asbestos Provisions (if applicable)

The Permittee shall comply with 40 CFR Part 61, Subpart M when conducting any renovation or demolition activities at the facility.

Evonik Corporation, Havre de Grace, Maryland did not conduct any asbestos related activity in 2022.

15. Ozone Depleting Regulations (if applicable)

The Permittee shall comply with 40 CFR Part 82, Subpart F with regards to the service, maintenance, repair and disposal of appliances containing class I or class II ODS.

Evonik Corporation, Havre de Grace, Maryland uses only certified technicians as defined in 40 CFR Part 82 sec 161(a) to service, maintain, repair and dispose of ODS containing appliances.

16. Acid Rain Permit (if applicable)

Not applicable for the Evonik Corporation, Havre de Grace, Maryland facility.

Methods and Assumptions for Annual Emissions 2022

1. The Equipment Inventory notes that the fuel type used was natural gas (NG) for the registered equipment, it does not include the No. 2 Fuel Oil usage for registered equipment that has the ability to use No. 2 Fuel Oil. As shown in the Form 3 PM Calculations 2022 and as stated in the Annual Certification of Plant Wide Conditions submitted for 2022, there was no No. 2 Fuel Oil purchased nor used in 2022.
2. The rates for process equipment are identified in the Equipment Inventory under Throughput but is measured in units of cubic feet per minute (cfm) which was not on the Cover Page for MDE Emission Certification Report, however, the facility thought it should be noted in this location. This information is also noted in the PM Calculations 2022 and is shown in Form 3 PM Calculations 2022.
3. Emissions of Criteria Air Pollutants including SOx, NOx, CO, VOC's, and Lead are generated in trace amounts by registered process fuel burning equipment: #1 and #2 Spray Dryers, Sulfate Dryer (Out of Service), #1 and #2 Warehouse Mill Burners, #3 and #4 Bulk Loading Mill Burners, #1 Boiler, #2 Boiler, Pilot Plant Spray Dryer, Pilot Plant High Pressure Boiler and Pilot Plant Low Pressure Boiler (Out of Service). Emissions are calculated based on AP-42 factors and metered natural gas usage values. See the attached Form 2 Calculation Sheet and Form 2 Critical Pollutants calculations. It should be noted that the pilot plant has only one gas meter; therefore, gas usage is based on days operated. Reported emissions are listed by registration numbers with a brief equipment description.
4. Particulate Matter (PM) emissions are based on AP-42 factors for the #1 Boiler, #2 Boiler, Pilot Plant High Pressure Boiler, Pilot Plant Low Pressure Boiler, and the Pilot Plant Spray Dryer.
5. For PM emissions of the #1 and #2 Boilers, both natural gas and fuel oil factors were considered, although no No. 2 Fuel Oil was used in 2022, as shown in Form 3 PM Calculations 2022.
6. For PM emissions of the Pilot Plant High Pressure Boiler, Pilot Plant Low Pressure Boiler and the Pilot Plant Spray Dryer are based on factors from AP-42 table 1.4-2. This assumes that PM 10 and PM 2.5 are both equal to PM filterable (total) noted in footnote C of the table.
7. Stack testing had been performed on the #1 and #2 Spray Dryers and the values of the results were used for the PM emissions calculations. The emission rates for #1 and #2 Spray Dryers were 0.14 lbs/hr and 1.42 lbs/hr, respectively. However, per MDE request, the more conservative 1.42 lbs/hr has been used for both spray dryers.
8. Particulate matter emissions are based on a very conservative dust loading of 0.015 GR/DSCF from our bag houses. Emissions flow rates were taken from what was specified in Havre de Grace Plant permits. This process was used to estimate particulate emissions from process equipment that has not already been noted and is shown in attached documentation.

9. Particulate matter losses to the atmosphere via fugitive emissions are calculated based on inside stack discharge air flow. It was assumed that 10% of inside emissions escape to the atmosphere that would equate to a dust loading of 0.0015 GR/DSCF.
10. Particulate matter losses via our three registered mist eliminator stacks are assumed to be 0.0015 GR/DSCF; however, there is no evidence of any emissions. It should be noted in the attached calculations; the silicate drop tank demister receives flow only 10 minutes per hour while the plant is operating.
11. The PM 10 and PM 2.5 emissions for process equipment (excluding #1 Boiler, #2 Boiler, Pilot Plant High Pressure Boiler, Pilot Plant Low Pressure Boiler, Pilot Plant Spray Dryer, #1 Spray Dryer, and #2 Spray Dryer) are based on factors from AP-42 Appendix B. It is assumed that PM total for these pieces of equipment is all PM filterable.
12. Calculations were based on a plant operating time for 2022 of zero hours for #1 Spray Dryer and 4162 hours for #2 Spray Dryer.
13. Since only some of the products we produce are milled with heat (natural gas) in the warehouse, the milling hours and total hours for PM are 3930.
14. Emissions for toxic air pollutants were calculated based on the factors from AP 42 Tables 1.4-3 and 1.4-4 and metered natural gas usage values. Calculations for pollutants were compared to the List of Maryland Air Toxics sheet (attached). Formaldehyde would be present as a result of natural gas combustion and calculations for the registered equipment are shown in Form 4 – formaldehyde calculation sheet and quantified on Form 4. As requested from the note on the Control Device column, this has been intentional left blank.
15. The facility's fuel-burning equipment is exempt from Form 5 under COMAR 26.11-15.03. All non-fuel burning equipment do not emit Class 1 or Class 2 Toxic Air Pollutants. Although, there are no Billable Toxic Air Pollutants (TAPs) being emitted, the form has been completed indicating this.
16. Emissions for greenhouse gas air pollutants were calculated based on the factors from AP 42 Tables 1.4-2 and metered natural gas usage values. Calculations for GHG air pollutants are shown in Form 6 – GHG Calculation Sheet and are quantified on Form 6.

FORM 0

EQUIPMENT INVENTORY
EMISSIONS CERTIFICATION REPORT

Equipment Inventory

24-025-0005 Evonik Corportation Please Enter Facility ID and Name

Equipment Name	Registration No.	S / F	Fuel			Throughput		Actual Operating Schedule			Estimation Methods
			Type	Amount	Units	Amount	Units	hrs/day	days/wk	days/yr	
#2 BOILER	*5-013*	S	NG	12651300.00	cf			24	7	157	C1
#1 BOILER	*5-032*	S	NG	55845400.00	cf			24	7	247	C1
PILOT PLANT HIGH PRESSURE BOILER	*5-0125*	S	NG	701818.00	cf			10	5	215	C1
PILOT PLANT LOW PRESSURE BOILER	*5-0126*	S	NG	0.00	cf			0	0	0	C1
SILICATE DISSOLVERS	*7-028*	S				11350	cfm	16	7	267	C2
SAND HANDLING	*7-064*	S						6	5	148	C4
SAND HANDLING	*7-064*	F						6	5	148	C4
#1 PLT WET PROCESSING	*7-065*	S				7,000	cfm	0	0	0	C2
#1 PLT WET PROCESSING	*7-065*	F				1300	cfm	0	0	0	C2
#2 SPRAY DRYER	*7-069*	S	NG	64257727.00	cf			16	7	267	C1
#2 SPRAY DRYER	*7-069*	F				3305	cfm	16	7	267	C2
#1 SPRAY DRYER	*7-102*	S	NG	0.00	cf			0	0	0	C1
#1 SPRAY DRYER	*7-102*	F				1495	cfm	0	0	0	C2
PILOT PLANT SPRAY DRYER	*7-105*	S	NG	2049861.00	cf			4	5	215	C1
#2 PLT WET PROCESSING	*7-131*	S				13600	cfm	4162	7	267	C2
WAREHOUSE MILLING & PACKING	*7-132*	S	NG	12225.00	cf			10	7	236	C1
WAREHOUSE MILLING & PACKING	*7-132*	F				3430	cfm	10	7	236	C2
SULFATE PLANT	*7-136*	S	NG	0.00	cf			0	0	0	C1
SULFATE PLANT	*7-136*	F				1300	cfm	0	0	0	C2
BULK MILLING & LOADING	*7-151*	S	NG	616797.00	cf			10	7	160	C1
BULK MILLING & LOADING	*7-151*	F				2000	cfm	10	7	160	C2
ADDITIONAL FUGATIVE EMISSIONS VACUUM		F				800	cfm				C4

CALENDAR YEAR: 2022

[internal]

FORM 2

CRITERIA POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Criteria Pollutants

24-025-0005 Evonik Corportation Please Enter Facility ID and Name in Equipment Inventory Spreadsheet

Equipment Name	Registration No.	S / F	Fuel Type	VOC		(TOSD)	NOx		(TOSD)	SOx		CO		Lead		Estimation Methods
				tons/yr	lbs/day	lbs/day	tons/yr	lbs/day	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	
#2 BOILER	5-013	S	NG	3.48E-02	4.43E-01	1.85E-01	6.33E-01	8.06E+00	3.36E+00	3.80E-03	4.83E-02	5.31E-01	6.77E+00	3.16E-06	4.03E-05	C3
#1 BOILER	5-032	S	NG	1.54E-01	1.24E+00	5.18E-01	2.79E+00	2.26E+01	9.42E+00	1.68E-02	1.36E-01	2.35E+00	1.90E+01	1.40E-05	1.13E-04	C3
PILOT PLANT HIGH PRESSURE BOILER	5-0125	S	NG	1.93E-03	1.80E-02	7.48E-03	3.51E-02	3.26E-01	1.36E-01	2.11E-04	1.96E-03	2.95E-02	2.74E-01	1.75E-07	1.63E-06	C3
PILOT PLANT LOW PRESSURE BOILER	5-0126	S	NG	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	C3
#2 SPRAY DRYER	7-069	S	NG	1.77E-01	1.32E+00	5.52E-01	1.61E+00	1.20E+01	5.01E+00	1.93E-02	1.44E-01	2.70E+00	2.02E+01	1.61E-05	1.20E-04	C3
#1 SPRAY DRYER	7-102	S	NG	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	C3
PILOT PLANT SPRAY DRYER	7-105	S	NG	5.64E-03	5.24E-02	2.18E-02	1.02E-01	9.53E-01	3.97E-01	6.15E-04	5.72E-03	8.61E-02	8.01E-01	5.12E-07	4.77E-06	C3
WAREHOUSE MILLING & PACKING	7-132	S	NG	3.36E-05	2.85E-04	1.19E-04	6.11E-04	5.18E-03	2.16E-03	3.67E-06	3.11E-05	5.13E-04	4.35E-03	3.06E-09	2.59E-08	C3
SULFATE PLANT	7-136	S	NG	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	C3
BULK MILLING & LOADING	7-151	S	NG	1.70E-03	2.12E-02	8.83E-03	3.08E-02	3.85E-01	1.61E-01	1.85E-04	2.31E-03	2.59E-02	3.24E-01	1.54E-07	1.93E-06	C3
Total Emissions				3.74E-01	3.10E+00	1.29E+00	5.20E+00	4.44E+01	1.85E+01	4.08E-02	3.38E-01	5.72E+00	4.74E+01	3.40E-05	2.82E-04	

CALENDAR YEAR: 2022
[internal]

Form 2 Calculation Sheet - Based on AP 42

N0x Calculations
#2 Boiler (5-013) (Gas), #1 Boiler (5-032), #2 Spray Dryer (7-069) & #1 Spray Dryer (7-102) Tons/yr = air flow (ft3/yr)*(5.0E-5 ton/1000 ft3) + (fuel oil gal/yr)*(20#/1000gal)*(1 ton/2000 lbs) Pounds/day = (tons/year)*(2000 pounds/ton)*(1 year/# days) or Pounds/day = (tons/year)*(2000 pounds/ton)*(1 year/# hours) *24 hrs/day **Pilot Plant High Pressure Boiler (5-0125), Pilot Plant Low Pressure Boiler (5-0126), Pilot Plant Spray Dryer (7-105), Warehouse Milling & Packing (7-132), Sulfate Plant (7-136), Bulk Milling and Loading (7-151)** Tons/yr = air flow (ft3/yr)*(5.0E-5 ton/1000 ft3) Pounds/day = (tons/year)*(2000 pounds/ton)*(1 year/# days) or Pounds/day = (tons/year)*(2000 pounds/ton)*(1 year/# hours) *24 hrs/day

SOx Calculations
#2 Boiler (5-013) (Gas), #1 Boiler (5-032), #2 Spray Dryer (7-069) & #1 Spray Dryer (7-102) Tons/yr = air flow (ft3/yr)*(3.0E-7 ton/1000 ft3) + (fuel oil gal/yr)*(22.7#/1000gal)*(1 ton/2000 lbs) Pounds/day = (tons/year)*(2000 pounds/ton)*(1 year/# days) or Pounds/day = (tons/year)*(2000 pounds/ton)*(1 year/# hours) *24 hrs/day **Pilot Plant High Pressure Boiler (5-0125), Pilot Plant Low Pressure Boiler (5-0126), Pilot Plant Spray Dryer (7-105), Warehouse Milling & Packing (7-132), Sulfate Plant (7-136), Bulk Milling and Loading (7-151)** Tons/yr = air flow (ft3/yr)*(3.0E-7 ton/1000 ft3) Pounds/day = (tons/year)*(2000 pounds/ton)*(1 year/# days) or Pounds/day = (tons/year)*(2000 pounds/ton)*(1 year/# hours) *24 hrs/day

VOC Calculations
#2 Boiler (5-013) (Gas), #1 Boiler (5-032), #2 Spray Dryer (7-069) & #1 Spray Dryer (7-102) Tons/yr = air flow (ft3/yr)*(2.75E-6 ton/1000 ft3) + (fuel oil gal/yr)*(0.34#/1000gal)*(1 ton/2000 lbs) Pounds/day = (tons/year)*(2000 pounds/ton)*(1 year/# days) or Pounds/day = (tons/year)*(2000 pounds/ton)*(1 year/# hours) *24 hrs/day **Pilot Plant High Pressure Boiler (5-0125), Pilot Plant Low Pressure Boiler (5-0126), Pilot Plant Spray Dryer (7-105), Warehouse Milling & Packing (7-132), Sulfate Plant (7-136), Bulk Milling and Loading (7-151)** Tons/yr = air flow (ft3/yr)*(2.75E-6 ton/1000 ft3) Pounds/day = (tons/year)*(2000 pounds/ton)*(1 year/# days) or Pounds/day = (tons/year)*(2000 pounds/ton)*(1 year/# hours) *24 hrs/day

CO Calculations
#2 Boiler (5-013) (Gas), #1 Boiler (5-032), #2 Spray Dryer (7-069) & #1 Spray Dryer (7-102) Tons/yr = air flow (ft3/yr)*(4.20E-5 ton/1000 ft3) + (fuel oil gal/yr)*(5.0#/1000gal)*(1 ton/2000 lbs) Pounds/day = (tons/year)*(2000 pounds/ton)*(1 year/# days) or Pounds/day = (tons/year)*(2000 pounds/ton)*(1 year/# hours) *24 hrs/day **Pilot Plant High Pressure Boiler (5-0125), Pilot Plant Low Pressure Boiler (5-0126), Pilot Plant Spray Dryer (7-105), Warehouse Milling & Packing (7-132), Sulfate Plant (7-136), Bulk Milling and Loading (7-151)** Tons/yr = air flow (ft3/yr)*(4.20E-5 ton/1000 ft3) Pounds/day = (tons/year)*(2000 pounds/ton)*(1 year/# days) or Pounds/day = (tons/year)*(2000 pounds/ton)*(1 year/# hours) *24 hrs/day

Lead Calculations
#2 Boiler (5-013) (Gas), #1 Boiler (5-032), #2 Spray Dryer (7-069) & #1 Spray Dryer (7-102) Pilot Plant High Pressure Boiler (5-0125), Pilot Plant Low Pressure Boiler (5-0126), Pilot Plant Spray Dryer (7-105), Warehouse Milling & Packing (7-132), Sulfate Plant (7-136), Bulk Milling and Loading (7-151) Tons/yr = air flow (ft3/yr)*(2.50E-10 ton/ 1000 ft3) Pounds/day = (tons/year)*(2000 pounds/ton)*(1 year/# days) or Pounds/day = (tons/year)*(2000 pounds/ton)*(1 year/# hours) *24 hrs/day Pounds/hr = (tons/year)*(2000 pounds/ton)*(hours/year)

Crtical Pollutants

Equipment 2022	Natural Gas (ft3/yr)	#2 Fuel Oil (gal/yr)	Operating Hours	Operating Days/yr	NOx		SOx		VOC		CO		Lead		
					Tons/yr	Lbs/day	Tons/yr	Lbs/day	Tons/yr	Lbs/day	Tons/yr	Lbs/day	Tons/yr	Lbs/day	Lbs/hr
#2 Boiler (5-013)	12,651,300	0	3,768	157	0.633	8.058	0.004	0.048	0.035	0.443	0.531	6.769	0.00000	0.00004	0.00000
#1 Boiler (5-032)	55,845,400	0	5,928	247	2.792	22.609	0.017	0.136	0.154	1.244	2.346	18.992	0.00001	0.00011	0.00000
Pilot Plant High Pressure Boiler (5-0125)	701,818		297	215	0.035	0.326	0.000	0.002	0.002	0.018	0.029	0.274	0.00000	0.00000	0.00000
Pilot Plant Low Pressure Boiler (5-0126)	0		0.00	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00000	0.00000	0.00000
#2 Spray Dryer (7-069)	64,257,727	0	4,162	267	1.606	12.033	0.019	0.144	0.177	1.324	2.699	20.216	0.00002	0.00012	0.00001
#1 Spray Dryer (7-102)	0	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00000	0.00000	0.00000
Pilot Plant Spray Dryer (7-105)	2,049,861		864	215	0.102	0.953	0.001	0.006	0.006	0.052	0.086	0.801	0.00000	0.00000	0.00000
Warehouse Milling & Packing (7-132)	12,225		2,345	236	0.001	0.005	0.000	0.000	0.000	0.000	0.001	0.004	0.00000	0.00000	0.00000
Sulfate System (7-136)	0		0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00000	0.00000	0.00000
Bulk Milling and Loading (7-151)	616,797		1,585	160	0.031	0.385	0.000	0.002	0.002	0.021	0.026	0.324	0.00000	0.00000	0.00000
total	136,135,128				**5.200**	**44.371**	**0.041**	**0.338**	**0.374**	**3.102**	**5.718**	**47.380**	**3.40E-05**	**2.82E-04**	**1.67E-05**

FORM 3

PARTICULATE MATTER
EMISSIONS CERTIFICATION REPORT

Particulate Matter (PM)
Pollutant

24-025-0005 Evonik Corportation Please Enter Facility ID and Name in Equipment Inventory Spreadsheet

Equipment Name	Registration No.	S / F	Fuel Type	PM - Filterable		PM 10 - Filterable		PM 2.5 - Filterable		PM - Condensable		Estimation Methods
				tons/yr	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	
#2 BOILER	5-013	S	NG	1.20E-02	1.53E-01	1.20E-02	1.53E-01	1.20E-02	1.53E-01	3.61E-02	4.59E-01	C3
#1 BOILER	5-032	S	NG	5.31E-02	4.30E-01	5.31E-02	4.30E-01	5.31E-02	4.30E-01	1.59E-01	1.29E+00	C3
PILOT PLANT HIGH PRESSURE BOILER	5-0125	S	NG	6.67E-04	6.20E-03	6.67E-04	6.20E-03	6.67E-04	6.20E-03	2.00E-03	1.86E-02	C3
PILOT PLANT LOW PRESSURE BOILER	5-0126	S	NG	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	C3
SILICATE DISSOLVERS	7-028	S		5.05E-02	3.79E-01	4.30E-02	3.22E-01	1.52E-02	1.14E-01	0.00E+00	0.00E+00	C4
SAND HANDLING	7-064	S		7.00E-02	5.38E-01	5.95E-02	4.58E-01	2.10E-02	1.62E-01	0.00E+00	0.00E+00	C4
SAND HANDLING	7-064	F		2.32E-02	1.79E-01	1.98E-02	1.52E-01	5.36E-02	5.36E-02	0.00E+00	0.00E+00	C4
#1 PLT WET PROCESSING	7-065	S		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	C4
#1 PLT WET PROCESSING	7-065	F		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	C4
#2 SPRAY DRYER	7-069	S	NG	7.39E-01	5.53E+00	7.39E-01	5.53E+00	7.39E-01	5.53E+00	2.22E+00	1.66E+01	C1
#2 SPRAY DRYER	7-069	F		2.21E-02	1.65E-01	1.88E-02	1.41E-01	2.65E-02	1.98E-01	6.62E-02	4.96E-01	C4
#1 SPRAY DRYER	7-102	S	NG	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	C1
#1 SPRAY DRYER	7-102	F		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	C4
PILOT PLANT SPRAY DRYER	7-105	S	NG	1.95E-03	1.81E-02	1.95E-03	1.81E-02	1.95E-03	1.81E-02	5.84E-03	5.43E-02	C3
#2 PLT WET PROCESSING	7-131	S		3.63E-01	4.19E+00	3.09E-01	3.56E+00	1.09E-01	1.26E+00	0.00E+00	0.00E+00	C4
WAREHOUSE MILLING & PACKING	7-132	S	NG	4.18E+00	3.55E+01	3.56E+00	3.01E+01	1.26E+00	1.06E+01	0.00E+00	0.00E+00	C4
WAREHOUSE MILLING & PACKING	7-132	F		5.16E-02	4.38E-01	4.39E-02	3.72E-01	1.55E-02	1.31E-01	0.00E+00	0.00E+00	C4
SULFATE PLANT	7-136	S	NG	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	C4
SULFATE PLANT	7-136	F		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	C4
BULK MILLING & LOADING	7-151	S	NG	7.33E-01	9.16E+00	6.23E-01	7.78E+00	2.20E-01	2.75E+00	0.00E+00	0.00E+00	C4
BULK MILLING & LOADING	7-151	F		2.04E-02	2.54E-01	1.73E-02	2.16E-01	6.11E-03	7.63E-02	0.00E+00	0.00E+00	C4
ADDITIONAL FUGATIVE EMISSIONS VACUUM		F		2.25E-03	1.23E-02	1.91E-03	1.05E-02	6.75E-04	3.70E-03	0.00E+00	0.00E+00	C4
Total Emissions				6.33E+00	5.69E+01	5.50E+00	4.93E+01	2.53E+00	2.15E+01	2.49E+00	1.89E+01	

CALENDAR YEAR: 2022
[internal]

Pilot Plant AP-42 Factors (Natural Gas)

NOTE: These were used for Spray Dryers, sulfate and mill dryers, and boilers.

SO_X: $\frac{0.6\ lb}{10^5\ ft^3} = \frac{3 \times 10^{-7}\ tons}{1000\ ft^3}$

NO_X (Low NO_X S.D.): $\frac{50\ lb}{10^5\ ft^3} = \frac{2.5 \times 10^{-5}\ tons}{1000\ ft^3}$

NO_X (uncontrolled): $\frac{100\ lb}{10^5\ ft^3} = \frac{5.0 \times 10^{-5}\ tons}{1000\ ft^3}$

VOC: $\frac{5.5\ lb}{10^5\ ft^3} = \frac{2.75 \times 10^{-6}\ tons}{1000\ ft^3}$

CO (uncontrolled): $\frac{84\ lb}{10^5\ ft^3} = \frac{4.2 \times 10^{-5}\ tons}{1000\ ft^3}$

CO (Low NO_X): $\frac{84\ lb}{10^5\ ft^3} = \frac{4.2 \times 10^{-5}\ tons}{1000\ ft^3}$

Lead: $\frac{0.0005\ lb}{10^5\ ft^3} = \frac{2.5 \times 10^{-10}\ tons}{1000\ ft^3}$

Plant AP-42 Factors (Natural Gas)

NOTE: These were used for the spray dryer.
(ft^3 = natural gas burned)

SO_X: $\frac{0.6\ lb}{10^5\ ft^3} = \frac{3 \times 10^{-7}\ tons}{1000\ ft^3}$

NO_X: $\frac{50\ lb}{10^5\ ft^3} = \frac{2.5 \times 10^{-5}\ tons}{1000\ ft^3}$

CO: $\frac{84\ lb}{10^5\ ft^3} = \frac{4.2 \times 10^{-5}\ tons}{1000\ ft^3}$

VOC: $\frac{5.5\ lb}{10^5\ ft^3} = \frac{2.75 \times 10^{-6}\ tons}{1000\ ft^3}$

Lead: $\frac{0.0005\ lb}{10^5\ ft^3} = \frac{2.5 \times 10^{-10}\ tons}{1000\ ft^3}$

Particulate Matter

1) Baghouses: (ft^3 = exhaust gas)

$$\frac{tons}{1000\ ft^3} = \frac{0.015\ grains}{ft3} \times \frac{lb}{7000\ grains} \times \frac{ton}{2000\ lb} \times 1000\ ft^3 = 1.07 \times 10^{-5}$$

2) Demisters: (assumed 0.0015 grains/SCFD)

$$\frac{tons}{1000\ ft^3} = 1.07 \times 10^{-7}$$

3) Fugitive Emissions: (assumed 0.0015 gr/SCFD)

$$\therefore \frac{tons}{1000\ ft^3} = \frac{1.07 \times 10^{-7}}{}$$

1) Used all inside building discharges from bag houses.
2) Assumed only 10% of discharges left building.

4) Boiler (Used AP-42 Factors for gas and oil since no bag houses exist.)

PM Total (Oil): PM Filterable + PM Condensible

PM Condensible (Oil): $\frac{1.3\ lb}{1000\ gal} \times \frac{ton}{2000\ lb} = 6.5 \times 10^{-7}\ \frac{tons}{1000\ gal}$

PM Filterable (Oil): $\frac{2\ lb}{1000\ gal} \times \frac{ton}{2000\ lb} = 1.0 \times 10^{-6}\ \frac{tons}{1000\ gal}$

PM 10 (Oil): PM Filterable X 1

PM 2.5 (Oil) PM filterable X 0.25

PM Total (Gas): $\frac{7.6\ lb}{10^5\ ft^3\ NG} \times 1000\ ft^3 NG \times \frac{ton}{2000\ lb}$

PM Condensible (Gas) $\frac{5.7\ lb}{10^5\ ft^3\ NG} \times 1000\ ft^3 NG \times \frac{ton}{2000\ lb}$

PM Filterable (Gas) $\frac{1.9\ lb}{10^5\ ft^3\ NG} \times 1000\ ft^3 NG \times \frac{ton}{2000\ lb}$

PM Filterable = PM 10 = PM 2.5 (Based on AP-42 Table 1.4-2 footnote C)

PM Calculations 2022

Boilers
Assumes 7.6 lbs PM per 1,000,000 cubic feet of Natural Gas for total PM (based on AP-42 1.4)
Assumes 1.3 lbs PM per 1000 gal #2 fuel oil for condesible PM; assumes 2 lbs PM per 1000 gal #2 fuel oil for filerable PM (based on AP-42 1.3)

Silicate Drop Tank Dissolvers
Assumes 11,350 CFM, operates 10 min/hour (therefore 1/6 of Total Plant). Hours is worst case of #1 or #2 Spray dryer hours
Assumes 1.07E-7 tons per 1000 cfm

Sand Handling (7-064)
See Form 3 - PM Sand Handling Calculations

#1 Plant Wet Processing Sustem (7-065)
Assumes 7000 CFM from the #1 plant demister fan
Fugitive emissions assumes operating 13 days per month, dumping 50% of time at 1300 CFM (Lime Dump Baghouse)
Hours is #1 plant spray dryer hours

#2 Spray Dryer (7-069)
Assumes 1.4 lbs per hour PM emissions
Fugitive emissions assumes 3305 CFM when operating dryer
For Plant Vacuum Clean-up, assumes it is operated 5% of the time at 800 CFM
Hours is #2 plant spray dryer hours

#1 Spray Dryer (7-102) - Did not operate in 2022
Assumes 1.4 lbs per hour PM emissions
Fugitive emissions assumes 1495 CFM when operating dryer

Additional Fugitive Emissions: (Plant Vacuum Clean-up)
Basis: operated 5% of plant time; 800 CFM, inside discharge

Pilot Plant Spray Dryer (7-105)
Assumes 7.6 lbs PM per 1,000,000 cubic feet of Natural Gas for total PM (based on AP-42 1.4)
Gas flow rate & number of operating days

#2 Plant Wet Processing System (7-131)
Assumes 13600 CFM air flow for #2 plant demister
Hours is #2 plant spray dryer hours

Warehouse Milling & Packing (7-132)
Assumes 27790 total CFM air flow for all stacks
*Note: In 2003, the #9 Silo Bin Vent was installed (per permit #025-7-0132M) and the 1500cfm has been added to the total air flow under the warehouse milling and packaging (for a total of 27,790 cfm).

Sulfate System (7-136) - Did not operate in 2022
Assumes 12268 total CFM air flow for all stacks
Fugitive Emissions: (Sulfate Pre-Coat Baghouse)

Basis: 2 hrs/day operation, 1300 CFM, inside discharge
Hours is time Evaporator plant ran.

Bulk Milling and Loading (7-151)
Assumes 7200 total CFM air flow

Fugitive Emissions: (2000 CFM)
Assumes 2000 total CFM air flow for all stacks
Hours spent loading railcars and trucks & Beechem

Sand Handling
Total Cubic Feet of Air per Day = (Trucks/day * hours/truck* CFM*60 min/hr)/1000000 = 106ft3
Tons PM/yr: Total Cubic Feet of Air per day *# days/year*1.07E-6 tons/1000 ft3 =
If <0.01, assume 0.01
#/Day = tons*(2000 lbs/ton) *(1/# days /year)

Sand Handling Fugitive Emissions:
Assumes 870 CFM

Form 3 - PM Sand Handling (7-064) Calculations

Trucks/day (max)	4	
hrs unloading time/truck	1.5	
days/week	5	
weeks/year	52	
%age of sand unloaded to bunkers	0	
%age of sand unloaded to silo	100	
Truck blower CFM	625	
bunker fan CFM	0	
Total Cubic Feet of Air per Day: (Trucks/day * hours/truck* CFM*60 min/hr)/1000000 = $10^6 ft^3$	**0.225**	**x$10^6 ft^3$**
Tons PM/yr: Total Cubic Feet of Air per day *# days/year*1.07E-6 tons/1000 ft^3 =	**0.063**	**tons/yr**
If <0.01, assume 0.01	**0.070**	**tons/yr**
#/Day = tons*(2000 lbs/ton) *(1/# days /year) #/Day =	**0.538**	**lbs/day**

Fugitive Emissions:
Pulse Air Dust Collectors

Enclosed area 870 CFM Tons/yr =	**0.023246435**	**tons/yr**
#/Day = tons*(2000 lbs/ton) *(1/# days /year) #/Day =	**0.178818729**	**lbs/day**

Form 3 PM Calculations 2022

Equipment	NG (ft3/yr)	#2 Fuel Oil (gal/yr)	CFM	Lbs/hr Emissions	Operating Hours	Operating Days/yr	PM(total) Tons/Year	PM (condensible) Tons/yr	PM (condensible) lb/day	PM (filterable) Tons / yr	PM (filterable) lbs / day	PM(total) Lbs/day	PM10 Tons/yr	PM 10 Lbs/day	PM2.5 Tons/yr	PM 2.5 Lbs/day
#2 Boiler	12,651,300.00					157.00	0.048075	0.036056	0.459315	0.012019	0.153105	0.612	0.012019	0.153105	0.012019	0.153105
#2 Boiler		0.00				0.00	0.000000	0.000000	0.000000	0.000000	0.000000	0.000	0	0	0	0
#1 Boiler	55,845,400.00					247.00	0.212213	0.159159	1.288740	0.053053	0.429580	1.718	0.053053	0.429580	0.053053	0.429580
#1 Boiler		0.00				0.00	0.000000	0.000000	0.000000	0.000000	0.000000	0.000	0	0	0	0
Pilot Plant High Pressure Boiler	701,818.00				297.00	215.00	0.002667	0.002000	0.018606	0.000667	0.006202	0.025	0.000667	0.006202	0.000667	0.006202
Pilot Plant Low Pressure Boiler	0.00					0.00	0.000000	0.000000	0.000000	0.000000	0.000000	0.000	0	0	0	0
Silicate Drop Tank Dissolvers			11350		4,162	267.00	0.050545			0.050545	0.378617	0.379	0.042963598	0.322	0.015163623	0.113585189
#1 Plant Wet Processing System (7-065)			7,000		0		0.000000			0.000000	0.000000	0.000	0	0.000	0	0
#1 Plant Wet Processing System (fugitive)			1300		0		0.000000			0.000000	0.000000	0.200	0	0.000	0	0
#2 Spray Dryer (7-069)	64,257,727			1.42	4,162	267	2.95502	2.216265	16.60123596	0.738755	5.533745	22.135	0.738755	5.534	0.738755	5.533745
#2 Spray Dryer (fugitive)			3305		4,162	267	0.088310	0.066232299	0.496122091	0.022077433	0.165374	1.018	0.018765818	0.141	0.02649292	0.198448836
Additional Fugitive emissions (Vacuum Clean-up)			800				0.002250			0.002250	0.012326	0.012	0.001912133	0.01047744	0.00067487	0.00369792
#1 Spray Dryer (7-102)	0			1.42	0	0	0	0	0	0	0.000000	0.000	0	0.000	0	0.000000
#1 Spray Dryer (fugitive)			1495		0	0	0.000000	0.000000	0.000000	0.000000	0.000000	0.000	0	0.000	0	0
Pilot Plant Spray Dryer (7-105)	2,049,861				864	215	0.007789	0.005842	0.054345	0.001947	0.018115	0.072	0.001947	0.018115	0.001947	0.018115
#2 Plant Wet Processing System (7-131)			13600		4,162		0.363393			0.363393	4.190976	4.191	0.308883662	3.562	0.109017763	1.2572928
Warehouse Milling & Packing (7-132)	12,225		27790		2,345	236	4.183757			4.183757	35.455565	35.456	3.556193204	30.137	1.255127013	10.6366696
Warehouse Milling & Packing (fugitive)			3430		2,345	236	0.051638			0.051638	0.437613	0.438	0.043892561	0.372	0.015491492	0.131283831
Sulfate System (7-136)	0		12268		0	0	0.000000			0.000000	0.000000	0.000	0	0.000	0	0
Fugitive Emissions: (Sulfate Pre-Coat Baghouse)			1300		0	0	0.000000			0.000000	0.000000	0.000	0	0	0	0
Bulk Milling and Loading (7-151)	616,797		7200		1,585	160	0.732650			0.732650	9.158130	9.158	0.62275284	7.784	0.21979512	2.747439
Fugitive Emissions; (Bulk Milling and Loading)			2000		1,585	160	0.020351			0.020351	0.254393	0.254	0.01729869	0.216	0.00610542	0.07631775
Sand Handling					4,162	148	0.070000			0.070000	0.538462	0.538	0.0595	0.458	0.021	0.161538462
Fugitive Sand Handling			1400		4,162	148	0.023246			0.023246	0.178819	0.179	0.01975947	0.152	0.053645619	0.053645619
SUM:							**8.8119043**	**2.4855552**	**18.9183642**	**6.3263492**	**57.4682987**	**76.3866629**	**4.6302278**	**49.2954808**	**2.5289548**	**21.5206664**

FORM 4

REPORTABLE TOXIC AIR POLLUTANTS EMISSIONS CERTIFICATION REPORT

Reportable Toxics
Pollutant

24-025-0005 Evonik Corportation Please Enter Facility ID and Name in Equipment Inventory Spreadsheet

Equipment Name	Registration No.	S / F	Fuel Type	Pollutant	CASRN	Actual Emissions			Control Device	Efficiency (%)	Estimation Method
						tons/yr	lbs/day	lbs/hr			
#2 BOILER	5-013	S	NG	Formaldehyde	50-00-0	4.74E-04	6.04E-03	2.52E-04			C3
#1 BOILER	5-032	S	NG	Formaldehyde	50-00-0	2.09E-03	1.70E-02	7.07E-04			C3
PILOT PLANT HIGH PRESSURE BOILER	5-0125	S	NG	Formaldehyde	50-00-0	2.63E-05	2.45E-04	1.77E-04			C3
PILOT PLANT LOW PRESSURE BOILER	5-0126	S	NG	Formaldehyde	50-00-0	0.00E+00	0.00E+00	0.00E+00			C3
#2 SPRAY DRYER	7-069	S	NG	Formaldehyde	50-00-0	2.41E-03	1.80E-02	1.16E-03			C3
#1 SPRAY DRYER	7-102	S	NG	Formaldehyde	50-00-0	0.00E+00	0.00E+00	0.00E+00			C3
PILOT PLANT SPRAY DRYER	7-105	S	NG	Formaldehyde	50-00-0	7.69E-05	7.15E-04	1.78E-04			C3
WAREHOUSE MILLING & PACKING	7-132	S	NG	Formaldehyde	50-00-0	4.58E-07	3.89E-06	3.91E-07			C3
SULFATE PLANT	7-136	S	NG	Formaldehyde	50-00-0	0.00E+00	0.00E+00	0.00E+00			C3
BULK MILLING & LOADING	7-151	S	NG	Formaldehyde	50-00-0	2.31E-05	2.89E-04	2.92E-05			C3

Pollutant Totals		tons/yr	lbs/day	lbs/hr
Formaldehyde	50-00-0	5.11E-03	4.23E-02	2.50E-03
Total Toxics	-	5.11E-03	4.23E-02	2.50E-03

CALENDAR YEAR: 2022
[internal]

Form 4 - formaldehyde calculation sheet

AP-42 table 1.4-3 7.5E-02 (0.075 lb/10^6 scf) 2022

#1 Boiler 5-032

Total Gas Used (ft^3 / yr)	Days Operated	Hours Operated
55,845,400	247	5928

Tons / Year	Total Gas Used (scf / yr)*(0.75 lb / 10^6 scf)*(1 ton / 2000 lb)	=	0.002094
lb/day	((Tons / year) * (2000 lb / ton)) / (days / year)	=	0.016957
lb/hour	((Tons / year) * (2000 lb / ton)) / (hours / year)	=	0.000707

#2 Boiler 5-013

Total Gas Used (ft^3 / yr)	Days Operated	Hours Operated
12,651,300	157	3768

Tons / Year	Total Gas Used (scf / yr)*(0.75 lb / 10^6 scf)*(1 ton / 2000 lb)	=	0.000474
lb/day	((Tons / year) * (2000 lb / ton)) / (days / year)	=	0.006044
lb/hour	((Tons / year) * (2000 lb / ton)) / (hours / year)	=	0.000252

Pilot Plant High Pressure Boiler 5-0125

Total Gas Used (ft^3 / yr)	Days Operated	Hours Operated
701,818	215	297

Tons / Year	Total Gas Used (scf / yr)*(0.75 lb / 10^6 scf)*(1 ton / 2000 lb)	=	0.000026
lb/day	((Tons / year) * (2000 lb / ton)) / (days / year)	=	0.000245
lb/hour	((Tons / year) * (2000 lb / ton)) / (hours / year)	=	0.000177

#1 Plant Spray Dryer - 7-102

Total Gas Used (ft^3 / yr)	Days Operated	Hours Operated
0	0	0

Tons / Year	Total Gas Used (scf / yr)*(0.75 lb / 10^6 scf)*(1 ton / 2000 lb)	=	0.000000
lb/day	((Tons / year) * (2000 lb / ton)) / (days / year)	=	0.000000
lb/hour	((Tons / year) * (2000 lb / ton)) / (hours / year)	=	0.000000

#2 Plant Spray Dryer - 7-102

Total Gas Used (ft^3 / yr)	Days Operated	Hours Operated
64,257,727	267	4,162

Tons / Year	Total Gas Used (scf / yr)*(0.75 lb / 10^6 scf)*(1 ton / 2000 lb)	=	0.002410
lb/day	((Tons / year) * (2000 lb / ton)) / (days / year)	=	0.018050
lb/hour	((Tons / year) * (2000 lb / ton)) / (hours / year)	=	0.001158

Pilot Plant Low Pressure Boiler 5-0125

Total Gas Used (ft^3 / yr)	Days Operated	Hours Operated
0	0	0

Tons / Year	Total Gas Used (scf / yr)*(0.75 lb / 10^6 scf)*(1 ton / 2000 lb)	=	0.000000
lb/day	((Tons / year) * (2000 lb / ton)) / (days / year)	=	0.000000
lb/hour	((Tons / year) * (2000 lb / ton)) / (hours / year)	=	0.000000

Pilot Plant Spray Dryer 7-105

Total Gas Used (ft^3 / yr)	Days Operated	Hours Operated
2,049,861	215	864

Tons / Year	Total Gas Used (scf / yr)*(0.75 lb / 10^6 scf)*(1 ton / 2000 lb)	=	0.000077
lb/day	((Tons / year) * (2000 lb / ton)) / (days / year)	=	0.000715
lb/hour	((Tons / year) * (2000 lb / ton)) / (hours / year)	=	0.000178

Warehouse Milling & Packing

Total Gas Used (ft^3 / yr)	Days Operated	Hours Operated
12,225	236	2,345

Tons / Year	Total Gas Used (scf / yr)*(0.75 lb / 10^6 scf)*(1 ton / 2000 lb)	=	0.000000
lb/day	((Tons / year) * (2000 lb / ton)) / (days / year)	=	0.000004
lb/hour	((Tons / year) * (2000 lb / ton)) / (hours / year)	=	0.000000

Sulfate Plant

Total Gas Used (ft^3 / yr)	Days Operated	Hours Operated
0	0	0

Tons / Year	Total Gas Used (scf / yr)*(0.75 lb / 10^6 scf)*(1 ton / 2000 lb)	=	0.000000
lb/day	((Tons / year) * (2000 lb / ton)) / (days / year)	=	0.000000
lb/hour	((Tons / year) * (2000 lb / ton)) / (hours / year)	=	0.000000

Bulk Milling & Loading

Total Gas Used (ft^3 / yr)	Days Operated	Hours Operated
616,797	160	1,585

Tons / Year	Total Gas Used (scf / yr)*(0.75 lb / 10^6 scf)*(1 ton / 2000 lb)	=	0.000023
lb/day	((Tons / year) * (2000 lb / ton)) / (days / year)	=	0.000289
lb/hour	((Tons / year) * (2000 lb / ton)) / (hours / year)	=	0.000029

Toic Air Pollutants Calculations

Equipment 2022	Natural Gas (ft3/yr)	#2 Fuel Oil (gal/yr)	Operating Hours	Operating Days/yr
#2 Boiler (5-013)	12,651,300	0	3,768	157
#1 Boiler (5-032)	55,845,400	0	5,928	247
Pilot Plant High Pressure Boiler (5-0125)	701,818		297	215
Pilot Plant Low Pressure Boiler (5-0126)	0		0.00	0
#2 Spray Dryer (7-069)	64,257,727	0	4,162	267
#1 Spray Dryer (7-102)	0	0	0	0
Pilot Plant Spray Dryer (7-105)	2,049,861		864	215
Warehouse Milling & Packing (7-132)	12,225		2,345	236
Sulfate System (7-136)	0		0	0
Bulk Milling and Loading (7-151)	616,797		1,585	160
total	136,135,128			

TABLE 1.4-3. EMISSION FACTORS FOR SPECIATED ORGANIC COMPOUNDS FROM NATURAL GAS COMBUSTION

	2- Methylnapthalene	3-Methylcholanthrene	7,12 - Dimethylbenz(a)anthracene	1,4 Dichlorobenzene	Acenapthene	Acenaphhylene	Anthracene	Benzo(a)anthracene	Benzene	Benz(a)pyrene
	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year
	1.52E-07	1.14E-08	1.01E-07	7.59078E-06	1.13862E-08	1.14E-08	1.52E-08	1.13862E-08	1.32839E-05	7.59078E-09
	6.70E-07	5.03E-08	4.47E-07	3.35072E-05	5.02609E-08	5.02609E-08	6.70E-08	5.02609E-08	5.86377E-05	3.35072E-08
	8.42E-09	6.32E-10	5.61E-09	4.21091E-07	6.31636E-10	6.31636E-10	8.42E-10	6.31636E-10	7.36909E-07	4.21091E-10
	0.00E+00	0.00E+00	0.00E+00	0	0	0	0.00E+00	0	0	0
	7.71E-07	5.78E-08	5.14E-07	3.85546E-05	5.7832E-08	5.7832E-08	7.71E-08	5.7832E-08	6.74706E-05	3.85546E-08
	0.00E+00	0.00E+00	0.00E+00	0	0	0	0.00E+00	0	0	0
	2.46E-08	1.84E-09	1.64E-08	1.22992E-06	1.84487E-09	1.84487E-09	2.46E-09	1.84487E-09	2.15235E-06	1.22992E-09
	1.47E-10	1.10E-11	9.78E-11	7.335E-09	1.10025E-11	1.10025E-11	1.47E-11	1.10025E-11	1.28363E-08	7.335E-12
	0.00E+00	0.00E+00	0.00E+00	0	0	0	0.00E+00	0	0	0
	7.40E-09	5.55E-10	4.93E-09	3.70078E-07	5.55117E-10	5.55117E-10	7.40E-10	5.55117E-10	6.47637E-07	3.70078E-10
	1.63E-06	**1.23E-07**	**1.09E-06**	**8.17E-05**	**1.23E-07**	**1.23E-07**	**1.63E-07**	**1.23E-07**	**1.43E-04**	**8.17E-08**
	0.0000	**0.0000**	**0.0000**	**0.00008**	**0.00000**	**0.00000**	**0.00000**	**0.00000**	**0.00014**	**0.00000**
	2.40E-05	1.80E-06	1.60E-05	1.20E-03	1.80E-06	1.80E-06	2.40E-06	1.80E-06	2.10E-03	1.20E-06
TAP Threshold (ton/yr)				0.01	0.01	0.1	0.01	0.001	0.1	0.0001

	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr
	8.06E-08	6.04E-09	5.37E-08	4.03E-06	6.04E-09	6.04E-09	8.06E-09	6.04E-09	7.05E-06	4.03E-09
	2.26E-07	1.70E-08	1.51E-07	1.13E-05	1.70E-08	1.70E-08	2.26E-08	1.70E-08	1.98E-05	1.13E-08
	5.67E-08	4.25E-09	3.78E-08	2.84E-06	4.25E-09	4.25E-09	5.67E-09	4.25E-09	4.96E-06	2.84E-09
	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	3.71E-07	2.78E-08	2.47E-07	1.85E-05	2.78E-08	2.78E-08	3.71E-08	2.78E-08	3.24E-05	1.85E-08
	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	5.69E-08	4.27E-09	3.80E-08	2.85E-06	4.27E-09	4.27E-09	5.69E-09	4.27E-09	4.98E-06	2.85E-09
	1.25E-10	9.38E-12	8.34E-11	6.26E-09	9.38E-12	9.38E-12	1.25E-11	9.38E-12	1.09E-08	6.26E-12
	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	9.34E-09	7.00E-10	6.23E-09	4.67E-07	7.00E-10	7.00E-10	9.34E-10	7.00E-10	8.17E-07	4.67E-10
	8.00E-07	**6.00E-08**	**5.34E-07**	**4.00E-05**	**6.00E-08**	**6.00E-08**	**8.00E-08**	**6.00E-08**	**7.00E-05**	**4.00E-08**
	0.0000	**0.0000**	**0.0000**	**0.00004**	**0.00000**	**0.00000**	**0.00000**	**0.00000**	**0.00007**	**0.00000**
	2.40E-05	1.80E-06	1.60E-05	1.20E-03	1.80E-06	1.80E-06	2.40E-06	1.80E-06	2.10E-03	1.20E-06
TAP Threshold (lb/hr)				1	0.001	0.01	0.001	0.001	0.001	0.001

Toic Air Pollutants Calculations

Equipment 2022	Natural Gas (ft3/yr)	#2 Fuel Oil (gal/yr)	Operating Hours	Operating Days/yr
#2 Boiler (5-013)	12,651,300	0	3,768	157
#1 Boiler (5-032)	55,845,400	0	5,928	247
Pilot Plant High Pressure Boiler (5-0125)	701,818		297	215
Pilot Plant Low Pressure Boiler (5-0126)	0		0.00	0
#2 Spray Dryer (7-069)	64,257,727	0	4,162	267
#1 Spray Dryer (7-102)	0	0	0	0
Pilot Plant Spray Dryer (7-105)	2,049,861		864	215
Warehouse Milling & Packing (7-132)	12,225		2,345	236
Sulfate System (7-136)	0		0	0
Bulk Milling and Loading (7-151)	616,797		1,585	160
total	136,135,128			

TABLE 1.4-3. EMISSION FACTORS FOR SPECIATED ORGANIC COMPOUNDS FROM NATURAL GAS COMBUSTION

	Benzo(b)fluoranthene	Benzo(ghi)perylene	Benzo(k)fluoranthene	Butane	Chrysene	Dibenzo(ah)anthrance	Ethane	Formaldehyde	Fluoranthene	Fluorene	Hexane	Indeno(123-cd)pyrene
	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year
	1.14E-08	7.59E-09	1.14E-08	1.33E-02	1.13862E-08	7.59078E-09	1.96E-02	4.74E-04	1.8977E-08	1.77118E-08	0.01138617	1.13862E-08
	5.02609E-08	3.35072E-08	5.02609E-08	5.86E-02	5.02609E-08	3.35072E-08	8.66E-02	2.09E-03	8.37681E-08	7.81836E-08	0.05026086	5.02609E-08
	6.31636E-10	4.21091E-10	6.31636E-10	7.37E-04	6.31636E-10	4.21091E-10	1.09E-03	2.63E-05	1.05273E-09	9.82545E-10	0.000631636	6.31636E-10
	0	0	0	0.00E+00	0	0	0.00E+00	0.00E+00	0	0	0	0
	5.7832E-08	3.85546E-08	5.7832E-08	6.75E-02	5.7832E-08	3.85546E-08	9.96E-02	2.41E-03	9.63866E-08	8.99608E-08	0.057831954	5.7832E-08
	0	0	0	0.00E+00	0	0	0.00E+00	0.00E+00	0	0	0	0
	1.84487E-09	1.22992E-09	1.84487E-09	2.15E-03	1.84487E-09	1.22992E-09	3.18E-03	7.69E-05	3.07479E-09	2.86981E-09	0.001844875	1.84487E-09
	1.10025E-11	7.335E-12	1.10E-11	1.28E-05	1.10025E-11	7.335E-12	1.89E-05	4.58E-07	1.83375E-11	1.7115E-11	1.10025E-05	1.10025E-11
	0	0	0	0.00E+00	0	0	0.00E+00	0.00E+00	0	0	0	0
	5.55117E-10	3.70078E-10	5.55117E-10	6.48E-04	5.55117E-10	3.70078E-10	9.56E-04	2.31E-05	9.25196E-10	8.63516E-10	0.000555117	5.55117E-10
	1.23E-07	**8.17E-08**	**1.23E-07**	**1.43E-01**	**1.23E-07**	**8.17E-08**	**2.11E-01**	**5.11E-03**	**2.04E-07**	**1.91E-07**	**1.23E-01**	**1.23E-07**
	0.00000	**0.00000**	**0.00000**	**0.14294**	**0.00000**	**0.00000**	**0.21101**	**0.00511**	**0.00000**	**0.00000**	**0.1225**	**0.00000**
	1.80E-06	1.20E-06	1.80E-06	2.10E+00	1.80E-06	1.20E-06	3.10E+00	7.50E-02	3.00E-06	2.80E-06	1.80E+00	1.80E-06
TAP Threshold (ton/yr)	0.001	0.01	0.01		0.01	0.0001		0.01	0.1	0.01	10	0.001
	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr
	6.04E-09	4.03E-09	6.04E-09	7.05E-03	6.04E-09	4.03E-09	1.04E-02	2.52E-04	1.01E-08	9.40E-09	6.04E-03	6.04E-09
	1.70E-08	1.13E-08	1.70E-08	1.98E-02	1.70E-08	1.13E-08	2.92E-02	7.07E-04	2.83E-08	2.64E-08	1.70E-02	1.70E-08
	4.25E-09	2.84E-09	4.25E-09	4.96E-03	4.25E-09	2.84E-09	7.33E-03	1.77E-04	7.09E-09	6.62E-09	4.25E-03	4.25E-09
	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	2.78E-08	1.85E-08	2.78E-08	3.24E-02	2.78E-08	1.85E-08	4.79E-02	1.16E-03	4.63E-08	4.32E-08	2.78E-02	2.78E-08
	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	4.27E-09	2.85E-09	4.27E-09	4.98E-03	4.27E-09	2.85E-09	7.35E-03	1.78E-04	7.12E-09	6.64E-09	4.27E-03	4.27E-09
	9.38E-12	6.26E-12	9.38E-12	1.09E-05	9.38E-12	6.26E-12	1.62E-05	3.91E-07	1.56E-11	1.46E-11	9.38E-06	9.38E-12
	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	7.00E-10	4.67E-10	7.00E-10	8.17E-04	7.00E-10	4.67E-10	1.21E-03	2.92E-05	1.17E-09	1.09E-09	7.00E-04	7.00E-10
	6.00E-08	**4.00E-08**	**6.00E-08**	**7.00E-02**	**6.00E-08**	**4.00E-08**	**1.03E-01**	**2.50E-03**	**1.00E-07**	**9.34E-08**	**6.00E-02**	**6.00E-08**
	0.00000	**0.00000**	**0.00000**	**0.07003**	**0.00000**	**0.00000**	**0.10338**	**0.00250**	**0.00000**	**0.00000**	**0.0600**	**0.00000**
	1.80E-06	1.20E-06	1.80E-06	2.10E+00	1.80E-06	1.20E-06	3.10E+00	7.50E-02	3.00E-06	2.80E-06	1.80E+00	1.80E-06
TAP Threshold (lb/hr)	0.1	0.001	0.01		0.001	0.0001		0.001	0.1	0.001	1	0.001

Toic Air Pollutants Calculations

Equipment 2022	Natural Gas (ft3/yr)	#2 Fuel Oil (gal/yr)	Operating Hours	Operating Days/yr
#2 Boiler (5-013)	12,651,300	0	3,768	157
#1 Boiler (5-032)	55,845,400	0	5,928	247
Pilot Plant High Pressure Boiler (5-0125)	701,818		297	215
Pilot Plant Low Pressure Boiler (5-0126)	0		0.00	0
#2 Spray Dryer (7-069)	64,257,727	0	4,162	267
#1 Spray Dryer (7-102)	0	0	0	0
Pilot Plant Spray Dryer (7-105)	2,049,861		864	215
Warehouse Milling & Packing (7-132)	12,225		2,345	236
Sulfate System (7-136)	0		0	0
Bulk Milling and Loading (7-151)	616,797		1,585	160
total	136,135,128			

EMISSION FACTORS FOR SPECIATED ORGANIC COMPOUNDS FROM NATURAL GAS

Naphthalene	Pentane	Phenanthrene	Propane	Pyrene	Toluene
tons/year	tons/year	tons/year	tons/year	tons/year	tons/year
3.85865E-06	1.64E-02	1.07536E-07	1.01E-02	3.16283E-08	2.15072E-05
1.70328E-05	7.26E-02	4.74686E-07	4.47E-02	1.40E-07	9.49372E-05
2.14054E-07	9.12E-04	5.96545E-09	5.61E-04	1.75455E-09	1.19309E-06
0	0.00E+00	0	0.00E+00	0	0
1.95986E-05	8.35E-02	5.46191E-07	5.14E-02	1.60644E-07	0.000109238
0	0.00E+00	0	0.00E+00	0	0
6.25208E-07	2.66E-03	1.74238E-08	1.64E-03	5.12465E-09	3.48476E-06
3.72863E-09	1.59E-05	1.03913E-10	9.78E-06	3.05625E-11	2.07825E-08
0	0.00E+00	0	0.00E+00	0	0
1.88123E-07	8.02E-04	5.24277E-09	4.93E-04	1.54199E-09	1.04855E-06
4.15E-05	**1.77E-01**	**1.16E-06**	**1.09E-01**	**3.40E-07**	**2.31E-04**
0.00004	**0.17698**	**0.00000**	**0.10891**	**0.00000**	**0.00023**
6.10E-04	2.60E+00	1.70E-05	1.60E+00	5.00E-06	3.40E-03
1		0.01		0.01	10

TAP Threshold (ton/yr)

lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr
2.05E-06	8.73E-03	5.71E-08	5.37E-03	1.68E-08	1.14E-05
5.75E-06	2.45E-02	1.60E-07	1.51E-02	4.71E-08	3.20E-05
1.44E-06	6.14E-03	4.02E-08	3.78E-03	1.18E-08	8.03E-06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.42E-06	4.01E-02	2.62E-07	2.47E-02	7.72E-08	5.25E-05
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.45E-06	6.17E-03	4.03E-08	3.80E-03	1.19E-08	8.07E-06
3.18E-09	1.36E-05	8.86E-11	8.34E-06	2.61E-11	1.77E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.37E-07	1.01E-03	6.62E-09	6.23E-04	1.95E-09	1.32E-06
2.03E-05	**8.67E-02**	**5.67E-07**	**5.34E-02**	**1.67E-07**	**1.13E-04**
0.00002	**0.08670**	**0.00000**	**0.05336**	**0.00000**	**0.00011**
6.10E-04	2.60E+00	1.70E-05	1.60E+00	5.00E-06	3.40E-03
0.1		0.01		0.001	1

TAP Threshold (lb/hr)

Toic Air Pollutants Calculations

Equipment 2022	Natural Gas (ft3/yr)	#2 Fuel Oil (gal/yr)	Operating Hours	Operating Days/yr
#2 Boiler (5-013)	12,651,300	0	3,768	157
#1 Boiler (5-032)	55,845,400	0	5,928	247
Pilot Plant High Pressure Boiler (5-0125)	701,818		297	215
Pilot Plant Low Pressure Boiler (5-0126)	0		0.00	0
#2 Spray Dryer (7-069)	64,257,727	0	4,162	267
#1 Spray Dryer (7-102)	0	0	0	0
Pilot Plant Spray Dryer (7-105)	2,049,861		864	215
Warehouse Milling & Packing (7-132)	12,225		2,345	236
Sulfate System (7-136)	0		0	0
Bulk Milling and Loading (7-151)	616,797		1,585	160
total	136,135,128			

TABLE 1.4-4 EMISSION FACTORS FOR METALS FROM NATURAL GAS COMBUSTION

	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Manganese	Mercury	Molybdenum	Nickel	Selenium	Vanadium	Zinc
	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year
	1.26513E-06	2.78E-05	7.59078E-08	6.96E-06	8.85591E-06	5.31355E-07	5.38E-06	2.40375E-06	1.64467E-06	6.95822E-06	1.32839E-05	1.51816E-07	1.4549E-05	0.000183
	5.58454E-06	0.00012286	3.35072E-07	3.07E-05	3.90918E-05	2.34551E-06	2.37E-05	1.06106E-05	7.2599E-06	3.0715E-05	5.86377E-05	6.70145E-07	6.4222E-05	0.00081
	7.01818E-08	1.544E-06	4.21091E-09	3.86E-07	4.91273E-07	2.94764E-08	2.98E-07	1.33345E-07	9.12363E-08	3.86E-07	7.36909E-07	8.42182E-09	8.0709E-07	1.02E-05
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6.42577E-06	0.000141367	3.85546E-07	3.53E-05	4.49804E-05	2.69882E-06	2.73E-05	1.2209E-05	8.3535E-06	3.53417E-05	6.74706E-05	7.71093E-07	7.3896E-05	0.000932
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2.04986E-07	4.50969E-06	1.22992E-08	1.13E-06	1.4349E-06	8.60942E-08	8.71E-07	3.89474E-07	2.66482E-07	1.12742E-06	2.15235E-06	2.45983E-08	2.3573E-06	2.97E-05
	1.2225E-09	2.6895E-08	7.335E-11	6.72E-09	8.5575E-09	5.1345E-10	5.2E-09	2.32275E-09	1.58925E-09	6.72375E-09	1.28363E-08	1.467E-10	1.4059E-08	1.77E-07
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6.16797E-08	1.35695E-06	3.70078E-09	3.39E-07	4.31758E-07	2.59055E-08	2.62E-07	1.17191E-07	8.01836E-08	3.39238E-07	6.47637E-07	7.40156E-09	7.0932E-07	8.94E-06
	1.36E-05	**2.99E-04**	**8.17E-07**	**7.49E-05**	**9.53E-05**	**5.72E-06**	**5.79E-05**	**2.59E-05**	**1.77E-05**	**7.49E-05**	**1.43E-04**	**1.63E-06**	**1.57E-04**	**1.97E-03**
	0.00001	**0.00030**	**0.00000**	**0.00007**	**0.00010**	**0.00001**	**0.00006**	**0.00003**	**0.00002**	**0.00007**	**0.00014**	**0.00000**	**0.00016**	**0.00197**
	2.00E-04	4.40E-03	1.20E-05	1.10E-03	1.40E-03	8.40E-05	8.50E-04	3.80E-04	2.60E-04	1.10E-03	2.10E-03	2.40E-05	2.30E-03	2.90E-02
TAP Threshold (ton/yr)	0.001		0.0001	0.0001	0.01	0.001	0.01	0.01	0.001		0.001	0.01		0.1
	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr
	6.72E-07	1.48E-05	4.03E-08	3.69E-06	4.70E-06	2.82E-07	2.85E-06	1.28E-06	8.73E-07	3.69E-06	7.05E-06	8.06E-08	7.72E-06	9.74E-05
	1.88E-06	4.15E-05	1.13E-07	1.04E-05	1.32E-05	7.91E-07	8.01E-06	3.58E-06	2.45E-06	1.04E-05	1.98E-05	2.26E-07	2.17E-05	2.73E-04
	4.73E-07	1.04E-05	2.84E-08	2.60E-06	3.31E-06	1.98E-07	2.01E-06	8.98E-07	6.14E-07	2.60E-06	4.96E-06	5.67E-08	5.43E-06	6.85E-05
	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	3.09E-06	6.79E-05	1.85E-07	1.70E-05	2.16E-05	1.30E-06	1.31E-05	5.87E-06	4.01E-06	1.70E-05	3.24E-05	3.71E-07	3.55E-05	4.48E-04
	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	4.75E-07	1.04E-05	2.85E-08	2.61E-06	3.32E-06	1.99E-07	2.02E-06	9.02E-07	6.17E-07	2.61E-06	4.98E-06	5.69E-08	5.46E-06	6.88E-05
	1.04E-09	2.29E-08	6.26E-11	5.73E-09	7.30E-09	4.38E-10	4.43E-09	1.98E-09	1.36E-09	5.73E-09	1.09E-08	1.25E-10	1.20E-08	1.51E-07
	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	7.78E-08	1.71E-06	4.67E-09	4.28E-07	5.45E-07	3.27E-08	3.31E-07	1.48E-07	1.01E-07	4.28E-07	8.17E-07	9.34E-09	8.95E-07	1.13E-05
	6.67E-06	**1.47E-04**	**4.00E-07**	**3.67E-05**	**4.67E-05**	**2.80E-06**	**2.83E-05**	**1.27E-05**	**8.67E-06**	**3.67E-05**	**7.00E-05**	**8.00E-07**	**7.67E-05**	**9.67E-04**
	0.00001	**0.00015**	**0.00000**	**0.00004**	**0.00005**	**0.00000**	**0.00003**	**0.00001**	**0.00001**	**0.00004**	**0.00007**	**0.00000**	**0.00008**	**0.00097**
	2.00E-04	4.40E-03	1.20E-05	1.10E-03	1.40E-03	8.40E-05	8.50E-04	3.80E-04	2.60E-04	1.10E-03	2.10E-03	2.40E-05	2.30E-03	2.90E-02
TAP Threshold (lb/hr)	0.001		0.00001	0.0001	0.001	0.0001	0.001	0.001	0.0001		0.001	0.001		0.01

FORM 5

BILLABLE TOXIC AIR POLLUTANTS EMISSIONS CERTIFICATION REPORT

24-025-0005 Evonik Corportation

Billable TAPs
Pollutant

Chemical Name	CAS Number	Actual Emissions			Estimation Method
		tons/yr	lbs/day	lbs/hr	
carbon disulfide	75-15-0	0.00E+00	0.00E+00	0.00E+00	C2
carbonyl sulfide	463-58-1	0.00E+00	0.00E+00	0.00E+00	C2
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	C2
cyanide compounds	57-12-5	0.00E+00	0.00E+00	0.00E+00	C2
hydrochloric acid	7647-01-0	0.00E+00	0.00E+00	0.00E+00	C2
hydrogen fluoride	7664-39-3	0.00E+00	0.00E+00	0.00E+00	C2
methyl chloroform	71-55-6	0.00E+00	0.00E+00	0.00E+00	C2
methylene chloride	75-09-2	0.00E+00	0.00E+00	0.00E+00	C2
perchloroethylene	127-18-4	0.00E+00	0.00E+00	0.00E+00	C2
phosphine	7803-51-2	0.00E+00	0.00E+00	0.00E+00	C2
titanium tetrachloride	7550-45-0	0.00E+00	0.00E+00	0.00E+00	C2

*if any amount of emissions are reported for these compounds, please also include the emissions broken down by equipment number in Form 4

CALENDAR YEAR: 2022
[internal]

FORM 6

GREENHOUSE GASES
EMISSIONS CERTIFICATION REPORT

24-025-0005 Evonik Corportation Please Enter Facility ID and Name in Equipment Inventory Spreadsheet

Greenhouse Gases
Pollutant

Equipment Name	Registration No.	S / F	Fuel Type	CO_2		CH_4		N_2O		HFCs		PFCs		SF_6		Estimation Methods
				tons/yr	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	
#2 BOILER	5-013	S	NG	7.59E+02	9.67E+03	1.45E-02	1.77E-01	1.39E-02	1.77E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	C3
#1 BOILER	5-032	S	NG	3.35E+03	2.71E+04	6.42E-02	5.20E-01	6.14E-02	4.97E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	C3
PILOT PLANT HIGH PRESSURE BOILER	5-0125	S	NG	4.21E+01	3.92E+02	8.07E-04	7.51E-03	7.72E-04	7.18E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	C3
PILOT PLANT LOW PRESSURE BOILER	5-0126	S	NG	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	C3
#2 SPRAY DRYER	7-069	S	NG	3.86E+03	2.89E+04	7.39E-02	5.54E-01	7.07E-02	5.29E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	C3
#1 SPRAY DRYER	7-102	S	NG	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	C3
PILOT PLANT SPRAY DRYER	7-105	S	NG	1.23E+02	1.14E+03	2.36E-03	2.19E-02	2.25E-03	2.10E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	C3
WAREHOUSE MILLING & PACKING	7-132	S	NG	7.34E-01	6.22E+00	1.41E-05	1.19E-04	1.34E-05	1.14E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	C3
SULFATE PLANT	7-136	S	NG	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	C3
BULK MILLING & LOADING	7-151	S	NG	3.70E+01	4.63E+02	7.09E-04	8.87E-03	6.78E-04	8.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	C3
Total Emissions				8.17E+03	6.77E+04	1.57E-01	1.29E+00	1.50E-01	1.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

CALENDAR YEAR: 2022
[internal]

Form 6 - GHG Calculation Sheet

AP-42 Table 1.4-2 Emission Factors lb/10^6 SCF Natural Gas

CO_2	**120,000**
N2O	**2.2**
CH4	**2.3**

Calendar Year: 2022

#1 Boiler 5-032					
	55,845,400 Ft^3 Natural Gas (NG) =			**55.85** x 10^6 SCF NG	
			247	**Days**	**5928 Hours**
CO2	120,000 x	55.85 mmcf =	6,701,448	/2000=	**3,351 tons CO2**
	6,701,448 lbs/	247 days =	**27,131**	**lbs/days CO2**	
	6,701,448 lbs/	5928 hours =	**1,130**	**lbs/hour CO2**	
N2O	2.2 x	55.85 mmcf =	123	/2000=	**0.061 tons N2O**
	123 lbs/	247 days =	**0.497**	**lbs/days N2O**	
	123 lbs/	5928 hours =	**0.0207**	**lbs/hour N2O**	
CH4	2.3 x	55.85 mmcf =	128	/2000=	**0.064 tons CH4**
	128 lbs/	247 days =	**0.520**	**lbs/days CH4**	
	128 lbs/	5928 hours =	**0.0217**	**lbs/hour CH4**	

#2 Boiler 5-013					
	12,651,300 Ft^3 Natural Gas (NG) =			**12.65** x 10^6 SCF NG	
			157	**Days**	**3768 Hours**
CO2	120,000 x	12.65 mmcf =	1,518,156	/2000=	**759 tons CO2**
	1,518,156 lbs/	157 days =	**9,670**	**lbs/days CO2**	
	1,518,156 lbs/	3768 hours =	**403**	**lbs/hour CO2**	
N2O	2.2 x	12.65 mmcf =	28	/2000=	**0.01392 tons N2O**
	28 lbs/	157 days =	**0.177**	**lbs/days N2O**	
	28 lbs/	3768 hours =	**0.0074**	**lbs/hour N2O**	
CH4	2.3 x	12.65 mmcf =	29	/2000=	**0.015 tons CH4**
	29 lbs/	157 days =	**0.185**	**lbs/days CH4**	
	29 lbs/	3768 hours =	**0.0077**	**lbs/hour CH4**	

Sulfate Drying 7-136					
	0 Ft^3 Natural Gas (NG) =			**0.00** x 10^6 SCF NG	
			0	**Days**	**0 Hours**
CO2	120,000 x	0.00 mmcf =	0	/2000=	**0.00 tons CO2**
	0 lbs/	0 days =	**0**	**lbs/days CO2**	
	0 lbs/	0 hours =	**0**	**lbs/hour CO2**	
N2O	2.2 x	0.00 mmcf =	0	/2000=	**0.0000 tons N2O**
	0 lbs/	0 days =	**0.000**	**lbs/days N2O**	
	0 lbs/	0 hours =	**0.0000**	**lbs/hour N2O**	
CH4	2.3 x	0.00 mmcf =	0	/2000=	**0.0000 tons CH4**
	0 lbs/	0 days =	**0.000**	**lbs/days CH4**	
	0 lbs/	0 hours =	**0.0000**	**lbs/hour CH4**	

AP-42 Table 1.4-2 Emission Factors lb/10^6 SCF Natural Gas

CO_2	**120,000**
N2O	**2.2**
CH4	**2.3**

Calendar Year: 2022

Pilot Plant High Pressure boiler 5-0125

701,818 Ft^3 Natural Gas (NG) = **0.70** x 10^6 SCF NG

215 **Days** **297 Hours**

CO2	120,000 x	0.70 mmcf =	84,218 /2000=	**42.11 tons CO2**
	84,218 lbs/	215 days =	**392 lbs/days CO2**	
	84,218 lbs/	297 hours =	**284 lbs/hour CO2**	
N2O	2.2 x	0.70 mmcf =	1.5440 /2000=	**0.00077 tons N2O**
	1.544 lbs/	215 days =	**0.007 lbs/days N2O**	
	1.544 lbs/	297 hours =	**0.0052 lbs/hour N2O**	
CH4	2.3 x	0.70 mmcf =	1.614 /2000=	**0.00081 tons CH4**
	1.614 lbs/	215 days =	**0.008 lbs/days CH4**	
	1.614 lbs/	297 hours =	**0.0054 lbs/hour CH4**	

Pilot Plant Spray Dryer 7-105

2,049,861 Ft^3 Natural Gas (NG) = **2.05** x 10^6 SCF NG

215 **Days** **864 Hours**

CO2	120,000 x	2.05 mmcf =	245,983 /2000=	**122.99 tons CO2**
	245,983 lbs/	215 days =	**1,144 lbs/days CO2**	
	245,983 lbs/	864 hours =	**285 lbs/hour CO2**	
N2O	2.2 x	2.05 mmcf =	5 /2000=	**0.002255 tons N2O**
	5 lbs/	215 days =	**0.021 lbs/days N2O**	
	5 lbs/	864 hours =	**0.0052 lbs/hour N2O**	
CH4	2.3 x	2.05 mmcf =	4.715 /2000=	**0.00236 tons CH4**
	4.715 lbs/	215 days =	**0.022 lbs/days CH4**	
	4.715 lbs/	864 hours =	**0.0055 lbs/hour CH4**	

#1 Plant Spray Dryer 7-102

0 Ft^3 Natural Gas (NG) = **0.00** x 10^6 SCF NG

0 **Days** **0 Hours**

CO2	120,000 x	0.00 mmcf =	0 /2000=	**0 tons CO2**
	0 lbs/	0 days =	**0 lbs/days CO2**	
	0 lbs/	0 hours =	**0 lbs/hour CO2**	
N2O	2.2 x	0.00 mmcf =	0 /2000=	**0.000 tons N2O**
	0 lbs/	0 days =	**0.000 lbs/days N2O**	
	0 lbs/	0 hours =	**0.0000 lbs/hour N2O**	
CH4	2.3 x	0.00 mmcf =	0 /2000=	**0.000 tons CH4**
	0 lbs/	0 days =	**0.000 lbs/days CH4**	
	0 lbs/	0 hours =	**0.0000 lbs/hour CH4**	

AP-42 Table 1.4-2 Emission Factors lb/10^6 SCF Natural Gas

CO_2	**120,000**
N2O	**2.2**
CH4	**2.3**

Calendar Year: 2022

#2 Plant Spray Dryer 7-069					
	64,257,727 Ft^3 Natural Gas (NG) =			**64.26** x 10^6 SCF NG	
			267	**Days**	**4,162 Hours**
CO2	120,000 x	64.26 mmcf =	7,710,927 /2000=		**3,855 tons CO2**
	7,710,927 lbs/	267 days =	**28,880**	**lbs/days CO2**	
	7,710,927 lbs/	4162 hours =	**1,853**	**lbs/hour CO2**	
N2O	2.2 x	64.26 mmcf =	141 /2000=		**0.071 tons N2O**
	141 lbs/	267 days =	**0.529**	**lbs/days N2O**	
	141 lbs/	4162 hours =	**0.0340**	**lbs/hour N2O**	
CH4	2.3 x	64.26 mmcf =	148 /2000=		**0.074 tons CH4**
	148 lbs/	267 days =	**0.554**	**lbs/days CH4**	
	148 lbs/	4162 hours =	**0.0355**	**lbs/hour CH4**	

Milling - Warehouse 7-132					
	12,225 Ft^3 Natural Gas (NG) =			**0.01** x 10^6 SCF NG	
			236	**Days**	**2,345 Hours**
CO2	120,000 x	0.01 mmcf =	1,467 /2000=		**1 tons CO2**
	1,467 lbs/	236 days =	**6**	**lbs/days CO2**	
	1,467 lbs/	2345 hours =	**1**	**lbs/hour CO2**	
N2O	2.2 x	0.01 mmcf =	0.03 /2000=		**0.000 tons N2O**
	0 lbs/	236 days =	**0.000**	**lbs/days N2O**	
	0 lbs/	2345 hours =	**0.0000**	**lbs/hour N2O**	
CH4	2.3 x	0.01 mmcf =	0.03 /2000=		**0.000 tons CH4**
	0.03 lbs/	236 days =	**0.000**	**lbs/days CH4**	
	0.03 lbs/	2345 hours =	**0.0000**	**lbs/hour CH4**	

Milling - Process 7-151					
	616,797 Ft^3 Natural Gas (NG) =			**0.62** x 10^6 SCF NG	
			160	**Days**	**1,585 Hours**
CO2	120,000 x	0.62 mmcf =	74,016 /2000=		**37 tons CO2**
	74,016 lbs/	160 days =	**463**	**lbs/days CO2**	
	74,016 lbs/	1585 hours =	**47**	**lbs/hour CO2**	
N2O	2.2 x	0.62 mmcf =	1.36 /2000=		**0.001 tons N2O**
	1 lbs/	160 days =	**0.008**	**lbs/days N2O**	
	1 lbs/	1585 hours =	**0.0009**	**lbs/hour N2O**	
CH4	2.3 x	0.62 mmcf =	1.42 /2000=		**0.001 tons CH4**
	1.42 lbs/	160 days =	**0.009**	**lbs/days CH4**	
	1.42 lbs/	1585 hours =	**0.0009**	**lbs/hour CH4**	

AP-42 Table 1.4-2 Emission Factors lb/10^6 SCF Natural Gas

CO_2	**120,000**
N2O	**2.2**
CH4	**2.3**

Calendar Year: 2022

Pilot Plant Low Pressure boiler 5-0126							
	0 Ft^3 Natural Gas (NG) =			**0.00**	x 10^6 SCF NG		
				0	**Days**		**0 Hours**
CO2	120,000 x	0.00 mmcf =		0 /2000=			**0.00 tons CO2**
	0 lbs/	0 days =		**0 lbs/days**	**CO2**		
	0 lbs/	0 hours =		**0 lbs/hour**	**CO2**		
N2O	2.2 x	0.00 mmcf =		0.0000 /2000=			**0.00000 tons N2O**
	0.000 lbs/	0 days =		**0.000 lbs/days**	**N2O**		
	0.000 lbs/	0 hours =		**0.0000 lbs/hour**	**N2O**		
CH4	2.3 x	0.00 mmcf =		0.000 /2000=			**0.00000 tons CH4**
	0.000 lbs/	0 days =		**0.000 lbs/days**	**CH4**		
	0.000 lbs/	0 hours =		**0.0000 lbs/hour**	**CH4**		

List of Maryland Air Toxics

Number only	CAS w/ hyphen	Air Toxic	Reporting Threshold lbs/hr	Reporting Threshold tons/yr	Billable?
75070	75-07-0	Acetaldehyde	0.1	0.1	
60355	60-35-5	Acetamide	0.1	1	
75058	75-05-8	Acetonitrile	1	1	
98862	98-86-2	Acetophenone	0.1	1	
53963	53-96-3	2-Acetylaminofluorene	0.01	0.01	
107028	107-02-8	Acrolein	0.001	0.01	
79061	79-06-1	Acrylamide	0.0001	0.0001	
79107	79-10-7	Acrylic acid	0.1	0.1	
107131	107-13-1	Acrylonitrile	0.01	0.01	
107051	107-05-1	Allyl chloride	0.01	0.1	
92671	92-67-1	4-Aminobiphenyl	0.01	0.1	
7664417	7664-41-7	Ammonia	0.1	1	
62533	62-53-3	Aniline	0.1	0.1	
90040	90-04-0	o-Anisidine	0.001	0.01	
71432	71-43-2	Benzene	0.01	0.1	
92875	92-87-5	Benzidine	0.01	0.00001	
98077	98-07-7	Benzoic trichloride	0.01	0.0001	
100447	100-44-7	Benzyl chloride	0.01	0.1	
92524	92-52-4	Biphenyl	0.01	0.1	
117817	117-81-7	DEHP	0.01	0.1	
542881	542-88-1	Bis(chloromethyl) ether	0.00001	0.00001	
75252	75-25-2	Bromoform	0.01	0.1	
106990	106-99-0	1,3-Butadiene	0.01	0.001	
156627	156-62-7	Calcium cyanamide	0.001	0.01	
133062	133-06-2	Captan	0.01	0.1	
63252	63-25-2	Carbaryl	0.01	0.1	
75150	75-15-0	Carbon disulfide	0.1	1	Yes
56235	56-23-5	Carbon tetrachloride	0.1	0.01	
463581	463-58-1	Carbonyl sulfide	0.1	1	Yes
120809	120-80-9	Catechol	0.1	1	
133904	133-90-4	Chloramben	0.1	1	
57749	57-74-9	Chlordane	0.001	0.01	
7782505	7782-50-5	Chlorine	0.01	0.1	Yes
10049044	10049-04-4	Chlorine dioxide	0.001	0.01	
79118	79-11-8	Chloroacetic acid	0.01	0.1	
532274	532-27-4	2-Chloroacetophenone	0.001	0.01	
108907	108-90-7	Chlorobenzene	0.1	1	
510156	510-15-6	4,4'-Dichlorobenzilic acid eth	0.01	0.1	
67663	67-66-3	Chloroform	0.1	0.01	
107302	107-30-2	Chloromethyl methyl ether	0.01	0.1	
126998	126-99-8	Chloroprene	0.1	1	
1319773	1319-77-3	Cresol	0.1	1	
95487	95-48-7	o-Cresol	0.1	1	
108394	108-39-4	m-Cresol	0.1	1	
106445	106-44-5	p-Cresol	0.1	1	
98828	98-82-8	Cumene	1	10	
94757	94-75-7	2,4-D	0.1	0.1	
3547044	3547-04-4	DDE	0.01	0.1	
334883	334-88-3	Diazomethane	0.001	0.01	
132649	132-64-9	Dibenzofuran	0.1	1	
96128	96-12-8	1,2-Dibromo-3-chloropropane	0.01	1	
84742	84-74-2	Dibutylphthalate	0.01	0.1	
106467	106-46-7	1,4-Dichlorobenzene	1	0.1	
91941	91-94-1	3,3'-Dichlorobenzidine	0.001	0.001	
111444	111-44-4	Bis(2-dichloroethyl) ether	0.1	1	

Number only	CAS w/ hyphen	Air Toxic	Reporting Threshold lbs/hr	Reporting Threshold tons/yr	Billable?
78875	78-87-5	1,2-Dichloropropane	1	10	
542756	542-75-6	1,3-Dichloropropylene	0.01	0.01	
62737	62-73-7	Dichlorvos	0.01	0.01	
60571	60-57-1	Dieldrin	0.001	0.01	
111422	111-42-2	Diethanolamine	0.01	0.1	
64675	64-67-5	Diethyl sulfate	0.01	0.1	
119904	119-90-4	3,3'-Dimethoxybenzidine	0.1	0.1	
60117	60-11-7	4-Dimethylaminoazobenzene	0.01	0.01	
119937	119-93-7	o-Tolidine	0.1	0.1	
121697	121-69-7	N,N-Dimethylaniline	0.1	1	
79447	79-44-7	N,N-Dimethylcarbamyl chloride	0.01	0.1	
68122	68-12-2	N,N-Dimethylformamide	0.1	1	
57147	57-14-7	1,1-Dimethylhydrazine	0.0001	0.0001	
131113	131-11-3	Dimethylphthalate	0.01	0.1	
77781	77-78-1	Dimethyl sulfate	0.001	0.01	
534521	534-52-1	2,4-Dinitro-6-methyl-phenol	0.001	0.01	
51285	51-28-5	2,4-Dintrophenol	0.001	0.001	
121142	121-14-2	2,4-Dinitrotoluene	0.01	0.1	
123911	123-91-1	p-Dioxane	1	0.1	
122667	122-66-7	N,N'-Diphenylhydrazine	0.01	0.001	
106898	106-89-8	Epichlorohydrin	0.01	0.1	
106887	106-88-7	1,2-Butylene oxide	0.01	0.01	
140885	140-88-5	Ethyl acrylate	0.1	0.01	
100414	100-41-4	Ethylbenzene	1	10	
51796	51-79-6	Urethane {Ethyl carbamate}	0.01	0.1	
75003	75-00-3	Ethylene chloride	0.001	0.01	
106934	106-93-4	1,2-Dibromoethane	1	0.001	
107062	107-06-2	1,2-Dichloroethane	0.1	0.01	
107211	107-21-1	Ethylene glycol	1	1	
151564	151-56-4	Ethyleneimine	0.01	0.01	
75218	75-21-8	Ethylene oxide	0.01	0.001	
96457	96-45-7	1,3-Ethylenethiourea	0.1	0.01	
75343	75-34-3	Ethylidene dichloride	1	10	
50000	50-00-0	Formaldehyde	0.001	0.01	
76448	76-44-8	Heptachlor	0.0001	0.001	
118741	118-74-1	Hexachlorobenzene	0.00001	0.001	
87683	87-68-3	Hexachloro-1,3-butadiene	0.001	0.01	
319846	319-84-6	1,2,3,4,5,6-Hexachlorocyclohexane (alpha)	0.001	0.01	
319857	319-85-7	1,2,3,4,5,6-Hexachlorocyclohexane (beta)	0.001	0.01	
58899	58-89-9	1,2,3,4,5,6-Hexachlorocyclohexane (delta)	0.001	0.01	
319868	319-86-8	1,2,3,4,5,6-Hexachlorocyclohexane (gamma)	0.001	0.01	
608731	608-73-1	1,2,3,4,5,6-Hexachlorocyclohexane (technical)	0.001	0.01	
77474	77-47-4	Hexachlorocyclopentadiene	0.001	0.001	
67721	67-72-1	Hexachloroethane	0.1	0.1	
822060	822-06-0	Hexamethylene diisocyanate	0.0001	0.001	
680319	680-31-9	Hexamethyl phosphoramide	0.1	0.1	
110543	110-54-3	Hexane	1	10	
302012	302-01-2	Hydrazine	0.001	0.001	
7647010	7647-01-0	Hydrochloric acid	0.1	0.1	Yes
7664-39-3	7664-39-3	Hydrogen fluoride, anhydrous	0.01	0.1	Yes
123319	123-31-9	Hydroquinone	0.01	0.1	
78591	78-59-1	Isophorone	0.1	1	
58899	58-89-9	Lindane	0.001	0.01	
608731	608-73-1	1,2,3,4,5,6-Hexachlorocyclohexane	0.001	0.01	
108316	108-31-6	Maleic anhydride	0.01	0.01	
67561	67-56-1	Methanol	1	10	
72435	72-43-5	Methoxychlor	0.1	0.1	

Number only	CAS w/ hyphen	Air Toxic	Reporting Threshold lbs/hr	tons/yr	Billable?
74839	74-83-9	Bromomethane (methyl bromide)	0.01	0.01	
74873	74-87-3	Chloromethane	0.1	0.1	
71-55-6	71-55-6	1,1,1-Trichloroethane	10	10	Yes
78933	78-93-3	MEK	10	10	
60344	60-34-4	Methylhydrazine	0.0001	0.001	
74884	74-88-4	Methyl iodide	0.1	0.1	
108101	108-10-1	MIBK	1	10	
624839	624-83-9	Methyl isocyanate	0.0001	0.001	
80626	80-62-6	Methylmethacrylate	1	10	
1634044	1634-04-4	Tert-butyl methyl ether	1	10	
101144	101-14-4	4,4'-methylenebis(2-chloroaniline)	0.001	0.01	
75092	75-09-2	Methylene chloride	1	1	Yes
101688	101-68-8	Methylene diphenyl diisocyanate	0.0001	0.001	
101779	101-77-9	4,4'-Methylenedianiline	0.01	0.01	
91203	91-20-3	Naphthalene	0.1	1	
98953	98-95-3	Nitro-benzene	0.01	0.1	
92933	92-93-3	4-Nitrobiphenyl	0.1	0.1	
100027	100-02-7	4-Nitrophenol	0.01	0.01	
79469	79-46-9	2-Nitropropane	0.1	0.0001	
684935	684-93-5	1-Methyl-1-nitrosourea	0.001	0.01	
62759	62-75-9	N-Nitrosodimethylamine	0.001	0.00001	
59892	59-89-2	N-Nitrosomorpholine	0.01	0.01	
56382	56-38-2	Parathion	0.001	0.001	
82688	82-68-8	Quintozene (Pentachloronitrobenzene)	0.001	0.01	
87865	87-86-5	Pentachlorophenol	0.001	0.01	
108952	108-95-2	Phenol	0.1	1	
106503	106-50-3	1,4-Benzenediamine	0.001	0.001	
75445	75-44-5	Phosgene	0.001	0.01	
7803512	7803-51-2	Phosphine	0.001	0.01	Yes
7723140	7723-14-0	Yellow Phosphorus	0.001	0.001	
85449	85-44-9	Phthalic anhydride	0.1	0.1	
1336363	1336-36-3	PCBS	0.01	0.001	
1120714	1120-71-4	Propane sultone	10	10	
57578	57-57-8	beta-Propiolactone	0.01	0.1	
123386	123-38-6	Propionaldehyde	0.1	0.1	
114261	114-26-1	Propoxur	0.001	0.01	
75569	75-56-9	Propylene oxide	0.1	0.1	
75558	75-55-8	Propylenimine	0.01	0.1	
91225	91-22-5	Quinoline	0.01	0.1	
106514	106-51-4	Quinone	0.001	0.01	
100425	100-42-5	Styrene	1	1	
96093	96-09-3	Styrene oxide	0.1	0.1	
1746016	1746-01-6	2,3,7,8-Tetrachlorodibenzo-p-d	0.0000001	0.00000001	
79345	79-34-5	1,1,2,2-Tetrachlorethane	0.1	0.1	
127184	127-18-4	1,1,2,2-Tetrachloroethene	1	10	Yes
7550450	7550-45-0	Titanium(IV) chloride	0.01	0.1	Yes
108883	108-88-3	Toluene	1	10	
95807	95-80-7	2,4-Diaminotoluene	0.0001	0.0001	
584849	584-84-9	Toluene-2,4-diisocyanate	0.0001	0.01	
95534	95-53-4	o-Toluidine	0.1	0.01	
8001352	8001-35-2	Toxaphene	0.001	0.001	
120821	120-82-1	1,2,4 Trichlorobenzene	0.1	1	
79005	79-00-5	1,1,2-Trichloroethane	0.1	1	
79016	79-01-6	Trichloroethylene	1	10	
95954	95-95-4	2,4,5-Trichlorophenol	0.01	0.1	
88062	88-06-2	2,4,6-Trichlorophenol	0.01	0.1	
121448	121-44-8	Triethylamine	0.01	0.1	

Number only	CAS w/ hyphen	Air Toxic	Reporting Threshold lbs/hr	Reporting Threshold tons/yr	Billable?
1582098	1582-09-8	Trifluralin	0.1	0.1	
540841	540-84-1	2,2,4-Trimethylpentane	0.1	1	
108054	108-05-4	Vinyl acetate	0.1	1	
593602	593-60-2	Vinyl bromide	0.1	1	
75014	75-01-4	Vinyl chloride	0.1	0.01	
75354	75-35-4	Vinylidene chloride	0.1	1	
1330207	1330-20-7	Xylene	1	10	
95476	95-47-6	o-Xylene	1	10	
108383	108-38-3	m-Xylene	1	10	
106423	106-42-3	p-Xylene	1	10	
7440360	7440-36-0	Antimony	0.001	0.01	
7440382	7440-38-2	Arsenic	0.0001	0.0001	
7440417	7440-41-7	Beryllium	0.00001	0.0001	
7440439	7440-43-9	Cadmium	0.0001	0.0001	
7440473	7440-47-3	Chromium	0.001	0.01	
7440484	7440-48-4	Cobalt	0.0001	0.001	
TAP001	TAP001	Coke Oven Emissions	0.001	0.001	
7440508	7440-50-8	Copper	0.001	0.01	
57125	57-12-5	Cyanide Compounds (Cyanide Ion CAS)	0.01	0.1	Yes
TAP002	TAP002	Glycol ethers	0.1	1	
7439921	7439-92-1	Lead	0.0001	0.001	
7439965	7439-96-5	Manganese	0.001	0.01	
7439976	7439-97-6	Mercury	0.0001	0.001	
7440020	7440-02-0	Nickel	0.001	0.001	
TAP003	TAP003	Polycyclic Aromatic Compounds	0.0001	0.0001	
7782492	7782-49-2	Selenium	0.001	0.01	
TAP004	TAP004	Antimony Compounds	0.001	0.01	
TAP005	TAP005	Arsenic Compounds	0.0001	0.0001	
TAP006	TAP006	Beryllium Compounds	0.00001	0.0001	
TAP007	TAP007	Cadmium Compounds	0.0001	0.0001	
TAP008	TAP008	Chromium (III) Compounds	0.001	0.01	
TAP009	TAP009	Chromium (IV) Compounds	0.001	0.00001	
TAP010	TAP010	Cobalt Compounds	0.0001	0.001	
TAP011	TAP011	Lead Compounds	0.0001	0.001	
TAP012	TAP012	Manganese Compounds	0.001	0.01	
TAP013	TAP013	Mercury Compounds	0.0001	0.001	
TAP014	TAP014	Nickel Compounds	0.001	0.001	
TAP015	TAP015	Selenium Compounds	0.001	0.01	
TAP016	TAP016	Zinc Compounds	0.01	0.1	
		POM includes:			
83329	83-32-9	Acenaphthene	0.001	0.01	
208968	208-96-8	Acenaphthylene	0.01	0.1	
120127	120-12-7	Anthracene	0.001	0.01	
56553	56-55-3	Benz[a]anthracene	0.001	0.001	
50328	50-32-8	Benzo(a)pyrene	0.001	0.0001	
205992	205-99-2	Benzo(b)fluoranthene	0.1	0.001	
191242	191-24-2	Benzo(ghi)perylene	0.001	0.01	
207089	207-08-9	Benzo(k)fluoranthene	0.01	0.01	
218019	218-01-9	Chrysene	0.001	0.01	
53703	53-70-3	Dibenz(a,h)anthracene	0.0001	0.0001	
206440	206-44-0	Fluoranthene	0.1	0.1	
86737	86-73-7	Fluorene	0.001	0.01	
193395	193-39-5	Indeno(1,2,3-c,d)pyrene	0.001	0.001	
91203	91-20-3	Naphthalene	0.1	1	
85018	85-01-8	Phenanthrene	0.01	0.01	
129000	129-00-0	Pyrene	0.001	0.01	

Note: This list is intended as a resource and **not** meant to replace the PDF found on the AQCP website or any other toxics regulation. Please double check with source material.

AQCP Website

EVONIK
Leading Beyond Chemistry

Maryland Department of the Environment
Air and Radiation Administration
1800 Washington Boulevard, Suite 715
Baltimore, Maryland 21230-1720

March 31, 2023

Phone 410-939-7224
Fax 410-939-7303
Mobile 251-751-9913
francesca.pinczes@evonik.com

Evonik Corporation (24-025-0005) Annual Compliance Certification 2022

Evonik Corporation is submitting the Annual Compliance Certification for 2022 per the requirements of Title V permit #24-025-0005. The Title V permit was issued to this facility on January 30, 2020 and covers the period from January 1, 2022 through December 31, 2022.

If you have any questions, please contact my office at the contact information listed above.

Sincerely,

Francesca Pinczes

Francesca Pinczes
Environmental, Safety and Health Manager

EPA United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2022

Federal Operating Permit Program (40 CFR Part 71)
CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS (CTAC)

This form must be completed, signed by the "Responsible Official" designated for the facility or emission unit, and sent with each submission of documents (i.e., application forms, updates to applications, reports, or any information required by a part 71 permit).

A. Responsible Official

Name: (Last) Ocbo (First) Michael (MI) R

Title Site Manager

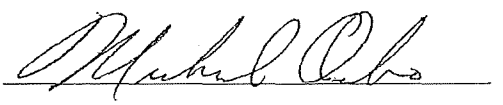
Street or P.O. Box 907 Revolution Street

City Havre de Grace State MD ZIP 21078 - ____

Telephone (410) 939 - 7317 Ext. ____ Facsimile (____) ____ - ____

B. Certification of Truth, Accuracy and Completeness (to be signed by the responsible official)

I certify under penalty of law, based on information and belief formed after reasonable inquiry, the statements and information contained in these documents are true, accurate and complete.

Name (signed) 

Name (typed) Michael R Ocbo Date: 03 /31 /2023

INSTRUCTIONS FOR CTAC
CERTIFICATION OF TRUTH, ACURACY, and COMPLETENESS

Information Collection Burden Estimates

The public reporting and recordkeeping burden for this collection of information is estimated to average 247 hours per respondent per year. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. *Include the OMB control number in any correspondence. Do not send* the completed form to this address.

DETAILED INSTRUCTIONS

This form is for the responsible official to certify that submitted documents (i.e., permit applications, updates to application, reports, and any other information required to be submitted as a condition of a permit) are true, accurate, and complete.

This form should be completed and submitted with each set of documents sent to the permitting authority. It may be used at time of initial application, at each step of a phased application submittal, for application updates, as well as to accompany routine submittals required as a term or condition of a permit.

Section A - Title V permit applications must be signed by a responsible official. *The definition of responsible official can be found at 40 CFR 70.2.*

Section B - The responsible official must sign and date the certification of truth, accuracy and completeness. This should be done after all application forms are complete and the responsible official has reviewed the information. Normally this would be the last form completed before the package of forms is mailed to the permitting authority.

CERTIFICATION OF PLANT-WIDE CONDITIONS
(SECTION III OF PART 70 OPERATING PERMIT)

Indicate compliance with the following requirements of Section III of your Part 70 Operating Permit in the space provided below:

1. Particulate Matter from Construction and Demolition

   In 2022, Evonik Corporation, Havre de Grace, Maryland facility did not permit any building, its appurtenances, or a road to be used, constructed, altered, repaired or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

2. Open Burning

   Except as provided in COMAR 26.11.07.04, the Permittee may not cause or permit an open fire from June 1 through August 31 of any calendar year. Prior to open burning, the Permittee must request and receive approval from the Department.

   Evonik Corporation, Havre de Grace, Maryland facility did not cause or permit an open fire from June 1 through August 31, 2022. The facility did not conduct any open burning in the 2022 calendar year.

3. Air Pollution Episode (N/A)

   When requested by the Department, the Permittee shall prepare in writing standby emissions reduction plans, consistent with good industrial practice and safe operating procedures, for reducing emissions creating air pollution during periods of Alert, Warning, and Emergency of an air pollution episode.

   An air pollution episode did not occur in 2022 and the Department did not request a plan from the facility.

4. Report of Excess Emissions and Deviations
   (All deviations from permit requirements should be clearly identified in quarterly monitoring reports.)

   Evonik Corporation, Havre de Grace, did not report any instances of visible emissions for 2022.

5. Accidental Release Provisions (if applicable)

   Should the Permittee, as defined in 40 CFR Part 68.3, become subject to 40 CFR Part 68.3 during the term of this permit, the owner or operator shall submit a risk management plan by the date specified in 40 CFR Part 68.10 and shall certify compliance with the requirements of 40 CFR Part 68 as part of the annual compliance certification as required by 40 CFR Part 70.

Evonik Corporation, Havre de Grace, Maryland facility did not become subject to 40 CFR Part 68.3 in 2022.

6. General Testing Requirements

The Department may require the Permittee to conduct, or have conducted, testing to determine compliance with this Part 70 permit. The Department, at its option, may witness or conduct these tests. This testing shall be done at a reasonable time, and all information gathered during a testing operation would be provided to the Department.

The Department did not request Evonik Corporation in Havre de Grace, Maryland to conduct or have conducted, testing to determine compliance with this Part 70 permit in 2022.

7. Emissions Test Methods

Compliance with the emissions standards and limitations in this Part 70 permit shall be determined by the test methods designated and described in Permit Condition III.7.a-c (i.e., 40 CFR 60 App. A/40 CFR App. M/MDE Technical Memorandum 91-01) or other test methods submitted to and approved by the Department.

Evonik Corporation, Havre de Grace, Maryland conducted monthly visible emissions observations according to 40 CFR 60, Appendix A, Method 22 to determine compliance with the relevant emissions standards and limitations in the Part 70 permit in 2022.

8. Emission Certification Report

Permittee shall certify actual annual emissions of regulated pollutants from the facility on a calendar year basis.

Evonik Corporation, Havre de Grace, Maryland submitted its Emissions Certification Report for 2022 on March 31, 2023.

9. Compliance Certification Report

The Permittee shall send to the Department and EPA Region III a report certifying compliance with each of this Part 70 permit including each applicable standard, emission limitation, and work practice for the previous calendar year by April 1 of each year.

On March 31, 2023, Evonik Corporation, Havre de Grace, Maryland submitted to the Department and EPA Region III its annual compliance certification report for 2022.

10. Certification by Responsible Official

All application forms, reports, and compliance certifications submitted pursuant this permit shall be certified by a responsible official as to truth, accuracy, and completeness. The Permittee shall expeditiously notify the Department of an appointment of a new responsible official.

All application forms, reports, and compliance certifications submitted in 2022 were certified by a responsible official from the Evonik Corporation, Havre de Grace, MD.

11. Sampling and Emissions Testing Record Keeping

The Permittee shall gather and retain the information in Permit Condition 11a-f when sampling and testing for compliance demonstrations.

Evonik Corporation, Havre de Grace, Maryland facility was not required to conduct sampling and emission testing in 2022.

12. General Record Keeping

The Permittee shall retain records of all monitoring data and support information that supports the compliance certification for a period of five years from the date that the monitoring sample, measurement, application, report or emissions test was completed or submitted to the Department. These records and support information shall include all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, records which support the annual emissions certification, and copies of all reports required by this permit.

Evonik Corporation, Havre de Grace, Maryland facility maintains the records for a period of five years. Records for the previous five years have been retained except as noted in previous annual compliance certifications.

13. General Conformity (N/A except for federal facilities)

Not applicable for the Evonik Corporation, Havre de Grace, Maryland facility.

14. Asbestos Provisions (if applicable)

The Permittee shall comply with 40 CFR Part 61, Subpart M when conducting any renovation or demolition activities at the facility.

Evonik Corporation, Havre de Grace, Maryland did not conduct any asbestos related activity in 2022.

15. Ozone Depleting Regulations (if applicable)

The Permittee shall comply with 40 CFR Part 82, Subpart F with regards to the service, maintenance, repair and disposal of appliances containing class I or class II ODS.

Evonik Corporation, Havre de Grace, Maryland uses only certified technicians as defined in 40 CFR Part 82 sec 161(a) to service, maintain, repair and dispose of ODS containing appliances.

16. Acid Rain Permit (if applicable)

Not applicable for the Evonik Corporation, Havre de Grace, Maryland facility.

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2022

Federal Operating Permit Program (40 CFR Part 71)
ANNUAL COMPLIANCE CERTIFICATION (A-COMP)

A. GENERAL INFORMATION

Permit No. 24-025-0005

Reporting Period: Beg. 01/01/2022 End. 12/31/2022

Source / Company Name Evonik Corporation

Mailing Address: Street or P.O. Box 907 Revolution Street

City Havre de Grace State MD ZIP 21078

Contact person Francesca Pinczes Title ESH Manager

Telephone (410) 939-7224 Ext. _____

Continued on next page

A-COMP

B. COMPLIANCE STATUS

Describe the compliance status of each permit term for the reporting period. Copy this page as many times as necessary to cover all permit terms and conditions.

Emission Unit ID(s): EU 1

Permit Term (Describe requirements and cross-reference)

IV 1.1 A & B
A. Visible Emissions Limitations

COMAR 26.11.06.02C(2) which prohibits visible emissions other than water in an uncombined form.

Exceptions. COMAR 26.11.06.02A(2) establishes that Section C does not apply to emissions during start-up, and process modifications or adjustments, or occasional cleaning of control equipment, if: (a) the visible emissions are not greater than 40 percent opacity; and (b) the visible emissions do not occur for more than 6 consecutive minutes in any 60-minute period.

B. Control of Particulate

1. COMAR 26.11.06.038(2) which limits particulate matter emissions to 0.03 grains per standard cubic foot of dry exhaust gas.
2. COMAR 26. 11.06.030 which requires that reasonable precautions be taken to prevent any particulate matter from becoming airborne as a result of material being handled, transported, or stored.

Compliance Methods for the Above (Description and Citation):

Shift inspections and permit required monthly visual inspections. The monthly visual inspections are conducted via a Method 22-like observation and are recorded as required in the permit. In all cases, the system was immediately shut down, the cause investigated and corrected before starting back up. All systems are set up to shut down at ½ of the permitted limit (0.015 gr/dscf). Shift inspections, monthly inspections, and monitoring equipment are precautions taken to ensure particulate matter does not become airborne as a result of material being handled, transported, or stored.

Status (Check one): ___ Intermittent Compliance _X__ Continuous Compliance

Emission Unit ID(s): EU 7 & 8

Permit Term (Describe requirements and cross-reference)

IV 1.1 A & B
A. Visible Emissions Limitations

COMAR 26.11.06.02C(2) which prohibits visible emissions other than water in an uncombined form.

Exceptions. COMAR 26.11.06.02A(2) establishes that Section C does not apply to emissions during start-up, and process modifications or adjustments, or occasional cleaning of control equipment, if: (a) the visible emissions are not greater than 40 percent opacity; and (b) the visible emissions do not occur for more than 6 consecutive minutes in any 60-minute period.

B. Control of Particulate

1. COMAR 26.11.06.038(2) which limits particulate matter emissions to 0.03 grains per standard cubic foot of dry exhaust gas.

2. COMAR 26. 11.06.030 which requires that reasonable precautions be taken to prevent any particulate matter from becoming airborne as a result of material being handled, transported, or stored.

Compliance Methods for the Above (Description and Citation):

Shift inspections and permit required monthly visual inspections. The monthly visual inspections are conducted via a Method 22-like observation and are recorded as required in the permit. For EP#31 and EP#33, pressure drop is continuously measured across each Flex-Clean baghouse. All systems are set up to shut down at ½ of the permitted limit (0.015 gr/dscf). Shift inspections, monthly inspections, and monitoring equipment are precautions taken to ensure particulate matter does not become airborne as a result of material being handled, transported, or stored.

Status (Check one): ___ Intermittent Compliance __X_ Continuous Compliance

Emission Unit ID(s): EU 2, 3, 4, 5, 6, and EU11(EP44)

Permit Term (Describe requirements and cross-reference)

IV 2.1 A & B, 3.1 A & B, 6.1 A & B
A. Visible Emissions Limitations

COMAR 26.11.06.02C(2) which prohibits visible emissions other than water in an uncombined form.

Exceptions. COMAR 26.11.06.02A(2) establishes that Section C does not apply to emissions during start-up, and process modifications or adjustments, or occasional cleaning of control equipment, if: (a) the visible emissions are not greater than 40 percent opacity; and (b) the visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period.

B. Control of Particulate
COMAR 26.11.06.038(2) which limits particulate matter emissions to 0.03 grains per standard cubic foot of dry exhaust gas.

Compliance Methods for the Above (Description and Citation):

Shift inspections and permit required monthly visual inspections. The monthly visual inspections are conducted via a Method 22-like observation and are recorded as required in the permit. Initial compliance was determined through representative stack tests and engineering design. Dual dust monitors on Spray Dryer #1 and #2 continuously measure particulate emissions and records are kept as required in the permit. EU 2, 3, 4 and 5 are set up to shut down at ½ of the permitted limit (0.015 gr./dscf), and EP 11 of EU 6 is set-up to shut down at ¾ of the permitted limit (0.0225 gr./dscf).

Status (Check one): Intermittent Compliance _X__ Continuous Compliance

B. COMPLIANCE STATUS

Describe the compliance status of each permit term for the reporting period. Copy this page as many times as necessary to cover all permit terms and conditions.

Emission Unit ID(s): EU1, 7 & 8 (EP 1, 5, 17, 23, 26, 27, 29, 30, 31, 33, 34 & 48)
EU 2, 3, 4 (EP 6, 7, 8)
EU 5 & 6 (EP 10 & 11)
EU 9 (36, 37, 38, 39, 40)
EU11 (44, 47)

Permit Term (Describe requirements and cross-reference)

IV 1.3 A, 1.4A, 2.3 A, 2.4 A, 3.3 A, 3.4 A, 4.3 A, 4.4. A, 6.3 A, 6.4 A
Visually inspect the exhaust gases from each external emission point at least monthly and record the results of each observation

If visible emissions are detected

a) Inspect all process and/or control equipment that may affect visible emissions.
b) Perform all necessary repairs and/or adjustments to processes or control equipment within 48 hours, so that visible emissions in the exhaust gases are eliminated
c) Document in writing, the results of the inspections and the repairs and/or adjustments made to the processes and/or control equipment.
d) If visible emissions are not eliminated within **48 hours**, perform a Method 9 observation once daily for an 18-minute period until corrective actions have eliminated visible emissions.

The Permittee shall maintain a record of each visible emission check required in 1.3 of this table on site for a period of no less than five (5) years. Said record shall include the date, time, name of emission point, the applicable visible emissions requirement, the results of the check, what action(s), if any, was/were taken, and the name of the observer.

Compliance Methods for the Above (Description and Citation):
Monthly visual emissions observations are conducted using a Method 22-like observation. Monthly observations were performed for running equipment every month in 2022. If there were visible emissions detected, corrective actions are taken immediately and resolved within 48 hours. This information is recorded on the visible emissions sheet. If equipment was not operational for the month, this was also noted. Visible Emission sheets are maintained in the EHS files for a period of 5 years.

Status (Check one): ___ Intermittent Compliance _X_ Continuous Compliance

Emission Unit ID(s): EU1, 7 & 8 (EP 1, 5, 17, 23, 26, 27, 29, 30, 31, 33, 34 & 48)
EU 5 & 6 (EP 10 & 11)

Permit Term (Describe requirements and cross-reference)

IV 1.3 B, 1.4 B, 3.3 B, 3.4 B
The Permittee shall develop and maintain a preventative maintenance plan for each baghouse that describes the maintenance activity and time schedule for completing each activity. The Permittee shall perform maintenance activities within the timeframes established in the plan and shall maintain a log with records of the dates that maintenance

was performed.
[Authority: COMAR26.11.03.0GC]

The Permittee shall keep a log of the maintenance activities on-site for at least five years and make them available to the Department upon request.

Compliance Methods for the Above (Description and Citation):
A procedure for Inspections and preventative maintenance for control equipment and permit monitoring equipment has been developed, using plant maintenance software (SAP) for scheduling and recordkeeping.

Status (Check one): ___ Intermittent Compliance _X__ Continuous Compliance

---

Emission Unit ID(s): EU 2, 3, 4 (EP 6, 7, 8)

Permit Term (Describe requirements and cross-reference)

IV 2.3 B, 2.4 B
The Permittee shall develop and maintain a preventative maintenance plan for each demister and baghouse that describes the maintenance activity and time schedule for completing each activity. The Permittee shall perform maintenance activities within the timeframes established in the plan and shall maintain a log with records of the dates that maintenance was performed.
[Authority: COMAR 26.11.03.06C]

The Permittee shall keep a log of the maintenance activities on-site for at least five years and make them available to the Department upon request.
[Authority: COMAR 26.11.03.0GC]

Compliance Methods for the Above (Description and Citation):
A procedure for Inspections and preventative maintenance for control equipment and permit monitoring equipment has been developed, using plant maintenance software (SAP) for scheduling and recordkeeping.

Status (Check one): ___ Intermittent Compliance _X__ Continuous Compliance

---

Emission Unit ID(s): EU 9 (36, 37, 38, 39, 40)

Permit Term (Describe requirements and cross-reference)
10. IV 4.3 B, 4.4 B
The Permittee shall develop and maintain a preventative maintenance plan for each dust collector (baghouse or demister) that describes the maintenance activity and time schedule for completing each activity.
The Permittee shall perform maintenance activities within the timeframes established in the plan and shall maintain a log with records of the dates that maintenance was performed.

The Permittee shall keep a log of the maintenance activities on-site for at least five years and make them available to the Department upon request.

[Authority: COMAR 26.11.03.06C]

A-COMP

Compliance Methods for the Above (Description and Citation):
A procedure for Inspections and preventative maintenance for control equipment and permit monitoring equipment has been developed, using plant maintenance software (SAP) for scheduling and recordkeeping.

Status (Check one): ___ Intermittent Compliance _X__ Continuous Compliance

B. COMPLIANCE STATUS

Describe the compliance status of each permit term for the reporting period. Copy this page as many times as necessary to cover all permit terms and conditions.

Emission Unit ID(s): EU 8 (EP 31 & 33)

Permit Term (Describe requirements and cross-reference)

IV 1.3B , 1.4B

The Permittee shall continuously measure the pressure drop across each bag-house when the equipment is operating.

The Permittee shall record the pressure drop across each bag-house at least once a day when the equipment is operating and keep records on site for at least five years and make them available to the Department upon request.
[Authority: COMAR 26.11.03.06C]

Compliance Methods for the Above (Description and Citation):
For EP31 and EP33, pressure drop is continuously measured across each Flex-Clean baghouse. The systems are set up to shut down at ½ of the permitted limit (0.015 gr./dscf). The equipment did not run in 2022.

Status (Check one): ___ Intermittent Compliance __X_ Continuous Compliance

---

Emission Unit ID(s): EU 5 & 6

Permit Term (Describe requirements and cross-reference)

IV 3.1 C, 3.4 C, 3.4 D (a and b)

C. Control of NOx

The Permittee shall:

(a) maintain good operating practices as recommended by the equipment vendor to minimize NOx emissions. [**Authority: COMAR26.11.09.08J**(1)]

(b) prepare and implement a written in-house training program for alloperators of these installations that include instruction on good operating and maintenance practices for the particular installation. **(Authority: COMAR 26.11.09.08J(2)]**

(c) burn only natural gas in each installation, where gas is available, during the period of May 1 through September 30 of each year. **[Authority COMAR 26.11.09.08J(4)]**

Compliance Methods for the Above (Description and Citation):
An in house training program was written for operators to instruct on good operating and maintenance practices in regards to minimizing NOx emissions. Training documents and attendance records are maintained and available upon request.

A-COMP

Status (Check one): ___ Intermittent Compliance _X__ Continuous Compliance

Emission Unit ID(s): EU 5 & 6

Permit Term (Describe requirements and cross-reference)

IV 3.1 D, 3.4 D(c)

The Permittee shall use natural gas as the primary fuel with No.2 fuel oil as back-up on interruptions for both spray dryers unless the Permittee requests and receives an approval or permit from the Department to burn an alternate fuel. **[Authority: COMAR 26.11.02.09A]**

Compliance Methods for the Above (Description and Citation):

Only natural gas was burned in the #1 and #2 plant spray dryers in 2022. The quantity of fuel used is recorded. Records are available to the department upon request.

Status (Check one): ___ Intermittent Compliance _X__ Continuous Compliance

Emission Unit ID(s): EP 10

Permit Term (Describe requirements and cross-reference)

IV 3.3 B, 3.4 B

The Permittee shall continuously measure the particulate matter usingthe dual dust monitors from this emission point and record the values atleast once a day when the equipment is operating. **[Authority: Permit to Construct # 025-7-0102 M issued December 1, 1989].**

The Permittee shall keep daily records of the PM emissions on site for at least five years.

Compliance Methods for the Above (Description and Citation):

PM is continuously measured using the dual dust monitors from this emission point and recorded on a data recorder. This data is downloaded and filed. Except as reported in previous compliance reports, these records are maintained on site for a minimum of 5 years. The equipment did not run in 2022.

Status (Check one): ___ Intermittent Compliance _X__ Continuous Compliance

B. COMPLIANCE STATUS

Describe the compliance status of each permit term for the reporting period. Copy this page as many times as necessary to cover all permit terms and conditions.

Emission Unit ID(s): EU 9

Permit Term (Describe requirements and cross-reference)

IV 4.1 A&B

Visible Emissions Limitations - EP 36, 37, 38, 39 and 40

COMAR 26.11 .06.02C(2) which prohibits visible emissions other than water in an uncombined form.

Exceptions. COMAR 26.11 .06.02A(2) establishes that Section C does not apply to emissions during start-up, and process modifications or adjustments, or occasional cleaning of control equipment, if: (a) the visible emissions are not greater than 40 percent opacity; and (b) the visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period.

Control of Particulate - EP 36, 37, 38, 39, and 40

COMAR 26.11.06.038(2) which limits particulate matter emissions to 0.03 grains per standard cubic foot of dry exhaust gas.

Compliance Methods for the Above (Description and Citation):

Shift inspections and permit required monthly visual inspections. The monthly visual inspections are conducted via a Method 22-like observation and are recorded as required in the permit. Initial compliance was determined through representative stack tests and engineering design. The systems are set up to shut down at ½ of the permitted limit (0.015 gr./dscf). In all cases, the system was immediately shut down, the cause investigated and corrected before starting back up. All of these were reported to the state per permit requirements. The equipment did not run in 2022.

Status (Check one): ___ Intermittent Compliance __X_ Continuous Compliance

Emission Unit ID(s): EU10

Permit Term (Describe requirements and cross-reference)

IV 5.1 A

Visible Emissions Limitations

COMAR 26.11 .09.05A(2) which prohibits visible emissions other than water in an uncombined form.

Exceptions. COMAR 26.11.09.05A(3) establishes that Section A(2) doesnot apply to

emissions during load changing, soot blowing, start-up, or adjustments or occasional cleaning of control equipment if: (a) the visible emissions are not greater than 40 percent opacity; and (b) the visible emissions do not occur for more than 6 consecutive minutes in any sixty minutes.

Compliance Methods for the Above (Description and Citation):

Shift inspections and permit required monthly visual inspections. The monthly visual inspections are conducted via a Method 22-like observation and are recorded as required in the permit. Initial compliance was determined through representative stack tests and engineering design.

Status (Check one): ___ Intermittent Compliance _X__ Continuous Compliance

Emission Unit ID(s): EU 10

Permit Term (Describe requirements and cross-reference)

IV 5.1 B

COMAR 26.11.09.07 A(2) which limits the sulfur content in distillate fuel oil to 0.3 percent by weight.

Compliance Methods for the Above (Description and Citation):

In December 2005 #2 Fuel Oil was purchased and delivered to the facility. No fuel was purchased in 2022. Records of fuel usage and purchases/deliveries are kept on file.

Status (Check one): ___ Intermittent Compliance _X__ Continuous Compliance

B. COMPLIANCE STATUS

Describe the compliance status of each permit term for the reporting period. Copy this page as many times as necessary to cover all permit terms and conditions.

Emission Unit ID(s): EU9 (EP 37)

Permit Term (Describe requirements and cross-reference)

IV 4.1 C, 4.4 C
The Permittee shall only burn natural gas in the Rotary Dryer.
The Permittee shall maintain records of the quantity and types of fuel burned in the rotary dryer for at least 5 years and make these records available to the Department upon request.
[Authority: COMAR 26.11.02.19C(1)(c)]

Compliance Methods for the Above (Description and Citation):
The sulfate rotary dryer did not operate in 2022. This equipment is not capable of running on an alternate fuel.

Status (Check one): ___ Intermittent Compliance __X__ Continuous Compliance

Emission Unit ID(s): EU 10

Permit Term (Describe requirements and cross-reference)

IV 5.1 C, 5.2 C

Must submit to the Department an identification of each affected installation, the rated heat input capacity of each installation and the type of fuel burned in each installation

Perform a combustion analysis for each affected installation at least once each year and optimize combustion based on the analysis. Maintain records in files.

At least once every 3 years, each operator must attend operator-training programs on combustion optimization sponsored by the MDE, EPA, or equipment vendors. Training records must be maintained.

Compliance Methods for the Above (Description and Citation):
A combustion analysis for each affected installation was conducted for each of the boilers in service in 2022. Records are maintained in the Maintenance department. Each operator completed training in May 2022.

Status (Check one): ___ Intermittent Compliance __X__ Continuous Compliance

A-COMP

Emission Unit ID(s): EU 10

Permit Term (Describe requirements and cross-reference)

IV 5.3A

Properly operate and maintain boilers in a manner to prevent visible emissions

Verify no visible emissions when burning No 2 Fuel oil by performing a visual observation of each boiler exhaust stack for a 6 minute period once for each 168 hours that the boiler burns No 2 fuel oil, or at a minimum of once per year.

If visible emissions are detected

1) Inspect all process and/or control equipment that may affect visible emissions.
2) Switch to an alternate boiler or natural gas or perform within 48 hours all repairs and or adjustments to eliminate visible emissions
3) Make written records of any switches, repairs or adjustments that were necessary to eliminate visible emissions.
4) If unable to switch to alternate boiler or natural gas or if the required adjustments or repairs have not eliminated the visible emissions within **48 hours**, perform a Method 9 observation once daily for a 12-minute period until visible emissions have been eliminated.

Records of visible emission checks are maintained for a minimum of 5 years.

Compliance Methods for the Above (Description and Citation):

The boilers are properly operated and maintained in a manner to prevent visible emissions. No #2 fuel oil was burned in the boilers in 2022, so no additional visible emission inspections were required. All records of visible emission observations are maintained for a minimum of five years.

Status (Check one): ___ Intermittent Compliance _X__ Continuous Compliance

B. COMPLIANCE STATUS

Describe the compliance status of each permit term for the reporting period. Copy this page as many times as necessary to cover all permit terms and conditions.

Emission Unit ID(s): EU 10

Permit Term (Describe requirements and cross-reference)

IV 5.4 A

A. Visible Emissions Limitations

The Permittee shall:

(1) Maintain an operating manual and preventative maintenance plan on site for each boiler.

(2) Maintain a record of the maintenance performed that relates to combustion performance for each boiler.

(3) Make a written or printable electronic record of each required observation for visible emissions, and each such record shall includeidentification of the observer, the date of the observation, the time atthe start of the observation, the time at the end of the observation,and an account of the observer's findings during performance of the observation.

(4) Maintain a record of the hours that No. 2 fuel is burned in each boiler.
[Authority: COMAR 26.11.03.0GC]

Compliance Methods for the Above (Description and Citation):
Each boiler is operated and maintained according to manufacturer recommendations and plant best management practices. Documentation of work done on the boiler is maintained in the SAP system. Records of visible emissions are maintained in the environmental files.

Status (Check one): ___ Intermittent Compliance __X_ Continuous Compliance

Emission Unit ID(s): EU1, 7, 8 (EP 1, 5, 17, 23, 26, 27, 29, 30, 31, 33, 34, & 48)
EU2, 3, 4, (EP6, 7, 8)
EU5&6 (EP 10 &11)
EU9 (EP 36, 37, 38, 39, 40)
EU 11(EP 44 & 47)

Permit Term (Describe requirements and cross-reference)

IV 1.5, 2.5, 3.5, 4.5, & 6.5

Report excess emissions and deviations in accordance with Section II, Condition 4 "Report of Excess Emissions & Deviations"

Compliance Methods for the Above (Description and Citation):

Copies of submitted deviation reports will be maintained on site in the environmental files. Permit deviations have been reported in six month reports, or as indicated in Condition #4

(Report of Excess Emissions and Deviations), Condition #9 (Compliance Certification Report), or Section III – Plant Wide Conditions.

Status (Check one): ___ Intermittent Compliance _X__ Continuous Compliance

Emission Unit ID(s): EU10(EP 41, 42)

Permit Term (Describe requirements and cross-reference)

IV 5.5

Report occurrences of visible emissions from the two boilers in accordance with conditions number 4 (Report of Excess Emissions and Deviations), and number 9 (Compliance Certification report) or Section III – Plant Wide Conditions

Compliance Methods for the Above (Description and Citation):

No occurrences of visible emissions for the 2 boilers for 2022.

Status (Check one): ___ Intermittent Compliance _X__ Continuous Compliance

Emission Unit ID(s): EU11 - EP 47

Permit Term (Describe requirements and cross-reference)

IV 6.1 C, 6.3 C

Permittee will limit the use of VOC to not more than 20 pounds per day unless VOC emissions are reduced by 85 % or more overall.

Compliance Methods for the Above (Description and Citation):

The installation of this equipment was not completed and the project was cancelled.

Status (Check one): ___ Intermittent Compliance _X__ Continuous Compliance

B. COMPLIANCE STATUS

Describe the compliance status of each permit term for the reporting period. Copy this page as many times as necessary to cover all permit terms and conditions.

Emission Unit ID(s): EU 10

Permit Term (Describe requirements and cross-reference)

IV 5.1D

D. Operational Limitation

(1) The Permittee shall burn only natural gas or No. 2 fuel oil in each of the two (2) boilers unless the Permittee obtains an approval from theDepartment to burn alternate fuels. No. 2 fuel oil may only be burneddduring periods of gas curtailment, gas supply interruption, startups, orperiodic testing on liquid fuel. Periodic testing on liquid fuel may not exceed 48 hours during any calendar year for each boiler.

Period of gas curtailment or supply interruption means a period of time during which the supply of gaseous fuel to an affected boiler isrestricted or halted for reasons beyond the control of the facility. Theact of entering into a contractual agreement with a supplier of natural gas established for curtailment purposes does not constitute a reason that is under the control of the facility for the purposes of this definition. An increase in the cost or unit price of natural gas due to normal market fluctuations not during periods of supplier delivery restriction does not constitute a period of natural gas curtailment or supply interruption. On-site gaseous fuel system emergencies or equipment failures qualify as periods of supply interruption when the emergency or failure is beyond the control of the facility.
[Authority: COMAR 26.11.02.09A 40 CFR §63.11237)

(2) If the Permittee wishes to burn No. 2 fuel oil in either of the two (2) boilers at any other times other than allowed under section 5.1D of this table, the Permittee shall comply with the requirements of 40 CFR 63, Subpart JJJJJJ.
[Authority: COMAR 26.11.02.0SA 40 CFR §63.11195(e)]

Compliance Methods for the Above (Description and Citation):
No #2 fuel oil was burned in the boilers in 2022, so no additional visible emission inspections were required. All records of visible emission observations are maintained for a minimum of five years.

Status (Check one): ___ Intermittent Compliance __X__ Continuous Compliance

Emission Unit ID(s):EU 10

Permit Term (Describe requirements and cross-reference)

IV 5.4 D
Operational Limitation

The Permittee shall maintain records of natural gas and No. 2 fuel usagefor the two (2) boilers including the types and amounts of fuel used anddocumentation showing that No. 2 fuel was only used during periods of natural gas curtailment or for testing.

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[Authority: COMAR 26.11.02.19C(1)(c)]

Compliance Methods for the Above (Description and Citation):

Fuel usage is tracked and records maintained for a minimum of 5 years.

Status (Check one): ___ Intermittent Compliance _X_ Continuous Compliance

Emission Unit ID(s): EU10

Permit Term (Describe requirements and cross-reference)
IV 5.3B, 5.4B

5.3 B. Control of Sulfur Oxides

The Permittee shall obtain from fuel oil suppliers written certification thatall No. 2 fuel oil received at the facility to be burned in the two boilerscomplies with the limitation regarding sulfur content imposed under COMAR 26.11.09.07A(2)(b).
[Authority: COMAR 26.11.03.0GC]

5.4 B. Control of Sulfur Oxides

The Permittee shall maintain written certifications from the facility's fuel oil suppliers that all No. 2 fuel oil received at the facility to be burned in the two boilers complies with the limitation regarding sulfur content imposed under COMAR 26.11.09.07A(2)(b).
[Authority: COMAR 26.11.03.0GC]

Compliance Methods for the Above (Description and Citation):

No fuel oil was purchased in 2022. There is a procedure in place to have the person ordering fuel oil to ensure that it contains the permitted amount of Sulfur, in addition the procedure has someone check prior to delivery. Certification of sulfur content is maintained by the purchasing department and EHS.

Status (Check one): ___ Intermittent Compliance _X_ Continuous Compliance

Emission Unit ID(s): EU 10

Permit Term (Describe requirements and cross-reference)
IV 5.3C and 5.4C

5.3 C Control of Nitrogen Oxides

The Permittee shall optimize combustion in the two boilers in accordance with the findings of the combustion analyses.
[Authority: COMAR 26.11.09.08E(2)]

5.4 C. Control of Nitrogen Oxides

The Permittee shall maintain records of:

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(1) All required combustion analyses performed on the two boilers;and

(2) Required training of equipment operators concerning combustion optimization, such records shall include the names of all trainees, the dates on which the training was administered, and identification of the concern that provided the training.
[Authority: COMAR 26.11.09.08E(5) and COMAR 26.11.03.0GC]

Compliance Methods for the Above (Description and Citation):
A combustion analysis for each affected installation was conducted for each of the boilers in service in 2022. Records are maintained in the Maintenance department. Each operator completed training in May 2022.

Status (Check one): ___ Intermittent Compliance _X_ Continuous Compliance

B. COMPLIANCE STATUS

Describe the compliance status of each permit term for the reporting period. Copy this page as many times as necessary to cover all permit terms and conditions.

Emission Unit ID(s): EU11 - EP 47

Permit Term (Describe requirements and cross-reference)

IV 6.4 C

Permittee will maintain a record of each log identifying the date and time that the break through detector is monitored and the date and time when a carbon bed breakthrough occurs and is replaced for a period of no less than 5 years.

Compliance Methods for the Above (Description and Citation):

The installation of this equipment was not completed and the project was cancelled

Status (Check one): ___ Intermittent Compliance __X_ Continuous Compliance

---

Emission Unit ID(s): EU 11 - EP 44, 46 & 47

Permit Term (Describe requirements and cross-reference)

IV 6.4 D

Maintain records of quantity and types of fuel burned for at least 5 years.

Compliance Methods for the Above (Description and Citation):

Only natural gas was burned in the pilot plant equipment in 2022. The quantity of fuel used is recorded. Records are available to the department upon request.

Status (Check one): ___ Intermittent Compliance _X__ Continuous Compliance

---

Emission Unit ID(s): EP 44, 46, & 47

Permit Term (Describe requirements and cross-reference)

IV 6.1 D

Operational Limitations - EP 44 and 46

The Permittee shall use only natural gas for the spray dryer and the boilers at the pilot plant unless the Permittee requests and receives an approval or permit from the Department to burn an alternate fuel. **[Authority: COMAR 26.11.02.0SA]**

EP 47

The exhaust gases from the Henschel mixer shall vent through a carbonbed adsorber (EP47) prior to discharging to the atmosphere.

Compliance Methods for the Above (Description and Citation):

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In December 2005 #2 Fuel Oil was purchased and delivered to the facility. The fuel oil was not used in 2022 in the pilot plant. Records of fuel usage and purchases/deliveries are kept on file.

The Henschel mixer was not used in 2022 and has not been used since the permit was issued. The project was cancelled.

Status (Check one): ___ Intermittent Compliance _X__ Continuous Compliance

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C. DEVIATIONS FROM PERMIT TERMS AND CONDITIONS

Report all deviations from permit terms (whether reported previously or not) that occurred during the permit term. Cross-reference deviations already reported in the six-month report. Indicate whether each deviation is a "possible exception to compliance." Start and end period of each deviation should be in mo/day/yr, hr:min format (24-hour clock). Also, specify the date when the written deviation report was submitted (If written report required, but not submitted, leave the date field blank).

Permit Term for Which There was a Deviation:
No Deviations this period (01/01/2022 – 12/31/2022)

Emission Units (unit IDs):

Deviation Start ___/___/_____ ____:____ End:___/___/_____ ____:____

Date Written Report Submitted __/__/____

Permit Term for Which There was a Deviation:

Emission Units (unit IDs):

Deviation Start _____/_____/_____ ____:____ End:_____/_____/_____ ____:____

Date Written Report Submitted ____/____/_____

Permit Term for Which There was a Deviation:

Emission Units (unit IDs):

Deviation Start _____/_____/_____ ____:____ End:_____/_____/_____ ____:____

Date Written Report Submitted ____/____/_____

Permit Term for Which There was a Deviation:

Emission Units (unit IDs):

Deviation Start _____/_____/_____ ____:____ End:_____/_____/_____ ____:____

Date Written Report Submitted ____/____/_____

INSTRUCTIONS FOR A-COMP
ANNUAL COMPLIANCE CERTIFICATION

Information Collection Burden Estimates

The public reporting and recordkeeping burden for this collection of information is estimated to average 247 hours per respondent per year. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

DETAILED INSTRUCTIONS

Submit this form along with a certification of truth, accuracy and completeness by a responsible official on an annual basis.

Section A (General Information)

Name and address should be consistent with information provided previously. The contact person should be a person familiar with the day-to-day operation of the facility, such as a plant site manager or other individual, who should be available to be contacted by the permitting authority. If there is more than one contact person, list the others on an attachment.

The reporting period must be at least every 12 months, but your permit may require this more frequently.

Section B (Compliance Status)

Description of Permit Term: Include each permit terms that imposes a requirement or action (emission limitations, standards, monitoring, recordkeeping, reporting, and other requirements on one or more emission units or on the facility. You will likely have to complete this section numerous times to include all requirements in the permit.

The emissions unit ID(s) should be those defined in the permit or in section I of form GIS. If the requirements, including compliance methods, apply in the same way to multiple emission units, you may list multiple units for a particular requirement. Emission units and requirements may be grouped if they apply the same way at all units in the group, the same compliance methods apply to all, and all units have the same compliance status.

Citations to the requirements should unambiguously identify the permit term to the lowest level.

Compliance Methods: List all compliance methods (monitoring, recordkeeping and reporting) you used to determine compliance with the permit term described above. Also, describe and cross-reference these compliance methods.

To describe monitoring, indicate the monitoring device, what is being monitored, averaging time, frequency, and cross-reference the permit term. To describe recordkeeping, describe the records kept, collection frequency, and cross-reference the permit term. Please indicate if monitoring data results or compliance records are kept on-site rather than reported. To describe reporting requirements, describe what is reported, when it is reported, and cross-reference the permit term.

The citation or cross-reference here must unambiguously identify the requirement to the lowest level.

Compliance Status: For each permit requirement and its associated compliance methods, indicate whether there was intermittent or continuous compliance (check one) during the reporting period. You should consider all available information or knowledge that you have when evaluating this, including compliance methods required by the permit and "credible evidence" (e.g., non-reference test methods and information "readily available" to you). You are always free to include written explanations and other information to clarify your conclusion regarding compliance status.

You must include permit terms that were not effective or not applicable (e.g., future-effective requirements, compliance options, and alternative scenarios). You may certify to continuous compliance for these if there is no evidence of noncompliance.

Absent evidence to the contrary, you may certify continuous compliance based on the data provided by the compliance methods, provided you did not fail to perform them and there were no unexcused deviations. Any failure to meet any permit term for any period of time indicates intermittent compliance. You may also indicate "undetermined compliance," if you include the reason.

Section C (Deviations From Permit Terms and Conditions)

Summarize all deviations from permit terms that occurred since the last compliance certification. They may have been reported previously in-writing or they may be reported concurrently with this certification. Also include any deviations but have not yet been reported in writing.

Copy this page as many times as necessary to include all deviations that occurred during the reporting period for this compliance certification.

Deviations occur when any permit term is not met, including emission limitations, standards, monitoring, recordkeeping, reporting and other requirements. For a more detailed explanation of the term "deviation." See the instructions for Form ***SIXMON***. A deviation is not necessarily a violation. Violations are determined by EPA (or its delegate Agency).

You may cross-reference deviations previously reported (e.g., in 6-month monitoring reports).

You must indicate whether each deviation is a "possible exception to compliance." This is a deviation that occurs when compliance is required. A deviation that is not a "possible exception to compliance" is one that occurs when compliance is not required or it is excused by another permit term. If you indicate that a deviation is not a possible exception to compliance, briefly explain and cross-reference the permit term that allows or excuses it. In addition, deviations for which the permit provides an affirmative defense (e.g., emergencies) must be identified as "possible exception to compliance" because only the permitting authority may determine if the affirmative defense applies.

If the cross-reference a deviation report that does not contain all the information requested here, you must supplement it accordingly.

You may list multiple emission units if they all had the same deviation during the same time periods. In addition, for deviations that impose requirements to the permitted facility as a whole or to all units at your facility, you may enter facility-wide in the emissions unit column.

You may indicate continuous periods of deviation that span multiple days in a single entry. Use the 24-hour clock (equivalent to military time) for reporting these times (e.g., the day starts and ends at midnight, 12 a.m., or 00:00 in military time.

Specify the date when the written deviation report was submitted to the permitting authority. Leave the date field blank if you did not submit a written deviation report during the reporting period covered by the

six-month monitoring report (whether required to do so or not). It is a deviation to fail to submit a required deviation report.

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Form CTAC (Certification of Truth, Accuracy, and Completeness by Responsible Official)

You must complete form **CTAC** and attach it to this annual compliance certification.

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EMISSION UNIT DESCRIPTIONS

SECTION 3A

SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: 1 1a. Date of installation (month/year): 1977, 2006	2. MDE Registration No.:(if applicable) 7-0064

3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):

Pneumatic Silica Flour Conveying and Storage

The silica flour (sand) is received via bulk truck and conveyed to the sand silo.

The sand silo is equipped with a bin vent baghouse (EP1). The sand is mixed with water and caustic in #3 and #4 Sand Slurry Tanks. The caustic tank (EP5) vents to the atmosphere.

4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:

General Reference: N/A

Continuous Processes: _____ hours/day _____ days/year

Batch Processes: _____ hours/batch _____ batches/day

_____ days/year

5. Fuel Consumption:

	Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1.	N/A		
2.			
3.			

6. Emissions in Tons:

A. Actual Major: _____ Potential Major: _____ (note: before control device)

B. Actual Emissions: NOx 0.0 SOx 0.0 VOC 0.0 PM10 0.06 HAPs 0.0

based on 2022 Emissions Report

SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: 2 1a. Date of installation (month/year): 1972	2. MDE Registration No.:(if applicable) 7-0028

3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):

Hydrous Sodium Silicate Process Line:

There are six dissolvers and one York demister in this process line. Silica Flour from the sand slurries in Emission Unit 1 is received into the dissolvers. Silica Flour is dissolved in caustic soda to produce an aqueous solution of hydrous sodium silicate. The drop 3 tanks for the dissolvers vent to one York demister, emission point EP6.

4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:

General Reference: N/A

Continuous Processes: _____ hours/day _____ days/year

Batch Processes: _____ hours/batch _____ batches/day

_____ days/year

5. Fuel Consumption:

	Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1.	N/A		
2.			
3.			

6. Emissions in Tons:

A. Actual Major: _____ Potential Major: _____ (note: before control device)

B. Actual Emissions: NOx 0.0 SOx 0.0 VOC 0.0 PM10 0.04 HAPs 0.0

based on 2022 Emissions Report

SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: 3 1a. Date of installation (month/year): 1978, modified in 1997, modified in 2024	2. MDE Registration No.:(if applicable) 7-0065

3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):

Synthetic Amorphous Silica process line (#1 Plant Wet Processing):

The sodium silicate from Emission Unit #2 is mixed with acid in four reactors, reactors #3, #4, #5, and #6, and mixed with lime and for some products acid in two digesters. The reactors and mixer/digesters vent to scrubber demister #1, emission point EP7. The lime slurry tank vents through a baghouse, emission point EP9, which is an inside discharge point. The product slurry from the reactors is transferred to a filter feed tank and then dewatered in rotary vacuum filters. The Product slurry from the digesters is transferred to a filter feed tank and then dewatered on a belt vacuum filter or transferred to another filter feed tank and then dewatered in rotary vacuum filters.

4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:

General Reference: N/A

Continuous Processes: _____ hours/day _____ days/year

Batch Processes: _____ hours/batch _____ batches/day

_____ days/year

5. Fuel Consumption:

Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1. N/A		
2.		
3.		

6. Emissions in Tons:

A. Actual Major: _____ Potential Major: _____ (note: before control device)

B. Actual Emissions: NOx 0.0 SOx 0.0 VOC 0.0 PM10 0.0 HAPs 0.0

based on 2022 Emissions Report

SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: 4 1a. Date of installation (month/year): 1985	2. MDE Registration No.:(if applicable) 7-0131

3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):

Synthetic Amorphous Silica / Sodium Alumino Silicate process line (#2 Plant Wet Processing):
This line consists of two reactors which mix the sodium silicate from Emission Unit #2 with magnesium hydroxide, aluminum sulfate and / or sulfuric acid. The two reactors discharge into a filter feed tank. Emissions from the two reactors, filter feed tank and the acid, magnesium hydroxide and aluminum sulfate tanks vent to scrubber demister #2 (emission point #8, EP8).

4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:

General Reference: N/A

Continuous Processes: _____ hours/day _____ days/year

Batch Processes: _____ hours/batch _____ batches/day

_____ days/year

5. Fuel Consumption:

Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1. N/A		
2.		
3.		

6. Emissions in Tons:

A. Actual Major: _____ Potential Major: _____ (note: before control device)

B. Actual Emissions: NOx 0.0 SOx 0.0 VOC 0.0 PM10 0.3 HAPs 0.0

based on 2022 Emissions Report

SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: 5 1a. Date of installation (month/year): 1959, modified in 1980, 1989 and 2004	2. MDE Registration No.:(if applicable) 7-0102

3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):

#1 Spray Dryer System

Spray Dryer #1 receives product slurry from a Rotary Vacuum Filter via the spray dryer feed tank. The spray dryer feeds through the #1 Plant baghouse, emission point #10 (EP10), which in turn is sent to a subsequent baghouse, emission point #12 (EP12), an inside discharge. Product from this baghouse is conveyed to either a Mill Feed Bunker (in Emission Unit #7) or to silos in the warehouse area (Emission Unit #8). Natural Gas is utilized as the primary fuel for the Spray Dryer #1, with No. 2 fuel oil as a backup.

4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:

General Reference: N/A

Continuous Processes: _____ hours/day _____ days/year

Batch Processes: _____ hours/batch _____ batches/day

_____ days/year

5. Fuel Consumption:

Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1. N/A		
2.		
3.		

6. Emissions in Tons:

A. Actual Major: _____ Potential Major: _____ (note: before control device)

B. Actual Emissions: NOx 0.0 SOx 0.0 VOC 0.0 PM10 0.0 HAPs 0.0

based on 2022 Emissions Report

SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: 6 1a. Date of installation (month/year): 1963 modified in1985, 2005 and 2009	2. MDE Registration No.:(if applicable) 7-0069

3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):

#2 Spray Dryer System

The product slurry is dried in Spray Dryer #2 after rotary vacuum filters via the Spray Dryer Feed Tank. The Spray Dryer feeds through the #2 baghouse emission point #11 (EP11). The dried product is conveyed either to the silos (Emission Unit #7) or to the Warehouse Area (Emission Unit #8) through another baghouse (EP13) an inside discharge. Also included in this emission unit is a silo exhaust baghouse, EP14, an inside discharge, and a vacuum clean-up system (EP25), an inside discharge. Natural Gas is the primary fuel in Spray Dryer #2 with No. 2 Fuel Oil as a backup.

4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:

General Reference: N/A

Continuous Processes: _____ hours/day _____ days/year

Batch Processes: _____ hours/batch _____ batches/day

_____ days/year

5. Fuel Consumption:

Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1. N/A		
2.		
3.		

6. Emissions in Tons:

A. Actual Major: _____ Potential Major: _____ (note: before control device)

B. Actual Emissions: NOx 1.6 SOx 0.02 VOC 0.18 PM10 0.74 HAPs 0.002

based on 2022 Emissions Report

SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: 7 1a. Date of installation (month/year): 1988, modified in 1993 and 2017	2. MDE Registration No.:(if applicable) 7-0151

3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):

Bulk Milling, Storing, and Loading Systems

The emission unit in an inorganic pigment process line which function as a product milling and product storage facility. Materials received from #1 and #2 dryers are conveyed into a common bunker which is vented via EP15. There are two identical attrition mills which are fed from a common bunker. The milled material is conveyed through separate baghouses #3 and #4 (EP17) to five storage silos before shipment. Each of the silos: bulk loading, #2, #3, #4, #5, #6 is equipped with a bin vent and baghouse (EP18, EP19, EP20, EP21, EP 22 and EP23). Silo #2 feeds to a bulk loading silo (EP23) for rail car loading. Silo #3, #4, #5 and #6 convey to the truck loading area, which is equipped with a baghouse (EP24) or a bulk product area which is equipped with a baghouse (EP49).

Natural gas is used to fuel mills 3 and 4.

4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:

General Reference: N/A

Continuous Processes: _____ hours/day _____ days/year

Batch Processes: _____ hours/batch _____ batches/day

_____ days/year

5. Fuel Consumption:

Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1. Natural Gas	0	
2.		
3.		

6. Emissions in Tons:

A. Actual Major: _____ Potential Major: _____ (note: before control device)

B. Actual Emissions: NOx 0.031 SOx 0.0002 VOC 0.002 PM10 0.623 HAPs 0.00002

based on 2022 Emissions Report

SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: 8 1a. Date of installation (month/year): 1985, modified in 1995, 1997, 2003 and 2022	2. MDE Registration No.:(if applicable) 7-0135 7-0132 7-0240

3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):

Warehouse/ Dry Processing / Packing

In the warehouse dry products are pneumatically conveyed from Emission Units #5 and #6 to silos #7 and #8, each equipped with bin vent filters (EP26 & EP27). Emissions Unit #6 may also pneumatically convey dry product to Silo #9, which is equipped with a bin vent filter (EP48). There are two screeners, one for Silos #7 and #8 and one for Silo #9. Both screeners may convey dry products to either the supersack station or packers. The supersack station is controlled by a baghouse and discharges inside at EP32. The packer is controlled by a baghouse and dicharges inside at EP33. Dry product from Emissions Units #5 and #6 may also be conveyed to the milling and packing line. The mill feed bunker is equipped with a baghouse (EP28). MIlls #1 and #2, burning natural gas convey through the mill vent filter (EP29) to a packing bunker. The packing area emissions are controlled by a baghouse (EP30). The silica conveying system also include a roll compaction system which can produce pellets instead of powder form. The system is controlled by a baghouse (EP31). The is also a vacuum clean-up system with a baghouse (EP34).

4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:

General Reference: N/A

Continuous Processes: _____ hours/day _____ days/year

Batch Processes: _____ hours/batch _____ batches/day

_____ days/year

5. Fuel Consumption:

Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1. Natural gas	0	
2.		
3.		

6. Emissions in Tons:

A. Actual Major: _____ Potential Major: _____ (note: before control device)

B. Actual Emissions: NOx 0.001 SOx 0.000004 VOC 0.00003 PM10 3.556 HAPs 0.0000005

based on 2022 Emissions Report

SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: 9 1a. Date of installation (month/year): 1985	2. MDE Registration No.:(if applicable) 7-0136

3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):

Sodium Sulfate Drying and Handling:

THIS EQUIPMENT IS NOT IN SERVICE , SOME OF IT HAS BEEN DISCONNECT AND SOME HAS BEEN REMOVED. The emission unit consists of a sulfate evaporator plant and a sodium sulfate drying and handling processline. The sulfate evaporator plant receives filtrate from the rotary vacuum filters. Emission points include the baghouse for the bag dump and precoat tank (EP35) and a vent demister (EP36) for the sulfate evaoprator plant's boil out tank. Sodium sulfate is dried in a natural gas burning rotary dryer, with baghouse (EP37) The sodium sulfate is dried by cool air supplied by a chiller, with a refrigerant capacity of less than 50 pounds. The cooled sodium sulfate process is controlled by baghouse (EP38). Product from both of these baghouses is conveyed to the SO4 storage bunker, equipped with a ben vent filter (EP39). The loading airveying system is also equipped with a baghouse (EP40).

4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:

General Reference: N/A

Continuous Processes: _____ hours/day _____ days/year

Batch Processes: _____ hours/batch _____ batches/day

_____ days/year

5. Fuel Consumption:

Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1. Natural gas	0	
2.		
3.		

6. Emissions in Tons:

A. Actual Major: _____ Potential Major: _____ (note: before control device)

B. Actual Emissions: NOx 0.00 SOx 0.00 VOC 0.00 PM10 0.0 HAPs 0.0

based on 2022 Emissions Report

SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: 10 1a. Date of installation (month/year): #1 boiler - 1976, #2 boiler - 1962	2. MDE Registration No.:(if applicable) 5-0032 5-0013

3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):

#1 Keeler Boiler, model DS10-18, 88 mmBTU/hr (EP41)

#2 Keeler Boiler, model 1-DK 10-11, 47 mmBTU/hr (EP42)

Primary fuel is natural gas with the option to use No. 2 Fuel Oil (Requires a propane ignition source). All boilers exhaust through a common stack.

4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:

General Reference: N/A

Continuous Processes: _____ hours/day _____ days/year

Batch Processes: _____ hours/batch _____ batches/day

_____ days/year

5. Fuel Consumption:

Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1. Natural Gas	0	
2. No. 2 Fuel Oil	<0.3%	Not used in 2023
3.		

6. Emissions in Tons:

A. Actual Major: _____ Potential Major: _____ (note: before control device)

B. Actual Emissions: NOx 3.42 SOx 0.021 VOC 0.188 PM10 0.065 HAPs 0.00257

based on 2022 Emissions Report

SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: 11 1a. Date of installation (month/year): 1980 modifed in 1983, 2008, and 2022	2. MDE Registration No.:(if applicable) 7-0105

3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):

Pilot Plant:

The pilot plant consists of one spray dryer (EP44) and a demister (EP47) that emits pick-up point emissions. The pilot plant is experimental in nature and varied batches up to 350 gallons or 4000 pounds are produced. Natural gas is the only fuel used. The high pressure boiler (1.7 mmBTU/hr and 300 psig) has been removed and replaced with a Fulton VSRT-15 Boiler that has a heat input of 600 MBH and uses natural gas. Per COMAR 26.11.02.10 (Sources Exempt From Permits To Construct And Approvals), this boiler is exempt from permitting. The 10 liter mixer was installed in 2008 for a specific project and has been removed from the site before installation and use (Permit # 025-7-105M).

4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:

General Reference: N/A

Continuous Processes: _____ hours/day _____ days/year

Batch Processes: _____ hours/batch _____ batches/day

_____ days/year

5. Fuel Consumption:

Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1. Natural Gas		
2.		
3.		

6. Emissions in Tons:

A. Actual Major: _____ Potential Major: _____ (note: before control device)

B. Actual Emissions: NOx 0.138 SOx 0.0006 VOC 0.001 PM10 0.003 HAPs 0.0001

based on 2022 Emissions Report

EVONIK
Leading Beyond Chemistry

CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFOREABLE REQUIREMENTS

SECTION 3B

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Facility Wide **General Reference:** COMAR 26.11.01.05-1 and 26.11.02.19C&D

Briefly describe the Emission Standard/Limit or Operational Limitation:
This regulation requires the submission of a certified emission statement by April 1 of each year

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference None Describe:

Testing: Reference None Describe:

Record Keeping: Reference COMAR 26.11.02.19C Describe: The following are requirements to support the emission certification: the total amount of actual emission of each regulated pollutant and the total of all regulated pollutants; an explanation of the methods used to quantify the emissions; amounts, types, and analysis of al fuels used; identification, description and use of records of all pollution control equipment and compliance monitoring equipment; limitations on source operation or any workplace standards that affect emissions; and other relevant information as requested by the Department

Reporting: Reference COMAR 26.11.01.05-1C Describe: Submission of an annual emission certification by every April 1st.

Frequency of submittal of the compliance demonstration: Annually

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Facility Wide **General Reference:** COMAR 26.11.02.09A

Briefly describe the Emission Standard/Limit or Operational Limitation:
This requires the facility to a new permit to construct if it is modified in such a manner that there is a change in the quantity, nature or characteristics of emissions from the source

Permit Shield Request:

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference None Describe:

Testing: Reference None Describe:

Record Keeping: Reference None Describe:

Reporting: Reference COMAR 26.11.02.09A Describe: If changes are proposed to the piece of equipment, then a letter of determination needs to be submitted to ARMA to determine the applicability of this requirement. This needs to be sent at least 90 days prior to the proposed change. Installation of new equipment may require the submittal of a Permit to Construct application.

Frequency of submittal of the compliance demonstration: Prior to modification or installation of equipment.

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Facility Wide **General Reference:** COMAR 26.11.03.06C(7)(a)(ii)

Briefly describe the Emission Standard/Limit or Operational Limitation:
This regulation requires the facility to report any deviations from permit requirements that could endanger human health or the environment by orally notifying the Department immediately upon discovery of the deviation.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference None Describe:

Testing: Reference None Describe:

Record Keeping: Reference None Describe:

Reporting: Reference COMAR 26.11.03.06C(7)(a)(ii) Describe: Report any deviation from permit that could endanger human health or the environment, by orally notifying the Department immediately upon discovery and promptly report all occurrences of excess emissions that are expected to last for one hour or longer by orally notifying the Department of the onset and the termination of the occurrence.

Frequency of submittal of the compliance demonstration: When necessary

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Facility Wide **General Reference:** COMAR 26.11.03.06C(7)(a)(ii)

Briefly describe the Emission Standard/Limit or Operational Limitation:
This regulation requires the facility to promptly report all other deviations from permit requirements including those attributable to upset conditions as defined in the permit within 5 days of discovery of the deviation and to submit a quarterly report of incidents that deviate from the permit conditions, only in the quarters in which deviations occur.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference None Describe:

Testing: Reference None Describe:

Record Keeping: Reference None Describe:

Reporting: Reference COMAR 26.11.03.06C(7)(a)(ii) Describe: The permittee shall report all deviations from permit conditions, including those attributable to malfunctions as defined in COMAR 26.11.01.07A within 5 days of the request by submitting a written description of the deviation to the Department. Instances of deviations form the permit conditions that occur within the calendar quarter shall be reported to MDE within 30 days of the end of the calendar quarter.

Frequency of submittal of the compliance demonstration: When necessary

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Facility Wide **General Reference:** COMAR 26.11.03.06G(6) and (7)

Briefly describe the Emission Standard/Limit or Operational Limitation:
The permittee shall submit to the Department and EPA Region III a report certifying compliance with each term of their Part 70 Permit including each applicable standard, emissions limitation, and work practice for the previous calendar year by April 1 of each year.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference None Describe:

Testing: Reference None Describe:

Record Keeping: Reference None Describe:

Reporting: Reference COMAR 26.11.03.06(G)&(7) and 26.11.02.02F Describe: The compliance certification shall be submitted to the Department and EPA Region III simultaneously by April 1 of each year.

Frequency of submittal of the compliance demonstration: Annually

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Facility Wide **General Reference:** COMAR 26.11.05.04

Briefly describe the Emission Standard/Limit or Operational Limitation:
When requested by the Department, the permittee shall prepare in writing a standby emissions reduction plan consistent with good industrial practice and safe operating control procedures, for reducing emissions during periods of alert, warning and emergency of an air pollution episode.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference None Describe:

Testing: Reference None Describe:

Record Keeping: Reference COMAR 26.11.05.04 Describe: Prepare an emission reduction plan as requested by MDE

Reporting: Reference None Describe:

Frequency of submittal of the compliance demonstration: Upon Request

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Facility Wide **General Reference:** COMAR 26.11.06.02C(2)

Briefly describe the Emission Standard/Limit or Operational Limitation:
Prohibits visible emissions other than water vapor in an uncombined form, which is visible to observers in Area III

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference None Describe:

Testing: Reference None Describe:

Record Keeping: Reference None Describe:

Reporting: Reference COMAR 26.11.03.06C(7)(a)(iii) Describe: Report to the Department incidents of visible emissions upon occurrence.

Frequency of submittal of the compliance demonstration: Annually

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Facility wide **General Reference:** COMAR 26.11.06.03D & 26.11.06.03B(2)

Briefly describe the Emission Standard/Limit or Operational Limitation:
The permittee shall not cause or permit any building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. A person may not cause or permit to be discharged particulate matter into the outdoor atmosphere from confined sources in excess of 0.03 gr/dscf.

Permit Shield Request:

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.06.03 Describe: Evonik will implement reasonable precautions to prevent particulate matter from becoming airborne during construction activities.

Testing: Reference None Describe:

Record Keeping: Reference None Describe:

Reporting: Reference COMAR 26.11.03.06C(7)(a)(iii) Describe: Reporting will occur in the event of a violation. Immediate notification of the Department is required by telephone. Written report within 5 days of the incident shall be submitted by the Department. At a minimum, it shall include the date and time of the occurrence, source of the emissions, the cause and the actions taken to alleviate the situation.

Frequency of submittal of the compliance demonstration: when necessary

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Facility wide **General Reference:** COMAR 26.11.07

Briefly describe the Emission Standard/Limit or Operational Limitation:

The permittee shall not cause or permit an open fire from June 1 through August 31 of any calendar year. Prior to any open burning, the permittee must request and receive approval from the Department.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: _____
- ☑ Annual Compliance Certification: _____
- ☑ Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference None Describe:

Testing: Reference None Describe:

Record Keeping: Reference None Describe:

Reporting: Reference None Describe:

Frequency of submittal of the compliance demonstration: Not Applicable

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Facility wide **General Reference:** 40 CFR 61 Subpart M & COMAR 26.11.21

Briefly describe the Emission Standard/Limit or Operational Limitation:

Prior to demolition or renovation activities, the owner or operator will thoroughly inspect the affected facility for the presence of asbestos, If asbestos-containing materials in excess amounts listed in the regulation are to be removed or demolished, the owner will notify MDE and the USEPA as early as possible of its intent to renovate or demolish. This notification shall include the start date for the demolition activities.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference None Describe:

Testing: Reference None Describe:

Record Keeping: Reference None Describe:

Reporting: Reference COMAR 26.11.21.03 & 40CFR61 Subpart M Describe: Evonik will meet the requirements of this regulation if any demolition, renovation or construction activities, which involve asbestos-containing materials take place at the facility. The Department will be notified prior to conducting any applicable renovation or demolition activities at the facility.

Frequency of submittal of the compliance demonstration: When necessary

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: 1, 7 & 8 **General Reference:** COMAR 26.11.06.02(C)(2)

Briefly describe the Emission Standard/Limit or Operational Limitation:
All visible emissions other than water are prohibited in any combined form.

Exceptions: This section does not apply to emissions during start-up, and process modifications or adjustments, or occasional cleaning of control equipment. , if: the visible emissions are not greater than 40 percent opacity and the visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C Describe: Evonik shall conduct a visual emissions observation of the exhaust gases from each emission point at least monthly and shall record the results of each observation. If emissions in the exhaust gases are visible, all processes and/or control equipment that may affect visible emissions, perform all necessary repairs and/or adjustments to processes or control equipment within 48 hours, so that visible emissions in the exhaust gases are eliminated, document in writing the results of the inspections and the repairs and/or adjustments made to the processes and / or control equipment.

If visible emissions have not been eliminated within 48 hours perform an EPA Method 9 observation daily for 18 minutes until visible emissions have been eliminated.

Testing: Reference None Describe:

Record Keeping: Reference COMAR 26.11.03.06C Describe: The permittee shall maintain a record of each visible emission check for a period of no less than 5 years. The record shall include the date, time, name of emission point, the applicable visible emissions r the results of the check, what action(s), if any, was/were taken, and the name of the observer.

This reference is for emission points 1, 5, 17, 23, 26, 27, 29, 30, 31, 34, and 48.

Reporting: Reference COMAR 26.11.03.06C Describe: The permittee shall report excess emissions and deviations in accordance with Section III, Condition 4 "Report of Excess Emissions and Deviations".

This reference is for emission points 1, 5, 17, 23, 26, 27, 29, 30, 31, 34, and 48.

Frequency of submittal of the compliance demonstration: Annually

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: 1, 7 & 8 **General Reference:** COMAR 26.11.06.03B(2) and 26.11.06.03D

Briefly describe the Emission Standard/Limit or Operational Limitation:
All particulate matter emissions shall be limited to 0.03 grains per standard cubic foot of dry exhaust gas. Reasonable precautions shall be taken to prevent any particulate matter from becoming airborne as a result of material being handled, transported or stored.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:
- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference Describe: Evonik shall develop and maintain a preventative maintenance plan for each baghouse that describes the maintenance activity and time schedule for completing each activity. The maintenance activities will be performed within the time frames established in the plan and a log with records of the dates and the maintenance that was performed will be maintained. This reference is for emission points 1, 5, 17, 23, 26, 27, 29, 30, 31, 33, 34, and 48.
For emission point 31: The pressure drop across each baghouse shall be continuously measured when the equipment is operating.

Testing: Reference None Describe:

Record Keeping: Reference COMAR 26.11.03.06C Describe: A log of the maintenance activities shall be kept on-site for at least five years and will be made available to the Department upon request. This reference is for emission points 1, 5, 17, 23, 26, 27, 29, 30, 31, 33, 34, and 48.
For emission point 31: The pressure drop across the baghouse shall be recorded at least once per day when the equipment is operating and the records shall be kept on-sire for at least five years and will be made available to the Department upon request.

Reporting: Reference COMAR 26.11.03.06C Describe: The permittee shall report excess emissions and deviations in accordance with Section III, Condition 4 "Report of Excess Emissions and Deviations".

Frequency of submittal of the compliance demonstration: Annually

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: 2, 3 & 4 **General Reference:** COMAR 26.11.06.02(C)(2)

Briefly describe the Emission Standard/Limit or Operational Limitation:
All visible emissions other than water are prohibited in any combined form.

Exceptions: This section does not apply to emissions during start-up, and process modifications or adjustments, or occasional cleaning of control equipment. , *if: the visible emissions are not greater than 40 percent opacity and the visible emissions do not occur for more than 6* consecutive minutes in any 60 minute period.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:
- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C Describe: Evonik shall conduct a visual emissions observation of the exhaust gases from each emission point at least monthly and shall record the results of each observation. If emissions in the exhaust gases are visible, all processes and/or control equipment that may affect visible emissions, perform all necessary repairs and/or adjustments to processes or control equipment within 48 hours, so that visible emissions in the exhaust gases are eliminated, document in writing the results of the inspections and the repairs and/or adjustments made to the processes and / or control equipment.
If visible emissions have not been eliminated within 48 hours perform an EPA Method 9 observation daily for 18 minutes until visible emissions have been eliminated.

Testing: Reference None Describe:

Record Keeping: Reference COMAR 26.11.03.06C Describe: The permittee shall maintain a record of each visible emission check for a period of no less than 5 years. The record shall include the date, time, name of emission point, the applicable visible emissions r the results of the check, what action(s), if any, was/were taken, and the name of the observer.
This reference is for emission points 6, 7 and 8.

Reporting: Reference COMAR 26.11.03.06C Describe: The permittee shall report excess emissions and deviations in accordance with Section III, Condition 4 "Report of Excess Emissions and Deviations".
This reference is for emission points 6, 7 and 8.

Frequency of submittal of the compliance demonstration: Annually

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: 2, 3 & 4 **General Reference:** COMAR 26.11.06.03B(2)

Briefly describe the Emission Standard/Limit or Operational Limitation:
All particulate matter emissions shall be limited to 0.03 grains per standard cubic foot of dry exhaust gas.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference Describe: Evonik shall develop and maintain a preventative maintenance plan for each demister that describes the maintenance activity and time schedule for completing each activity. The maintenance activities will be performed within the time frames established in the plan and a log with records of the dates and the maintenance that was performed will be maintained. This reference is for emission points 6, 7 and 8.

Testing: Reference None Describe:

Record Keeping: Reference COMAR 26.11.03.06C Describe: A log of the maintenance activities shall be kept on-site for at least five years and will be made available to the Department upon request. This reference is for emission points 6, 7 and 8.

Reporting: Reference COMAR 26.11.03.06C Describe: The permittee shall report excess emissions and deviations in accordance with Section III, Condition 4 "Report of Excess Emissions and Deviations".

Frequency of submittal of the compliance demonstration: Annually

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: 5 and 6 **General Reference:** COMAR 26.11.06.02(C)(2)

Briefly describe the Emission Standard/Limit or Operational Limitation:
All visible emissions other than water are prohibited in any combined form.

Exceptions: This section does not apply to emissions during start-up, and process modifications or adjustments, or occasional cleaning of control equipment. , if: the visible emissions are not greater than 40 percent opacity and the visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C Describe: Evonik shall conduct a visual emissions observation of the exhaust gases from each emission point at least monthly and shall record the results of each observation. If emissions in the exhaust gases are visible, all processes and/or control equipment that may affect visible emissions, perform all necessary repairs and/or adjustments to processes or control equipment within 48 hours, so that visible emissions in the exhaust gases are eliminated, document in writing the results of the inspections and the repairs and/or adjustments made to the processes and / or control equipment.

If visible emissions have not been eliminated within 48 hours perform an EPA Method 9 observation daily for 18 minutes until visible emissions have been eliminated.

Testing: Reference None Describe:

Record Keeping: Reference COMAR 26.11.03.06C Describe: The permittee shall maintain a record of each visible emission check for a period of no less than 5 years. The record shall include the date, time, name of emission point, the applicable visible emissions r the results of the check, what action(s), if any, was/were taken, and the name of the observer.

This reference is for emission points 10 and 11.

Reporting: Reference COMAR 26.11.03.06C Describe: The permittee shall report excess emissions and deviations in accordance with Section III, Condition 4 "Report of Excess Emissions and Deviations".

This reference is for emission points 10 and 11.

Frequency of submittal of the compliance demonstration: Annually

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: 5 and 6 **General Reference:** COMAR 26.11.06.03B(2)

Briefly describe the Emission Standard/Limit or Operational Limitation:
All particulate matter emissions shall be limited to 0.03 grains per standard cubic foot of dry exhaust gas.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference Describe: Evonik shall develop and maintain a preventative maintenance plan for each baghouse that describes the maintenance activity and time schedule for completing each activity. The maintenance activities will be performed within the timeframe established in the plan and a log with records of the dates and the maintenance that was performed will be maintained. This reference is for emission points 10 and 11. For EP 10: The permittee shall continuously measure the particulate matter (PM) using the dual dust monitors from this emission point and record the values at least once per day when equipment is operating.

Testing: Reference None Describe:

Record Keeping: Reference COMAR 26.11.03.06C Describe: A log of the maintenance activities shall be kept on-site for at least five years and will be made available to the Department upon request. This reference is for emission points 10 and 11.
For EP 10: The permittee shall keep daily records of the PM emissions on site for at least 5 years.

Reporting: Reference COMAR 26.11.03.06C Describe: The permittee shall report excess emissions and deviations in accordance with Section III, Condition 4 "Report of Excess Emissions and Deviations".

Frequency of submittal of the compliance demonstration: Annually

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: 5 and 6 **General Reference:** COMAR 26.11.09.08J(1) and J(2)

Briefly describe the Emission Standard/Limit or Operational Limitation:
The permittee shall maintain good operating practices as recommended by the equipment vendor to minimize NOx emissions. The permittee shall also prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the particular installation.

Permit Shield Request: yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference None Describe:

Testing: Reference None Describe:

Record Keeping: Reference COMAR 26.11.09.08J(3) and J(5) Describe: The permittee shall maintain and make available for the Department, upon request, the written in-house operator training program. The permittee shall also maintain operator training attendance records for each operator of these installations at the site for at least 2 years and make these records available to the Department upon request. This is for emission points 10 and 11.

Reporting: Reference None Describe:

Frequency of submittal of the compliance demonstration: Upon Request

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: 5 and 6 **General Reference:** COMAR 26.11.02.09A

Briefly describe the Emission Standard/Limit or Operational Limitation:
The permittee shall use natural gas as the primary fuel with No 2 fuel oil (propane ignition) as back-up on interruptions for both spray dryers unless the permittee requests and receives an approval or permit form the Department to burn an alternate fuel.

Permit Shield Request: yes

Compliance Demonstration:

Check appropriate reports required to be submitted:
- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference None Describe:

Testing: Reference None Describe:

Record Keeping: Reference COMAR 26.11.02.19C(1)(c) Describe: The permittee shall maintain records of the quantity and types of fuel burned for at least 5 years and make these records available to the Department upon request.

Reporting: Reference None Describe:

Frequency of submittal of the compliance demonstration: Upon Request

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: 9 (Not in Service) **General Reference:** COMAR 26.11.06.02(C)(2)

Briefly describe the Emission Standard/Limit or Operational Limitation:

All visible emissions other than water are prohibited in any combined form.

Exceptions: This section does not apply to emissions during start-up, and process modifications or adjustments, or occasional cleaning of control equipment. , if: the visible emissions are not greater than 40 percent opacity and the visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C Describe: Evonik shall conduct a visual emissions observation of the exhaust gases from each emission point at least monthly and shall record the results of each observation. If emissions in the exhaust gases are visible, all processes and/or control equipment that may affect visible emissions, perform all necessary repairs and/or adjustments to processes or control equipment within 48 hours, so that visible emissions in the exhaust gases are eliminated, document in writing the results of the inspections and the repairs and/or adjustments made to the processes and / or control equipment.

If visible emissions have not been eliminated within 48 hours perform an EPA Method 9 observation daily for 18 minutes until visible emissions have been eliminated.

Testing: Reference None Describe:

Record Keeping: Reference COMAR 26.11.03.06C Describe: The permittee shall maintain a record of each visible emission check for a period of no less than 5 years. The record shall include the date, time, name of emission point, the applicable visible emissions requirement, the results of the check, what action(s), if any, was/were taken, and the name of the observer.

This reference is for emission points 36, 37, 38, 39, and 40.

Reporting: Reference COMAR 26.11.03.06C Describe: The permittee shall report excess emissions and deviations in accordance with Section III, Condition 4 "Report of Excess Emissions and Deviations".

This reference is for emission points 36, 37, 38, 39, and 40.

Frequency of submittal of the compliance demonstration: Annually

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: 9 (Not in Service) **General Reference:** COMAR 26.11.06.03B(2)

Briefly describe the Emission Standard/Limit or Operational Limitation:
All particulate matter emissions shall be limited to 0.03 grains per standard cubic foot of dry exhaust gas.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference Describe: Evonik shall develop and maintain a preventative maintenance plan for each dust collector (baghouse or demister) that describes the maintenance activity and time schedule for completing each activity. The maintenance activities will be performed within the time frames established in the plan and a log with records of the dates and the maintenance that was performed will be maintained. This reference is for emission points 36, 37, 38, 39 and 40.

Testing: Reference None Describe:

Record Keeping: Reference COMAR 26.11.03.06C Describe: A log of the maintenance activities shall be kept on-site for at least five years and will be made available to the Department upon request. This reference is for emission points 36, 37, 38, 39, and 40.

Reporting: Reference None Describe:

Frequency of submittal of the compliance demonstration: Annually

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: 9 (Not in Service) **General Reference:** Permit to Construct #025-7-0136N

Briefly describe the Emission Standard/Limit or Operational Limitation:
The permittee shall only burn natural gas in Rotary Dryer

Permit Shield Request: yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference None Describe:

Testing: Reference None Describe:

Record Keeping: Reference COMAR 26.11.02.19C(1)(c) Describe: The permittee shall maintain records and quantity and types of fuel burned in the Rotary Dryer for at least 5 years and make these records available to the Department upon request.

Reporting: Reference None Describe:

Frequency of submittal of the compliance demonstration: Upon Request

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: 10 **General Reference:** COMAR 26.11.02.09A

Briefly describe the Emission Standard/Limit or Operational Limitation:
All visible emissions other than water are prohibited in any combined form.

Exceptions: This does not apply to emissions during load changing, soot blowing, start up, or adjustments or occasional cleaning of control equipment if: the visible emissions are not great than 40 percent opacity and the visible emissions do not occur for more than 6 minutes in any 60 minutes.

Permit Shield Request: yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C Describe: The permittee shall properly maintain boilers in a manner to prevent visible emissions and verify no visible emissions when burning No. 2 fuel oil. The permittee shall perform a visual observation of each boiler exhaust stack for a 6 minute period once for each 168 hours that the boiler burns No. 2 fuel oil or at a minimum once per year.

Testing: Reference None Describe:

Record Keeping: Reference COMAR 26.11.03.06C(5)(g) Describe: All records must be maintained for 5 years. The permittee shall maintain maintain an operating manual and prevention maintenance plan onsite for each boiler, maintain a record of maintenance performed that relates to combustion performance for each boiler, make a written or printable electronic record of each required observation of visible emissions (observer, date of observation, the time at the start and end of the observation and any findings), and maintain a record of the hours that No. 2 fuel oil is burned in each boiler. This is for emission points 41 & 42.

Reporting: Reference Describe: The permittee shall report occurrences of visible emissions from the three boilers in accordance with conditions Number 4 (Report of Excess Emissions and Deviations), and Number 9 (Compliance Certification Report), of Section III-Plant Wide Conditions in the current Part 70 Operating permit. This is for emission points 41 and 42.

Frequency of submittal of the compliance demonstration: Annually

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: 10 **General Reference:** COMAR 26.11.09.07A(2)

Briefly describe the Emission Standard/Limit or Operational Limitation:
This regulation limits the sulfur content in distillate fuel oil to 0.3 percent by weight.

Permit Shield Request: yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C Describe: The permittee shall obtain from fuel oil suppliers written certification that all No. 2 fuel oil received at the facility to be burned in the two boilers complies with the limitation regarding sulfur content.

Testing: Reference None Describe:

Record Keeping: Reference COMAR 26.11.03.06C Describe: The permittee shall maintain written certifications from the facility's fuel oil suppliers that all No. 2 fuel oil received at the facility to be burned in the three boilers complies with the limitation regarding sulfur content.

Reporting: Reference COMAR 26.11.03.06C Describe: The permittee shall make available to the Department upon request any records that the permittee is required to maintain.

Frequency of submittal of the compliance demonstration: Upon request

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: 10 **General Reference:** COMAR 26.11.09.08E

Briefly describe the Emission Standard/Limit or Operational Limitation:
This regulation requires that a person who operates fuel burning equipment with a rated heat input capacity of 100 mmBTU per hour or less: submit to the Department an identification of each affected installation, the rate of heat input capacity of each installation, and the type of fuel burned in each installation, perform a combustion analysis for each affected installation at least once per year and optimize combustion based on the analysis and once every 3 years require each operator of the installation to attend an operator training program on combustion optimization.

Permit Shield Request: yes

Compliance Demonstration:

Check appropriate reports required to be submitted:
- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.09.08E(2) Describe: The permittee shall optimize combustion in two boilers in accordance with the findings of the combustion analyses

Testing: Reference COMAR 26.11.09.08E(2) Describe: The permittee shall perform combustion analysis at least once per year

Record Keeping: Reference COMAR 26.11.09.08E(5) & 26.11.03.06C Describe: The permittee shall maintain records of all required combustion analyses performed on all two boilers and required training of equipment operators concerning combustion optimization, such records shall include names of all trainees, the dates on which the training was administered, and identification of the concern that provided the training.

Reporting: Reference COMAR 26.11.03.06C Describe: The permittee shall make available to the Department upon request any records that the permittee is required to maintain.

Frequency of submittal of the compliance demonstration: Annually

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: 10 **General Reference:** COMAR 26.11.02.09A

Briefly describe the Emission Standard/Limit or Operational Limitation:

This operational limitation requires that the Permittee shall burn only natural gas, propane (as a start-up fuel), or No. 2 fuel oil in each of the two boilers unless the Permittee obtains an approval from the Department to burn alternate fuels. No. 2 fuel oil may only be burned during periods of gas curtailment, gas supply interruptions or periodic testing on liquid fuel. Periodic testing on liquid fuel may not exceed 48 hours during any calendar year for each boiler. Period of gas curtailment or supply interruption are defined in the facility's permit to operate. If the Permittee wishes to burn No. 2 fuel oil in either of the two boilers at any other times other than previously stated, they shall comply with requirements of 40 CFR 63, Subpart JJJJJJ.

Permit Shield Request: yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: _____
- ☑ Annual Compliance Certification: _____
- ☑ Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference None Describe: _____

Testing: Reference None Describe: _____

Record Keeping: Reference COMAR 26.11.02.19C(1)(c) Describe: The Permittee shall maintain records of natural gas, propane, and No. 2 fuel usage for the two (2) boilers including the types and amounts of fuel used and documentation showing that No. 2 fuel was only used during periods of natural gas curtailment or for testing.

Reporting: Reference COMAR 26.11.03.06C Describe: The permittee shall make available to the Department upon request any records that the permittee is required to maintain.

Frequency of submittal of the compliance demonstration: Annually

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: 11 **General Reference:** COMAR 26.11.06.02(C)(2)

Briefly describe the Emission Standard/Limit or Operational Limitation:
This reference is for emission points 44 and 47. All visible emissions other than water are prohibited in any combined form.

For EP 44 - Exceptions: This section does not apply to emissions during start-up, and process modifications or adjustments, or occasional cleaning of control equipment. , if: the visible emissions are not greater than 40 percent opacity and the visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C Describe: Evonik shall conduct a visual emissions observation of the exhaust gases from each emission point at least monthly and shall record the results of each observation. If emissions in the exhaust gases are visible, all processes and/or control equipment that may affect visible emissions, perform all necessary repairs and/or adjustments to processes or control equipment within 48 hours, so that visible emissions in the exhaust gases are eliminated, document in writing the results of the inspections and the repairs and/or adjustments made to the processes and / or control equipment.

If visible emissions have not been elimnated within 48 hours perform an EPA Method 9 observation daily for 18 minutes until visible emissions have been eliminated.

Testing: Reference None Describe:

Record Keeping: Reference COMAR 26.11.03.06C Describe: The permittee shall maintain a record of each visible emission check for a period of no less than 5 years. The record shall include the date, time, name of emission point, the applicable visible emissions r the results of the check, what action(s), if any, was/were taken, and the name of the observer.

This reference is for emission points 44 and 47.

Reporting: Reference COMAR 26.11.03.06C Describe: The permittee shall report excess emissions and deviations in accordance with Section III, Condition 4 "Report of Excess Emissions and Deviations".

This reference is for emission points 44 and 47.

Frequency of submittal of the compliance demonstration: Annually

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: 11 **General Reference:** COMAR 26.11.06.03B(2)

Briefly describe the Emission Standard/Limit or Operational Limitation:
This regulation limits particulate matter emissions to 0.03 grains per standard cubic foot of dry exhaust gas. This is for emission point 44.

Permit Shield Request: yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference None Describe:

Testing: Reference None Describe:

Record Keeping: Reference None Describe:

Reporting: Reference None Describe:

Frequency of submittal of the compliance demonstration: Annually

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: 11 **General Reference:** COMAR 26.11.02.09A

Briefly describe the Emission Standard/Limit or Operational Limitation:
Operating requirements: for emission points 44 - the permittee shall only use natural gas for the spray dryer at the Pilot Plant unless the permittee requests and receives an approval or permit from the Department to burn alternative fuel.

Permit Shield Request: yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☑ Annual Compliance Certification:
- ☑ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance:

Monitoring: Reference None Describe:

Testing: Reference None Describe:

Record Keeping: Reference COMAR 26.11.02.19C Describe: The permittee shall maintain records of the quantity and types of fuel burned for at least 5 years and make these records available to the Department upon request.

Reporting: Reference None Describe:

Frequency of submittal of the compliance demonstration: Upon request

OBSOLETE, EXTRANEOUS, OR INSIGNIFICANT PERMIT CONDITIONS

SECTION 3C

SECTION 3C. OBSOLETE, EXTRANEOUS, OR INSIGNIFICANT PERMIT CONDITIONS

List permit to construct conditions which should be considered to be obsolete, extraneous, or environmentally insignificant.

Emissions Unit No.: 11 **Permit to Construct No.** _____

Emissions Point No. 46	Date Permit Issued	Condition No.	Brief Description of Condition and Reason for Exclusion The high pressure boiler (1.7 MMBtu/Hr) has been disconnected and removed from service.

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ALTERNATE OPERATING SCENARIOS

SECTION 3D

SECTION 3D. ALTERNATE OPERATING SCENARIOS

Emissions Unit No.: 5

Briefly describe any alternate operating scenarios. Assign a number to each scenario for identification purposes.

Spray Dryer No. 1 has the capability to burn No. 2 fuel oil as a backup fuel as an alternative to natural gas. This is defined as alternate operating scenario AOS-1 for this emission point.

SECTION 3D. ALTERNATE OPERATING SCENARIOS

Emissions Unit No.: 6

Briefly describe any alternate operating scenarios. Assign a number to each scenario for identification purposes.

Spray Dryer No. 2 has the capability to burn No. 2 fuel oil as a backup fuel as an alternative to natural gas. This is defined as alternate operating scenario AOS-1 for this emission point.

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CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS FOR ALTERNATE OPERATING SCENARIOS

SECTION 3E

SECTION 3E. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS FOR AN ALTERNATE OPERATING SCENARIO

Scenario No.: AOS-1

Emissions Unit No.: 5 **General Reference:** COMAR 26.11.09.07A(2)(b)

Briefly describe any applicable Emissions Standard/Limits/Operational Limitations:

This regulation limits the sulfur content of distillate fuel oil (No. 2) to 0.3% by weight.

Compliance Demonstration

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C Describe: The Permittee shall obtain from fuel oil suppliers written certification that all No. 2 fuel oil received at the facility to be burned in the two boilers complies with the limitation regarding sulfur content imposed under COMAR 26.11.09.07A(2)(b). This reference is required for Emission Point #10 (EP10).

Testing: Reference _____ Describe: _____

Record Keeping: Reference COMAR 26.11.03.06C Describe: The Permittee shall maintain written certifications from the facility's fuel oil suppliers that all No. 2 fuel oil received at the facility to be burned in the two boilers complies with the limitation regarding sulfur content imposed under COMAR 26.11.09.07A(2)(b). This reference is for Emission Point #10 (EP10).

Reporting: Reference COMAR 26.11.03.06C Describe: The Permittee shall make available to the Department upon request any records that the Permittee is required to maintain. This reference is required for emission point #10 (EP10).

Frequency of submittal of the compliance demonstration: When necessary

SECTION 3E. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS FOR AN ALTERNATE OPERATING SCENARIO

Scenario No.: AOS-1

Emissions Unit No.: 6 **General Reference:** COMAR 26.11.09.07A(2)(b)

Briefly describe any applicable Emissions Standard/Limits/Operational Limitations:

This regulation limits the sulfur content of distillate fuel oil (No. 2) to 0.3% by weight.

Compliance Demonstration

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C Describe: The Permittee shall obtain from fuel oil suppliers written certification that all No. 2 fuel oil received at the facility to be burned in the two boilers complies with the limitation regarding sulfur content imposed under COMAR 26.11.09.07A(2)(b). This reference is required for Emission Point #11 (EP11).

Testing: Reference _____ Describe: _____

Record Keeping: Reference COMAR 26.11.03.06C Describe: The Permittee shall maintain written certifications from the facility's fuel oil suppliers that all No. 2 fuel oil received at the facility to be burned in the two boilers complies with the limitation regarding sulfur content imposed under COMAR 26.11.09.07A(2)(b). This reference is for Emission Point #11 (EP11).

Reporting: Reference COMAR 26.11.03.06C Describe: The Permittee shall make available to the Department upon request any records that the Permittee is required to maintain. This reference is required for emission point #11 (EP11).

Frequency of submittal of the compliance demonstration: When necessary

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CONTROL EQUIPMENT

SECTION 4

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 1	2. Emissions Point No.: 01

3. Type and Description of Control Equipment:
Baghouse - FELX KLEEN 84-BVS-25

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 1	2. Emissions Point No.: 05
3. Type and Description of Control Equipment:	
Vent Pipe - 50% Caustic Storage Tank	

4. Pollutants Controlled:	Control Efficiency:

5. Capture Efficiency:

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 2	2. Emissions Point No.: 06

3. Type and Description of Control Equipment:
Demister - Otto York

4. Pollutants Controlled:	Control Efficiency:
PM	98%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 3	2. Emissions Point No.: 07

3. Type and Description of Control Equipment:

Demister - Capital City Iron Works fabricated

York Pads

4. Pollutants Controlled:	Control Efficiency:
Acid Gases	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 3	2. Emissions Point No.: 09
3. Type and Description of Control Equipment:	
Baghouse - Flex Kleen 36 BV9-II	

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 4	2. Emissions Point No.: 08
3. Type and Description of Control Equipment:	
Demister - Capital City Iron Works fabricated	
York Pads	

4. Pollutants Controlled:	Control Efficiency:
Acid Gases	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 5	2. Emissions Point No.: 10

3. Type and Description of Control Equipment:
Baghouse - Flex Kleen 120 WPWC- 360 (III)

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 5	2. Emissions Point No.: 12
3. Type and Description of Control Equipment:	
Baghouse - MAC 96RT52 (III)	

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 6	2. Emissions Point No.: 11
3. Type and Description of Control Equipment:	
Baghouse - Flex Kleen 120 WPWC- 360 III	

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 6	2. Emissions Point No.: 13
3. Type and Description of Control Equipment:	
Baghouse - Buhler-Miag RPPR 86-6	

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 6	2. Emissions Point No.: 14

3. Type and Description of Control Equipment:
Baghouse - Buhler-Miag RPDC 49-8

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 6	2. Emissions Point No.: 25

3. Type and Description of Control Equipment:
Baghouse - Flex Kleen 84-CT-38

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 7	2. Emissions Point No.: 15
3. Type and Description of Control Equipment:	
Baghouse - Flex Kleen 84-WSBC49 (IIG)	

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 7	2. Emissions Point No.: 17

3. Type and Description of Control Equipment:
Baghouse - Flex Kleen 120- WSBC100 (IIG)

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 7	2. Emissions Point No.: 18

3. Type and Description of Control Equipment:
Baghouse - Flex Kleen 84-BVBS-25-II

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 7	2. Emissions Point No.: 19

3. Type and Description of Control Equipment:
Baghouse - Flex Kleen 84-BVBS-36 (IIG)

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 7	2. Emissions Point No.: 20

3. Type and Description of Control Equipment:
Baghouse - Flex Kleen 84-BVBS-36 (IIG)

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 7	2. Emissions Point No.: 21

3. Type and Description of Control Equipment:
Baghouse - Flex Kleen 84-BVBS-36 (IIG)

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 7	2. Emissions Point No.: 22

3. Type and Description of Control Equipment:
Baghouse - Flex Kleen 84-BVBV-36 (IIIG)

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 7	2. Emissions Point No.: 23
3. Type and Description of Control Equipment:	
Baghouse - Flex Kleen 84-BVS-25 (IIG)	

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 7	2. Emissions Point No.: 24
3. Type and Description of Control Equipment:	
Baghouse - MAC 18RC14	

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 7	2. Emissions Point No.: 49

3. Type and Description of Control Equipment:
Baghouse - BHA 39AVSC9-STY3

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 8	2. Emissions Point No.: 26

3. Type and Description of Control Equipment:
Baghouse - Buhler-Miag RPBV 49-8

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 8	2. Emissions Point No.: 27
3. Type and Description of Control Equipment:	
Baghouse - Buhler-Miag RPBV 49-8	

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 8	2. Emissions Point No.: 28
3. Type and Description of Control Equipment:	
Baghouse - Flex Kleen 84-CTBS-54 (IIIG)	

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 8	2. Emissions Point No.: 29

3. Type and Description of Control Equipment:

Baghouse - Flex Kleen 120-WSWC-36IM209 (III)

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 8	2. Emissions Point No.: 30

3. Type and Description of Control Equipment:
Baghouse - Flex Kleen 120-WPWC-540 (III)

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 8	2. Emissions Point No.: 31

3. Type and Description of Control Equipment:
Baghouse - Flex Kleen 120-WSWC-144 (III)

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 8	2. Emissions Point No.: 32
3. Type and Description of Control Equipment:	
Baghouse - Flex Kleen 84-CT-38-III	

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 8	2. Emissions Point No.: 33
3. Type and Description of Control Equipment:	
Baghouse - Flex Kleen 84-WRBS-96-IIIG	

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 8	2. Emissions Point No.: 34
3. Type and Description of Control Equipment:	
Baghouse - Flex Kleen 58-CTBS-14 (III)	

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 8	2. Emissions Point No.: 48
3. Type and Description of Control Equipment:	
Baghouse - Flex Kleen 100-WSBS-49 (IIG)	

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 9	2. Emissions Point No.: 35
3. Type and Description of Control Equipment:	
Baghouse - Flex Kleen 84-BVBC-36 (III)	

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 9	2. Emissions Point No.: 36

3. Type and Description of Control Equipment:

Demister - Otto York Vent

4. Pollutants Controlled:	Control Efficiency:
Water vapor with trace amounts	98%
of Sodium Sulfate and / or acid mist	

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 9	2. Emissions Point No.: 37
3. Type and Description of Control Equipment:	
Baghouse - Flex Kleen 84-BVBC-25 (III)	

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 9	2. Emissions Point No.: 38

3. Type and Description of Control Equipment:

Baghouse - Buhler-Miag Airshock Filter (ASFA 64/8)

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 9	2. Emissions Point No.: 39

3. Type and Description of Control Equipment:
Baghouse - Buhler - Miag RPBV- 16-8

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 9	2. Emissions Point No.: 40

3. Type and Description of Control Equipment:
Baghouse - Buhler - Miag RPPR 67-8

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 11	2. Emissions Point No.: 44

3. Type and Description of Control Equipment:

Baghouse - Mikropulsaire 168S 10TR

4. Pollutants Controlled:	Control Efficiency:
PM	99%

5. Capture Efficiency: 100%

EVONIK
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SUMMARY SHEET OF POTENTIAL EMISSIONS

SECTION 5

SECTION 5. SUMMARY SHEET OF POTENTIAL EMISSIONS

List all applicable pollutants in tons per year (tpy) pertaining to this facility. The Emissions Unit No. should be consistent with numbers used in Section 3. Attach a copy of all calculations.

Pollutant	PM10	NOx	VOC	SOx	CO
CAS Number					
Emissions Unit # 1	0.060	0.000	0.000	0.000	0.000
Emissions Unit # 2	0.043	0.000	0.000	0.000	0.000
Emissions Unit # 3	0.000	0.000	0.000	0.000	0.000
Emissions Unit # 4	0.309	0.000	0.000	0.000	0.000
Emissions Unit # 5	0.000	0.000	0.000	0.000	0.000
Emissions Unit # 6	0.739	1.606	0.177	0.019	2.699
Emissions Unit # 7	0.623	0.031	0.002	0.000	0.026
Emissions Unit # 8	3.556	0.001	0.000	0.000	0.001
Emissions Unit # 9	0.000	0.000	0.000	0.000	0.000
Emissions Unit # 10	0.065	3.423	0.188	0.021	2.881
Emissions Unit # 11	0.003	0.138	0.008	0.001	0.116
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Fugitive Emissions	0.102				
Total	5.50	5.20	0.374	0.041	5.72

SECTION 5. SUMMARY SHEET OF POTENTIAL EMISSIONS

List all applicable pollutants in tons per year (tpy) pertaining to this facility. The Emissions Unit No. should be consistent with numbers used in Section 3. Attach a copy of all calculations.

Pollutant	Formaldehyde				
CAS Number	50-00-0				
Emissions Unit # 1	0.0				
Emissions Unit # 2	0.0				
Emissions Unit # 3	0.0				
Emissions Unit # 4	0.0				
Emissions Unit # 5	0.0				
Emissions Unit # 6	2.41E-3				
Emissions Unit # 7	2.31E-5				
Emissions Unit # 8	4.58E-7				
Emissions Unit # 9	0.0				
Emissions Unit # 10	2.57E-3				
Emissions Unit # 11	1.03E-4				
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Fugitive Emissions					
Total	5.11E-3				

	Actual Emissions (TPY)				
EU Number	PM	VOC	NOx	SOx	CO
1	0.060	0.000	0.000	0.000	0.000
2	0.051	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000
4	0.309	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000
6	0.739	0.177	1.606	0.019	2.699
7	0.623	0.002	0.031	0.000	0.026
8	3.556	0.000	0.001	0.000	0.001
9	0.000	0.000	0.000	0.000	0.000
10	0.065	0.188	3.423	0.021	2.881
11	0.003	0.008	0.138	0.001	0.116
TOTAL	5.406	0.375	5.199	0.041	5.723
POTENTIAL MAJOR	**NO**	**NO**	**NO**	**NO**	**NO**
REASON	<100 TPY	<100 TPY	<25 TPY	<100 TPY	<100 TPY

Assumptions: All PTE Calculations are based on operation 24 hours a day, 365 days/year

EU Number	Description	Fuel Type	Gal/yr	ft^3/yr	
1	Sand Handling				
2	Silicate Dissolvers				
3	#1 Wet Process				
4	#2 Wet Process				
5	#1 Spray Dryer	Natural Gas		220,736,891	
		Fuel Oil	2,084,211		
6	#2 Spray Dryer	Natural Gas		192,268,224	
		Fuel Oil	1,815,789		
7	Bulk Loading & Storage	Natural Gas		5,554,383	
8	Warehouse	Natural Gas		2,204,953	
9	Sulfate Plant	Natural Gas		7,917,474	
10	Boiler #2	Natural Gas		163,170,336	
		Fuel Oil	1,259,771		
10	Boiler #1	Natural Gas		149,941,137	
		Fuel Oil	1,157,634		
11	Pilot Plant Boiler	Natural Gas		40,880	
11	Pilot Plant Spray Dryer	Natural Gas		48,528	

Assumptions: All PTE Calculations are based on operation 24 hours a day, 365 days/year

	Potential Emissions (TPY)				
EU Number	PM	VOC	NOx	SOx	CO
1	0.070	0.000	0.000	0.000	0.000
2	0.106	0.000	0.000	0.000	0.000
3	0.394	0.000	0.000	0.000	0.000
4	0.765	0.000	0.000	0.000	0.000
5	6.220	0.961	7.603	23.722	14.481
6	6.220	0.837	6.622	20.667	12.615
7	4.049	0.015	0.278	0.002	0.233
8	15.629	0.006	0.110	0.001	0.093
9	0.000	0.022	0.396	0.002	0.333
10	5.179	1.094	17.028	15.671	16.582
11	0.000	0.000	0.004	0.000	0.004
TOTAL	38.631	2.936	32.041	60.064	44.340
POTENTIAL MAJOR	**NO**	**NO**	**YES**	**NO**	**NO**
REASON	<100 TPY	<100 TPY	>25 TPY	<100 TPY	<100 TPY

Pilot Plant AP- 42 Factors (Natural Gas)

NOTE: These were used for Spray Dryers, sulfate and mill dryers, and boilers.

SO_X: $\frac{0.6\ lb}{10^6\ ft^3} = \frac{3 \times 10^{-7}\ tons}{1000\ ft^3}$

NO_X (Low NO_X S.D.): $\frac{50\ lb}{10^6\ ft^3} = \frac{2.5 \times 10^{-5}\ tons}{1000\ ft^3}$

NO_X (uncontrolled): $\frac{100\ lb}{10^6\ ft^3} = \frac{5.0 \times 10^{-5}\ tons}{1000\ ft^3}$

VOC: $\frac{5.5\ lb}{10^6\ ft^3} = \frac{2.75 \times 10^{-6}\ tons}{1000\ ft^3}$

CO (uncontrolled): $\frac{84\ lb}{10^6\ ft^3} = \frac{4.2 \times 10^{-5}\ tons}{1000\ ft^3}$

CO (Low NO_X): $\frac{84\ lb}{10^6\ ft^3} = \frac{4.2 \times 10^{-5}\ tons}{1000\ ft^3}$

Lead: $\frac{0.0005\ lb}{10^6\ ft^3} = \frac{2.5 \times 10^{-10}\ tons}{1000\ ft^3}$

Plant AP- 42 Factors (Natural Gas)

NOTE: These were used for the spray dryer.
(ft^3 = natural gas burned)

SO_X: $\frac{0.6\ lb}{10^6\ ft^3} = \frac{3 \times 10^{-7}\ tons}{1000\ ft^3}$

NO_X: $\frac{50\ lb}{10^6\ ft^3} = \frac{2.5 \times 10^{-5}\ tons}{1000\ ft^3}$

CO: $\frac{84\ lb}{10^6\ ft^3} = \frac{4.2 \times 10^{-5}\ tons}{1000\ ft^3}$

VOC: $\frac{5.5\ lb}{10^6\ ft^3} = \frac{2.75 \times 10^{-6}\ tons}{1000\ ft^3}$

Lead: $\frac{0.0005\ lb}{10^6\ ft^3} = \frac{2.5 \times 10^{-10}\ tons}{1000\ ft^3}$

Particulate Matter

1) Baghouses: (ft^3 = exhaust gas)

$$\frac{tons}{1000\ ft^3} = \frac{0.015\ grains}{ft3} \times \frac{lb}{7000\ grains} \times \frac{ton}{2000\ lb} \times 1000\ ft^3 = 1.07 \times 10^{-6}$$

2) Demisters: (assumed 0.0015 grains/SCFD)

$$\frac{tons}{1000\ ft^3} = 1.07 \times 10^{-7}$$

3) Fugitive Emissions: (assumed 0.0015 gr/SCFD)

$$\therefore \frac{tons}{1000\ ft^3} = \frac{1.07 \times 10^{-7}}{}$$

1) Used all inside building discharges from bag houses.
2) Assumed only 10% of discharges left building.

4) Boiler (Used AP- 42 Factors for gas and oil since no bag houses exist.)

PM Total (Oil): PM Filterable + PM Condensible

PM Condensible (Oil): $\frac{1.3\ lb}{1000\ gal} \times \frac{ton}{2000\ lb} = 6.5 \times 10^{-7}\ \frac{tons}{1000\ gal}$

PM Filterable (Oil): $\frac{2\ lb}{1000\ gal} \times \frac{ton}{2000\ lb} = 1.0 \times 10^{-6}\ \frac{tons}{1000\ gal}$

PM 10 (Oil): PM Filterable X 1

PM 2.5 (Oil) PM Filterable X 0.25

PM Total (Gas): $\frac{7.6\ lb}{10^6\ ft^3\ NG} \times 1000\ ft^3\ NG \times \frac{ton}{2000\ lb}$

PM Condensible (Gas) $\frac{5.7\ lb}{10^6\ ft^3\ NG} \times 1000\ ft^3\ NG \times \frac{ton}{2000\ lb}$

PM Filterable (Gas) $\frac{1.9\ lb}{10^6\ ft^3\ NG} \times 1000\ ft^3\ NG \times \frac{ton}{2000\ lb}$

PM Filterable = PM 10 = PM 2.5 (Based on AP-42 Table 1.4-2 footnote C)

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EXPLANATION OF PROOSED EXEMPTIONS FROM OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

SECTION 6

SECTION 6. EXPLANATION OF PROPOSED EXEMPTIONS FROM OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Describe and cite the applicable requirements to be exempted. Complete this Section only if the facility is claiming exemptions from or the non-applicability of any federally enforceable requirements.

1. Applicable Requirement:

COMAR 26.11.06.04

2. Brief Description:

Emission limits for installations in Area III which discharge carbon monoxide gas at a rate exceeding 500 lb/day and at a concentration exceeding 12% by volume.

3. Reasons for Proposed Exemption or Justification of Non-applicability:

No installations are present and /or operated by Evonik's Havre de Grace plant that emit carbon monoxide above the rate and concentrations in COMAR 26.11.06.04

SECTION 6. EXPLANATION OF PROPOSED EXEMPTIONS FROM OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Describe and cite the applicable requirements to be exempted. Complete this Section only if the facility is claiming exemptions from or the non-applicability of any federally enforceable requirements.

1. Applicable Requirement:

40 CFR Part 60, Subpart Dc

2. Brief Description:

Emission and performance standards for steam generating units that commenced construction modifications or reconstruction after 9 June 1989 with a maximum heat input capacity between 10 and 100 mmBTU/hr.

3. Reasons for Proposed Exemption or Justification of Non-applicability:

The boilers operated at the facility, found in Emission Unit #10, have a maximum heat input capacity between 10 and 100 mmBTU/hr but they were constructed prior to 9 June 1989 and have not been modified or reconstructed since. Thus, these boilers are exempt from 40 CFR Part 60, Subpart Dc

SECTION 6. EXPLANATION OF PROPOSED EXEMPTIONS FROM OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Describe and cite the applicable requirements to be exempted. Complete this Section only if the facility is claiming exemptions from or the non-applicability of any federally enforceable requirements.

1. Applicable Requirement:

40 CFR Part 68

2. Brief Description:

Development of a Risk Management Program for accidental release of listed flammables and / or toxic substances

3. Reasons for Proposed Exemption or Justification of Non-applicability:

No listed flammables or toxic chemical is utilized at the Evonik, Havre de Grace facility in processes, above the threshold quantity, so the facility is exempt from the 40 CFR Part 68 requirements.

SECTION 6. EXPLANATION OF PROPOSED EXEMPTIONS FROM OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Describe and cite the applicable requirements to be exempted. Complete this Section only if the facility is claiming exemptions from or the non-applicability of any federally enforceable requirements.

1. Applicable Requirement:

40 CFR Part 64

2. Brief Description:

Compliance Assurance Monitoring

3. Reasons for Proposed Exemption or Justification of Non-applicability:

No emission unit has the potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year required for a source to be classified as a Major Source 40 CFR Part 64.2(a)(3).

SECTION 6. EXPLANATION OF PROPOSED EXEMPTIONS FROM OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Describe and cite the applicable requirements to be exempted. Complete this Section only if the facility is claiming exemptions from or the non-applicability of any federally enforceable requirements.

1. Applicable Requirement:

COMAR 26.11.02.10

2. Brief Description:

Fuel-burning equipment and space heaters using gaseous fuels or No.1 or No.2 oil with a heat input less than 1,000,000 Btu (1.06 gigajoules) per hour.

3. Reasons for Proposed Exemption or Justification of Non-applicability:

The Evonik Havre de Grace facility has a boiler that has a heat input of 600 MBH (600,00 Btu per hour) and uses natural gas so it is a source exempt from permits to construct and approvals.

COMPLIANCE SCHEDULE FOR NON-COMPLYING EMISSION LIMITS

SECTION 7

SECTION 7. COMPLIANCE SCHEDULE FOR NONCOMPLYING EMISSIONS UNITS

1. Emissions Unit #	Anticipated Compliance Date
N/A	
Applicable Federally Enforceable Requirement being Violated:	

2. Description of Plan to Achieve Compliance:

Certified Progress Reports for sources in noncompliance shall be submitted at least quarterly to the Department.

EVONIK
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STATE ONLY ENFORCEABLE REQUIREMENTS

STATE-ONLY ENFORCEABLE REQUIREMENTS

Facility Information:

Name of Facility:	County
Evonik Corporation	Harford County
Premises Number: 0005	
Street Address: 907 Revolution Street, Havre de Grace, MD, 21078	
24-hour Emergency Telephone Number for Air Pollution Matters: 410-939-7230	
Type of Equipment (List Significant Units):	
Product Spray Dryers #1 and #2 (Emission Units #5 and #6)	
Product Milling and Storage Facility (Emission Unit #7)	
Warehouse Area (Emission Unit #8)	
Facility Boilers (Emission Unit #10)	
Pilot Plant (Emission Unit #11)	

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CITATION TO AND DESCRIPTION OF APPLICABLE STATE ONLY ENFORCEABLE REQUIREMENTS

CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY ENFORCEABLE REQUIREMENTS

Registration No.: All Sources

Emissions Unit No.: All Sources **General Reference:** COMAR 26.11.06.08

Briefly describe the requirement and the emissions limit (if applicable):

This regulation requires that an instillation on premises may not be operated or maintained in such a manner that a nuisance is created.

Methods used to demonstrate compliance:

Six month and annual certification

CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY ENFORCEABLE REQUIREMENTS

Registration No.: All Sources

Emissions Unit No.: All Sources **General Reference:** COMAR 26.11.06.09

Briefly describe the requirement and the emissions limit (if applicable):

This regulation requires that a person may not cause or permit the discharge into the atmosphere of gases, vapors, or odors beyond the property line in such a manner that a nuisance of air pollution is created.

Methods used to demonstrate compliance:

Six month and annual certification

CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY ENFORCEABLE REQUIREMENTS

Registration No.: All Sources

Emissions Unit No.: All Sources **General Reference:** COMAR 26.11.15 and 16

Briefly describe the requirement and the emissions limit (if applicable):

This permit condition requires that the facility certify the results of air toxics analysis annually. The air toxics analysis shall include a statement that the facility's previously submitted air toxics compliance demonstration is still valid or a new air toxics compliance demonstration in accordance with COMAR 26.11.15 and 16 if there has been a change in the facility.

Methods used to demonstrate compliance:

The annual reporting and certification of an air compliance demonstration every April 1 for the previous year operations.

CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY ENFORCEABLE REQUIREMENTS

Registration No.: Facility wide

Emissions Unit No.: Facility wide **General Reference:** COMAR 26.11.15.05

Briefly describe the requirement and the emissions limit (if applicable):

This regulation requires the installation and operations of T-BACT for new installations discharging a toxic pollutant to the atmosphere.

Methods used to demonstrate compliance:

Six month and annual compliance certification.

EVONIK
Leading Beyond Chemistry

INSIGNIFICANT ACTIVITIES

ATTACHMENT A

III. Check-off List of Emissions Units and Activities Exempt from the Part 70 Permit Application

Insignificant Activities

Place a check mark beside each type of emissions unit or activity that is located at the facility. Where noted, please indicate the number of that type of emissions unit or activity located at the facility.

(1) No. 30 Fuel burning equipment using gaseous fuels or no. 1 or no. 2 fuel oil, and having a heat input less than 1,000,000 Btu (1.06 gigajoules) per hour;

(2) No. ___ Fuel-burning equipment using solid fuel and having a heat input of less than 350,000 Btu (0.37 gigajoule) per hour;

(3) No. 1 Stationary internal combustion engines with less than 500 brake horsepower (373 kilowatts)of power output

(4) X Space heaters utilizing direct heat transfer and used solely for comfort heat;

(5) ___ Water cooling towers and water cooling ponds unless used for evaporative cooling of water from barometric jets or barometric condensers, or used in conjunction with an installation requiring a permit to operate;

(6) No. ___ Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;

(7) ___ Commercial bakery ovens with a rated heat input capacity of less than 2,000,000 Btu per hour;

(8) ___ Kilns used for firing ceramic ware, heated exclusively by natural gas, liquefied petroleum gas, electricity, or any combination of these;

(9) ___ Confection cookers where the products are edible and intended for human consumption;

(10) ___ Die casting machines;

(11) ___ Photographic process equipment used to reproduce an image upon sensitized material through the use of radiant energy;

(12) X Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;

(13) X Brazing, soldering, or welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals and not directly related to plant maintenance, upkeep and repair or maintenance shop activities;

(14) X Equipment for washing or drying products fabricated from metal or glass, provided that no VOC is used in the process and that no oil or solid fuel is burned;

(15) ___ Containers, reservoirs, or tanks used exclusively for electrolytic plating work, or electrolytic polishing, or electrolytic stripping of brass, bronze, cadmium, copper, iron, lead, nickel, tin, zinc, and precious metals;

(16) Containers, reservoirs, or tanks used exclusively for:

(a) ___ Dipping operations for applying coatings of natural or synthetic resins that contain no VOC;

(b) ___ Dipping operations for coating objects with oils, waxes, or greases, and where no VOC is used;

(c) X Storage of butane, propane, or liquefied petroleum, or natural gas;

(d) No. 2 Storage of lubricating oils:

(e) No. 1 Unheated storage of VOC with an initial boiling point of 300 °F (

(f) No. 4 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel,

(g) No. ___ Storage of motor vehicle gasoline and having individual tank capacities of 2,000 gallons (7.6 cubic meters) or less;

(h) No. 2 The storage of VOC normally used as solvents, diluents, thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins, or other surface coatings and having individual capacities of 2,000 gallons (7.6 cubic meters) or less;

(17) ___ Gaseous fuel-fired or electrically heated furnaces for heat treating glass or metals, the use of which does not involve molten materials;

(18) Crucible furnaces, pot furnaces, or induction furnaces, with individual capacities of 1,000 pounds (454 kilograms) or less each, in which no sweating or distilling is conducted, or any fluxing is conducted using chloride, fluoride,

or ammonium compounds, and from which only the following metals are poured or in which only the following metals are held in a molten state:

(a) ___ Aluminum or any alloy containing over 50 percent aluminum, if no gaseous chloride compounds, chlorine, aluminum chloride, or aluminum fluoride is used;

(b) ___ Magnesium or any alloy containing over 50 percent magnesium;

(c) ___ Lead or any alloy containing over 50 percent lead;

(d) ___ Tin or any alloy containing over 50 percent tin;

(e) ___ Zinc or any alloy containing over 50 percent zinc;

(f) ___ Copper;

(g) ___ Precious metals;

(19)___ Charbroilers and pit barbecues as defined in COMAR 26.11.18.01 with a total cooking area of 5 square feet (0.46 square meter) or less;

(20) X___ First aid and emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation used in support of a manufacturing or production process;

(21) X___ Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use;

(22) ___ Potable water treatment equipment, not including air stripping equipment;

(23)___ Firing and testing of military weapons and explosives;

(24)___ Emissions resulting from the use of explosives for blasting at quarrying operations and from the required disposal of boxes used to ship the explosive;

(25)X___ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;

(26)___ Grain, metal, or mineral extrusion presses;

(27)___ Breweries with an annual beer production less than 60,000 barrels;

(28)___ Natural draft hoods or natural draft ventilators that exhaust air pollutants into the ambient air from manufacturing/industrial or commercial processes;

(29) X Laboratory fume hoods and vents inlcuding two (2) insignificant R&D laboratory kilns; and

(30) No. ___ Sheet-fed letter or lithographic printing press(es) with a cylinder width of less than 18 inches;

For the following, attach additional pages as necessary:

(31) any other emissions unit, not listed in this section, with a potential to emit less than the "de minimus" levels listed in COMAR 26.11.02.10X (list and describe units):

No. 1	Laboratory size tablet coater for R&D Lab (MDE Letter to Mr. Walker on March 19, 2004
No. 1	Laboratory size spray dryer
No. 1	air stripper to remove volatiles and stabilize pH of the incoming water to improve conformance to FDA requirements (MDE letter to Mr. JimBaugh on August 21, 2007)
No. 1	Modification of the existing system 200 baghouse (EP#13; EU 6) to eliminate confined space entry by changing the design from a bottom loader to a top loader. The baghouse does not have a discharge external to the building (MDE letter to Mr. Joseph Wroczynski on September 1, 2009.
No. 1	Laboratory sized mixer for R&D Lab

(32) any other emissions unit at the facility which is not subject to an applicable requirement of the Clean Air Act (list and describe):

No. ___ _____

No. ___ _____

No. ___ _____