



Ashland LLC
100 Big Sandy River Road
Kenova, WV 25530
www.ashland.com

November 18, 2016

Mr. William F. Durham, Director
West Virginia DEP
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

Re: Renewal Application
Ashland LLC
Ashland LLC - Neal Plant
100 Big Sandy River Road
Kenova, WV 25530
Title V Air Permit No. R30-09900009
Via Fed-Ex

To Whom It May Concern,

Ashland LLC is submitting the attached Title V Operating Permit renewal application for the Ashland facility located at 100 Big Sandy River Road in Kenova, WV. Enclosed please find 2 hard copies of the general form (one with original signature in blue ink and one copy) and 2 disks containing electronic copies of all the application forms. Pursuant to 45CSR 30-4.1.a.3 this application is being submitted more than six months prior to the expiration of the existing Title V Operating permit which expires on May 23, 2017.

If you have any questions or concerns, please do not hesitate to contact me at (304) 528-2610 sddunsmore@ashland.com or Kara Long at (614)790-4641 klong@ashland.com.

Sincerely,

A handwritten signature in blue ink that reads "Steven Dunsmore".

Steven Dunsmore
Plant Manager

cc: Steven Dunsmore – Plant Manager

File: APM/Neal, WV/Permits/Air/2016



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Attachment H: Compliance Assurance Monitoring (CAM) Form	Electronic on CD



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF AIR QUALITY

601 57th Street SE
Charleston, WV 25304
Phone: (304) 926-0475

www.dep.wv.gov/daq

INITIAL/RENEWAL TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

Form with 10 sections: 1. Name of Applicant (ASHLAND LLC), 2. Facility Name (ASHLAND LLC - NEAL PLANT), 3. DAQ Plant ID (099 - 00009), 3. Federal Employer ID (61-0122250), 5. Permit Application Type (Renewal), 6. Type of Business Entity (LLC), 7. Is the Applicant the: (Both), 8. Number of onsite employees (46), 9. Governmental Code (Privately owned), 10. Business Confidentiality Claims (No).

11. Mailing Address		
Street or P.O. Box: 100 Big Sandy River Road		
City: Kenova	State: WV	Zip: 25530-
Telephone Number: (304) 528-2600	Fax Number: (304) 528-2648	

12. Facility Location		
Street: 100 Big Sandy River Road	City: Kenova	County: Wayne
UTM Easting: 360.8 km	UTM Northing: 4,247.7 km	Zone: <input checked="" type="checkbox"/> 17 or <input type="checkbox"/> 18
Directions: The plant is located on the west side of the Big Sandy River Road, 0.9 miles south of the junction of Big Sandy River Road with I-64. The plant is most easily accessed from Exit 1, the Kenova exit, of I-64 then following Rt. 52 south for about 2 miles to the intersection of Rt. 52 and Big Sandy River Road.		
Portable Source? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Is facility located within a nonattainment area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, for what air pollutants?	
Is facility located within 50 miles of another state? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, name the affected state(s). Kentucky, Ohio	
Is facility located within 100 km of a Class I Area¹? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, name the area(s).	
If no, do emissions impact a Class I Area¹? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
¹ Class I areas include Dolly Sods and Otter Creek Wilderness Areas in West Virginia, and Shenandoah National Park and James River Face Wilderness Area in Virginia.		

13. Contact Information		
Responsible Official: Steven Dunsmore		Title: Plant Manager
Street or P.O. Box: 100 Big Sandy River Road		
City: Kenova	State: WV	Zip: 25530
Telephone Number: (304) 528-2610	Fax Number: (304) 528-2648	
E-mail address: sddunsmore@ashland.com		
Environmental Contact: Matthew Murray		Title: Process Engineer
Street or P.O. Box: 100 Big Sandy River Road		
City: Kenova	State: WV	Zip: 25530
Telephone Number: (304) 528-2634	Fax Number: (304) 528-2648	
E-mail address: memurray@ashland.com		
Application Preparer: Kara Long		Title: Corporate Environmental Engineer
Company: Ashland LLC		
Street or P.O. Box: 5200 Blazer Parkway		
City: Dublin	State: OH	Zip: 43017
Telephone Number: (614) 790-4641	Fax Number: (614) 790-6232	
E-mail address: klong@ashland.com		

14. Facility Description

List all processes, products, NAICS and SIC codes for normal operation, in order of priority. Also list any process, products, NAICS and SIC codes associated with any alternative operating scenarios if different from those listed for normal operation.

Process	Products	NAICS	SIC
Air oxidation of butane	Maleic Anhydride	325192	2865

Provide a general description of operations.

Maleic anhydride is produced by the partial catalytic oxidation of n-butane. A continuous mixture of a compressed air and n-butane stream is passed over a proprietary vanadium-phosphorous catalyst. About 60% of the reacted butane forms maleic anhydride. The main by-products are carbon monoxide, carbon dioxide, and water vapor. Minor by-products consist of acetic acid, acrylic acid, formic acid, and formaldehyde. Since the reaction is highly exothermic, the excess heat is used to produce steam for internal use and for export to the nearby Marathon refinery.

The reactor exit gas stream is cooled and the crude maleic anhydride is partially condensed. The condensed portion is removed in a gas/liquid separator and pumped to an intermediate storage tank. The gas stream passes to a scrubber, where the remaining maleic anhydride is scrubbed from the gas stream and forms maleic acid. The recovered maleic acid resides in an intermediate storage tank. The gas stream then proceeds to a thermal oxidizer, where the hydrocarbons in the gas stream are destroyed and the carbon monoxide is reacted to carbon dioxide. The thermal oxidizer stack is equipped with a carbon monoxide continuous emissions monitor.

While the production of the crude product as described above is done continuously, refining to a finished product is done in a batch distillation process. The maleic acid is azeotropically distilled with xylene to convert the maleic acid back to maleic anhydride and to remove the water. The crude maleic anhydride is added and the mixture is vacuum distilled to a finished product. The distillation process produces a recyclable forecut stream which is stored between batches. The xylene used in the dehydration step is likewise recovered and stored between batches. The water removed during the dehydration step is temporarily stored in a tank having a refrigerated vent condenser to control xylene emissions. This water is used as scrubbing medium for maleic anhydride recovery and is ultimately purged and biologically waste treated.

Periodically the distillation equipment accumulates unrecoverable organic solids on the column internals. These solids are removed by hot water washes which dissolves the solids to form an aqueous solution of maleic and fumaric acids and a maleic/acrylic copolymer (fumaric acid is an isomer of maleic acid). This acid solution is routed to two waste acid tanks, undergoes elementary neutralization using sodium hydroxide solution, and is disposed of in an environmentally approved manner.

15. Provide an **Area Map** showing plant location as **ATTACHMENT A**. Attached

16. Provide a **Plot Plan(s)**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is located as **ATTACHMENT B**. For instructions, refer to "Plot Plan - Guidelines." Attached

17. Provide a detailed **Process Flow Diagram(s)** showing each process or emissions unit as **ATTACHMENT C**. Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.

Attached

Section 2: Applicable Requirements

18. Applicable Requirements Summary	
Instructions: Mark all applicable requirements.	
<input checked="" type="checkbox"/> SIP	<input type="checkbox"/> FIP
<input checked="" type="checkbox"/> Minor source NSR (45CSR13)	<input checked="" type="checkbox"/> PSD (45CSR14)
<input checked="" type="checkbox"/> NESHAP (45CSR34)	<input type="checkbox"/> Nonattainment NSR (45CSR19)
<input checked="" type="checkbox"/> Section 111 NSPS	<input type="checkbox"/> Section 112(d) MACT standards
<input type="checkbox"/> Section 112(g) Case-by-case MACT	<input checked="" type="checkbox"/> 112(r) RMP
<input type="checkbox"/> Section 112(i) Early reduction of HAP	<input type="checkbox"/> Consumer/commercial prod. reqts., section 183(e)
<input type="checkbox"/> Section 129 Standards/Reqts.	<input checked="" type="checkbox"/> Stratospheric ozone (Title VI)
<input type="checkbox"/> Tank vessel reqt., section 183(f)	<input type="checkbox"/> Emissions cap 45CSR§30-2.6.1
<input type="checkbox"/> NAAQS, increments or visibility (temp. sources)	<input type="checkbox"/> 45CSR27 State enforceable only rule
<input checked="" type="checkbox"/> 45CSR4 State enforceable only rule	<input type="checkbox"/> Acid Rain (Title IV, 45CSR33)
<input type="checkbox"/> Emissions Trading and Banking (45CSR28)	<input type="checkbox"/> Compliance Assurance Monitoring (40CFR64)
<input type="checkbox"/> CAIR NO _x Annual Trading Program (45CSR39)	<input type="checkbox"/> CAIR NO _x Ozone Season Trading Program (45CSR40)
<input type="checkbox"/> CAIR SO ₂ Trading Program (45CSR41)	

19. Non Applicability Determinations
<p>List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.</p> <p>a. 40CFR60 Subpart E - Standards of Performance for Incinerators. Ashland's Neal plant incinerator is not used to burn solid waste.</p> <p>b. 40 C.F.R. Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction or Modification Commenced after July 23, 1984.</p> <p>Tanks F-412, F-413, M-1410A, M-1410B, F-414, F-602 are not subject to this Subpart because they were constructed before July 23, 1984 and were not modified since then.</p> <p>Butane pressure vessels TK-101, TK-102, TK-103 are exempted from the requirements of this Subpart, because they are designed to operate in excess of 204.9 kPa and without emissions to the atmosphere.</p> <p>c. 40CFR60 Subpart DDD - Standards of Performance for Volatile Organic Compound (VOC) Emissions From the Polymer Manufacturing Industry. Ashland's Neal plant does not produce polymers.</p> <p>d. 40CFR60 Subpart NNN - Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations. Ashland's Neal plant distillation process is designed and operated as a batch operation, so it is exempted per section 60.660 (c) (3).</p>
<input checked="" type="checkbox"/> Permit Shield

19. Non Applicability Determinations (Continued) - Attach additional pages as necessary.

List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.

- e. 40CFR60 Subpart RRR - Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes. Ashland's Neal plant is manufacturing MAN by air oxidation process, so it is not a subject to this Subpart, but is a subject to Subpart III instead.
- f. 40CFR60 Subpart DDDD - Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units that Commenced Construction On or Before November 30, 1999. Ashland's Neal plant incinerator is not used to burn solid waste.
- g. 40CFR61 Subpart F - National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene. The Neal plant has benzene waste in gas/vapor form only, therefore the plant is exempt from requirements of this subpart per 61.340(c)(1).
- h. 40CFR61 Subpart J - National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene. The Neal plant does not operate in "benzene service", because its equipment contacts a fluid that contains less than 10 percent benzene by weight. The raw butane feed into the system contains less than 1 percent of the benzene by weight; then before reaction process butane flow gets diluted with air at more than 50 to 1 dilution rate, so benzene content of the process fluid drops even less. Facility is required to keep on site the quarterly butane analysis to demonstrate compliance with the process fluid benzene content.
- i. 40CFR61 Subpart BB - National Emission Standard for benzene emissions from Benzene Transfer operations. The Neal plant is not a subject to this subpart, because it is not a benzene production facility or a bulk terminal.
- j. 40CFR63 Subpart A - National Emission Standards for Hazardous Air Pollutants for Source Categories. General Provisions. This subpart is not applicable because the Neal plant is not a major source of HAPs (facility has aggregate HAP emissions less than 25 TPY and single HAP emissions less than 10 TPY at maximum operating conditions).
- k. 40CFR63 Subpart B - Requirements for Control Technology Determinations for Major Sources in Accordance With Clean Air Act Sections, Sections 112(g) and 112(j). This subpart is not applicable because the Neal plant is not a major source of HAPs (facility has aggregate HAP emissions less than 25 TPY and single HAP emissions less than 10 TPY at maximum operating conditions).
- l. 40CFR63 Subpart F - National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry. This subpart is not applicable because the Neal plant is not a major source of HAPs (facility has aggregate HAP emissions less than 25 TPY and single HAP emissions less than 10 TPY at maximum operating conditions).
- m. 40CFR63 Subpart H - National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks. This subpart is not applicable because the Neal plant is not a major source of HAPs (facility has aggregate HAP emissions less than 25 TPY and single HAP emissions less than 10 TPY at maximum operating conditions).
- n. 40CFR63 Subparts G - Synthetic Organic Chemical Manufacturing. The Neal plant is not subject to this subpart, because the plant is not a major source of HAPs.
- o. 40CFR63 Subpart Q - Industrial Process Cooling Towers. The Neal plant cooling towers are not a subject to this subpart, because the plant is not a major source of HAPs.
- p. 45CSR27 - To Prevent and Control the Emissions of Toxic Air Pollutants. The Neal plant is not a subject to this rule, because its benzene emission rate is less than 1000 lbs/yr).
- q. 40CFR60, Subpart K - Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978. There are no petroleum liquid storage tanks in the Neal plant.
- r. 40CFR60, Subpart Ka - Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 19, 1978, and Prior to July 23, 1984. There are no petroleum liquid storage tanks in the Neal plant.
- s. 40CFR64 - Compliance Assurance Monitoring. The Neal plant does not own or operate a subject Pollutant-Specific Emissions Unit as defined at 40 C.F.R. §64.1, because all control devices at the plant either: [1] have potential pre-control device annual emissions of applicable regulated air pollutants that are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3), or [2] are subject to a Title V permit that specifies a continuous compliance determination method, as defined in §64.1, and thus are exempt per 40 C.F.R. §64.2(b)(1)(vi).
- t. 45CSR2 - "To Prevent and Control Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers." The Neal plant does not contain any fuel burning units.

Permit Shield

20. Facility-Wide Applicable Requirements

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements).

45CSR6-3.1. & 3.2. Open burning & open burning exemptions.
40CFR61 Subpart M - 61.145, 61.148, and 61.150 Asbestos.
45CSR4-3.1. [State-Enforceable only.] Odors.
45CSR13-10.5. [State-Enforceable only.] Permanent shutdown.
45CSR11-5.2. Standby plan for reducing emissions.
WV Code § 22-5-4(a)(14) Emission inventory.
40 CFR Part 82, Subpart F Ozone-depleting substances.
40 CFR Part 68 Risk Management Plan.
45CSR14, R14-0008K, A.1. Facility-Wide Production Limit
45CSR7-5.1. & 5.2. Fugitive particulate matter.
WV Code § 22-5-4(a)(15), 45CSR13 and 45CSR14, R14-0008K, B.8. Stack testing.
45CSR§30-5.1.c.2.A. Monitoring information.
45CSR§30-5.1.c.2.B. Retention of records.
45CSR§§30-4.4. and 5.1.c.3.D. Responsible official.
45CSR31, 45CSR§30-5.1.c.3.E. Confidential business information.
45CSR§30-8. Certified emissions statement.
45CSR§30-5.3.e. Compliance certification.
45CSR§30-5.1.c.3.A. Semi-annual monitoring reports.
45CSR§30-5.7 Emergencies.
45CSR§30-5.1.c.3. Deviations.
45CSR30-4.3.h.1.B. New applicable requirement.
45CSR14, R14-0008K, B.9. and 40CFR60 Subpart VV. Fugitive VOC emissions (LDAR).
45CSR14, R14-0008K, B.11. and 45CSR45-21-37. Fugitive VOC emissions (LDAR).

Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

45CSR6-3.1. & 3.2. Open burning & open burning exemptions – Compliance is demonstrated by Condition Numbers 3.1.1 & 3.1.2.

40CFR61 Subpart M - 61.145(b), 45CSR34 Asbestos – Compliance is demonstrated by Condition Number 3.1.3.

45CSR4-3.1.; 45CSR§30-5.1.c. Odors – Compliance is demonstrated by Condition Numbers 3.1.4 & 3.4.3.

45CSR11-5.2. Standby plan for reducing emissions – Compliance is demonstrated by Condition Number 3.1.5.

WV Code § 22-5-4(a)(14) Emission inventory – Compliance is demonstrated by Condition Number 3.1.6.

40 CFR Part 82, Subpart F Ozone-depleting substances – Compliance is demonstrated by Condition Number 3.1.7.

40 CFR Part 68 Risk Management Plan – Compliance is demonstrated by Condition Number 3.1.8.

Facility-Wide Production Limit 45CSR14, R14-0008,A.1 – Compliance is demonstrated by Condition Number 3.1.9.

45CSR7-5.1. & 5.2.; 45CSR§30-5.1.c. Fugitive particulate matter – Compliance is demonstrated by Condition Numbers 3.1.11 & 3.1.10; 3.4.4 & 3.4.5.

WV Code § 22-5-4(a)(14-15) and 45CSR13 Stack testing – Compliance is demonstrated by Condition Number 3.3.1.

45CSR§30-5.1.c.2.A. Monitoring information – Compliance is demonstrated by Condition Number 3.4.1.

45CSR§30-5.1.c.2.B. Retention of records – Compliance is demonstrated by Condition Number 3.4.2.

45CSR§§30-4.4. and 5.1.c.3.D. Responsible official – Compliance is demonstrated by Condition Number 3.5.1.

45CSR31, 45CSR§30-5.1.c.3.E. Confidential business information– Compliance is demonstrated by Condition Number 3.5.2.

45CSR§30-8. Certified emissions statement – Compliance is demonstrated by Condition Number 3.5.4.

45CSR§30-5.3.e. Compliance certification – Compliance is demonstrated by Condition Number 3.5.5.

45CSR§30-5.1.c.3.A. Semi-annual monitoring reports – Compliance is demonstrated by Condition Number 3.5.6.

45CSR§30-5.7 Emergencies – Compliance is demonstrated by Condition Number 3.5.7, 2.17.

45CSR§30-5.1.c.3. Deviations – Compliance is demonstrated by Condition Number 3.5.8.

45CSR30-4.3.h.1.B. New applicable requirement – Compliance is demonstrated by Condition Number 3.5.9.

45CSR14, R14-0008, B.9. and 40CFR60 Subpart VV – Compliance is demonstrated by Condition Numbers 3.1.12.

45CSR14, R14-0008K, B.11. and 45CSR45-21-37 – Compliance is demonstrated by Condition Number 3.1.12.

Are you in compliance with all facility-wide applicable requirements? Yes No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

20. Facility-Wide Applicable Requirements (Continued) - Attach additional pages as necessary.

List all facility-wide applicable requirements. For each applicable requirement, include the rule citation and/or permit with the condition number.

Completed Above.

Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Completed Above

Are you in compliance with all facility-wide applicable requirements? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	598.0
Nitrogen Oxides (NO _x)	13.2
Lead (Pb)	---
Particulate Matter (PM _{2.5}) ¹	0.9
Particulate Matter (PM ₁₀) ¹	0.9
Total Particulate Matter (TSP)	0.9
Sulfur Dioxide (SO ₂)	9.5
Volatile Organic Compounds (VOC)	69.0
Hazardous Air Pollutants ²	Potential Emissions
Acrylic Acid	5.41
Benzene	0.22
Maleic Anhydride	5.85
Xylenes (isomers and mixtures)	5.59
Regulated Pollutants other than Criteria and HAP	Potential Emissions
Non-Exempt CFCs	0.1

¹PM_{2.5} and PM₁₀ are components of TSP.
²For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.

Section 4: Insignificant Activities

24. Insignificant Activities (Check all that apply)	
<input checked="" type="checkbox"/>	1. Air compressors and pneumatically operated equipment, including hand tools.
<input checked="" type="checkbox"/>	2. Air contaminant detectors or recorders, combustion controllers or shutoffs.
<input checked="" type="checkbox"/>	3. Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
<input checked="" type="checkbox"/>	4. Bathroom/toilet vent emissions.
<input checked="" type="checkbox"/>	5. Batteries and battery charging stations, except at battery manufacturing plants.
<input checked="" type="checkbox"/>	6. Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
<input type="checkbox"/>	7. Blacksmith forges.
<input checked="" type="checkbox"/>	8. Boiler water treatment operations, not including cooling towers.
<input checked="" type="checkbox"/>	9. Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
<input checked="" type="checkbox"/>	10. CO ₂ lasers, used only on metals and other materials which do not emit HAP in the process.
<input checked="" type="checkbox"/>	11. Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
<input checked="" type="checkbox"/>	12. Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
<input checked="" type="checkbox"/>	13. Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
<input checked="" type="checkbox"/>	14. Demineralized water tanks and demineralizer vents.
<input type="checkbox"/>	15. Drop hammers or hydraulic presses for forging or metalworking.
<input checked="" type="checkbox"/>	16. Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
<input type="checkbox"/>	17. Emergency (backup) electrical generators at residential locations.
<input type="checkbox"/>	18. Emergency road flares.
<input type="checkbox"/>	19. Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO _x , SO ₂ , VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units. Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis: _____ _____ _____ _____ _____ _____ _____ _____ _____

24. Insignificant Activities (Check all that apply)

<input type="checkbox"/>	<p>20. Emission units which do not have any applicable requirements and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27.</p> <p>Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
<input checked="" type="checkbox"/>	21. Environmental chambers not using hazardous air pollutant (HAP) gases.
<input checked="" type="checkbox"/>	22. Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
<input type="checkbox"/>	23. Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
<input checked="" type="checkbox"/>	24. Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
<input checked="" type="checkbox"/>	25. Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
<input checked="" type="checkbox"/>	26. Fire suppression systems.
<input checked="" type="checkbox"/>	27. Firefighting equipment and the equipment used to train firefighters.
<input type="checkbox"/>	28. Flares used solely to indicate danger to the public.
<input checked="" type="checkbox"/>	29. Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
<input type="checkbox"/>	30. Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
<input checked="" type="checkbox"/>	31. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
<input type="checkbox"/>	32. Humidity chambers.
<input checked="" type="checkbox"/>	33. Hydraulic and hydrostatic testing equipment.
<input checked="" type="checkbox"/>	34. Indoor or outdoor kerosene heaters.
<input type="checkbox"/>	35. Internal combustion engines used for landscaping purposes.
<input type="checkbox"/>	36. Laser trimmers using dust collection to prevent fugitive emissions.
<input checked="" type="checkbox"/>	37. Laundry activities, except for dry-cleaning and steam boilers.
<input checked="" type="checkbox"/>	38. Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
<input checked="" type="checkbox"/>	39. Oxygen scavenging (de-aeration) of water.
<input type="checkbox"/>	40. Ozone generators.
<input checked="" type="checkbox"/>	41. Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant

24. Insignificant Activities (Check all that apply)

	owners/operators must still get a permit if otherwise requested.)
<input checked="" type="checkbox"/>	42. Portable electrical generators that can be moved by hand from one location to another. "Moved by Hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.
<input type="checkbox"/>	43. Process water filtration systems and demineralizers.
<input checked="" type="checkbox"/>	44. Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
<input checked="" type="checkbox"/>	45. Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
<input checked="" type="checkbox"/>	46. Routing calibration and maintenance of laboratory equipment or other analytical instruments.
<input checked="" type="checkbox"/>	47. Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
<input type="checkbox"/>	48. Shock chambers.
<input type="checkbox"/>	49. Solar simulators.
<input checked="" type="checkbox"/>	50. Space heaters operating by direct heat transfer.
<input checked="" type="checkbox"/>	51. Steam cleaning operations.
<input checked="" type="checkbox"/>	52. Steam leaks.
<input type="checkbox"/>	53. Steam sterilizers.
<input checked="" type="checkbox"/>	54. Steam vents and safety relief valves.
<input checked="" type="checkbox"/>	55. Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
<input checked="" type="checkbox"/>	56. Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
<input type="checkbox"/>	57. Such other sources or activities as the Director may determine.
<input checked="" type="checkbox"/>	58. Tobacco smoking rooms and areas.
<input checked="" type="checkbox"/>	59. Vents from continuous emissions monitors and other analyzers.

Section 5: Emission Units, Control Devices, and Emission Points

25. Equipment Table
Fill out the Title V Equipment Table and provide it as ATTACHMENT D . Attached
26. Emission Units
For each emission unit listed in the Title V Equipment Table , fill out and provide an Emission Unit Form as ATTACHMENT E . Attached
For each emission unit not in compliance with an applicable requirement, fill out a Schedule of Compliance Form as ATTACHMENT F . Not Applicable
27. Control Devices
For each control device listed in the Title V Equipment Table , fill out and provide an Air Pollution Control Device Form as ATTACHMENT G . Attached
For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Title V Major Source Threshold Level, refer to the Compliance Assurance Monitoring (CAM) Form(s) for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as ATTACHMENT H . Attached – CAM is not applicable; non-applicability rationale statement included.

Section 6: Certification of Information

28. Certification of Truth, Accuracy and Completeness and Certification of Compliance

Note: This Certification must be signed by a responsible official. The original, signed in blue ink, must be submitted with the application. Applications without an original signed certification will be considered as incomplete.

a. Certification of Truth, Accuracy and Completeness

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine and/or imprisonment.

b. Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

Responsible official (type or print)

Name: Steven Dunsmore

Title: Plant Manager

Responsible official's signature:

Signature: 

Signature Date: 11/19/2016

(Must be signed and dated in blue ink)

Note: Please check all applicable attachments included with this permit application:

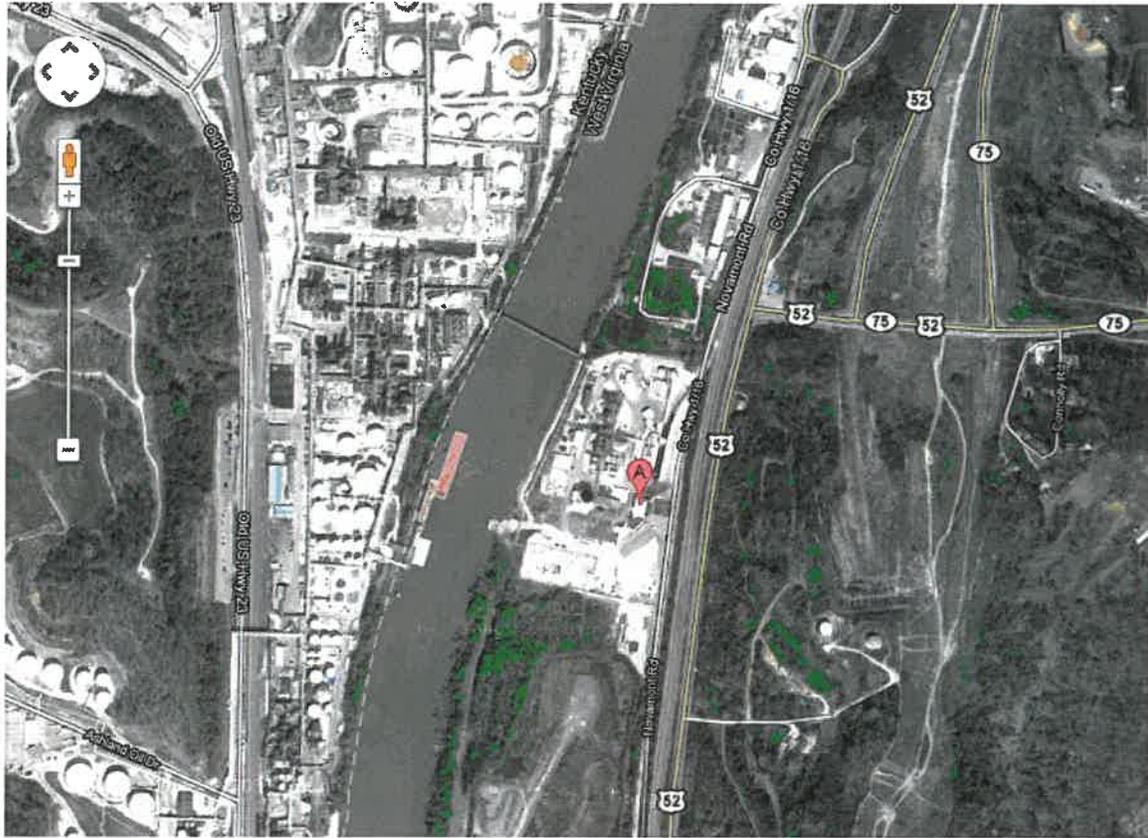
- | | |
|-------------------------------------|---|
| <input checked="" type="checkbox"/> | ATTACHMENT A: Area Map |
| <input checked="" type="checkbox"/> | ATTACHMENT B: Plot Plan(s) |
| <input checked="" type="checkbox"/> | ATTACHMENT C: Process Flow Diagram(s) |
| <input checked="" type="checkbox"/> | ATTACHMENT D: Equipment Table |
| <input checked="" type="checkbox"/> | ATTACHMENT E: Emission Unit Form(s) |
| <input type="checkbox"/> | ATTACHMENT F: Schedule of Compliance Form(s) |
| <input checked="" type="checkbox"/> | ATTACHMENT G: Air Pollution Control Device Form(s) |
| <input checked="" type="checkbox"/> | ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s) |

All of the required forms and additional information can be found and downloaded from, the DEP website at www.dep.wv.gov/daq, requested by phone (304) 926-0475, and/or obtained through the mail.

Attachment A

Figure 1 - Site Location Map

Ashland LLC
Neal Plant
100 Big Sandy River Rd
Kenova, WV 25530

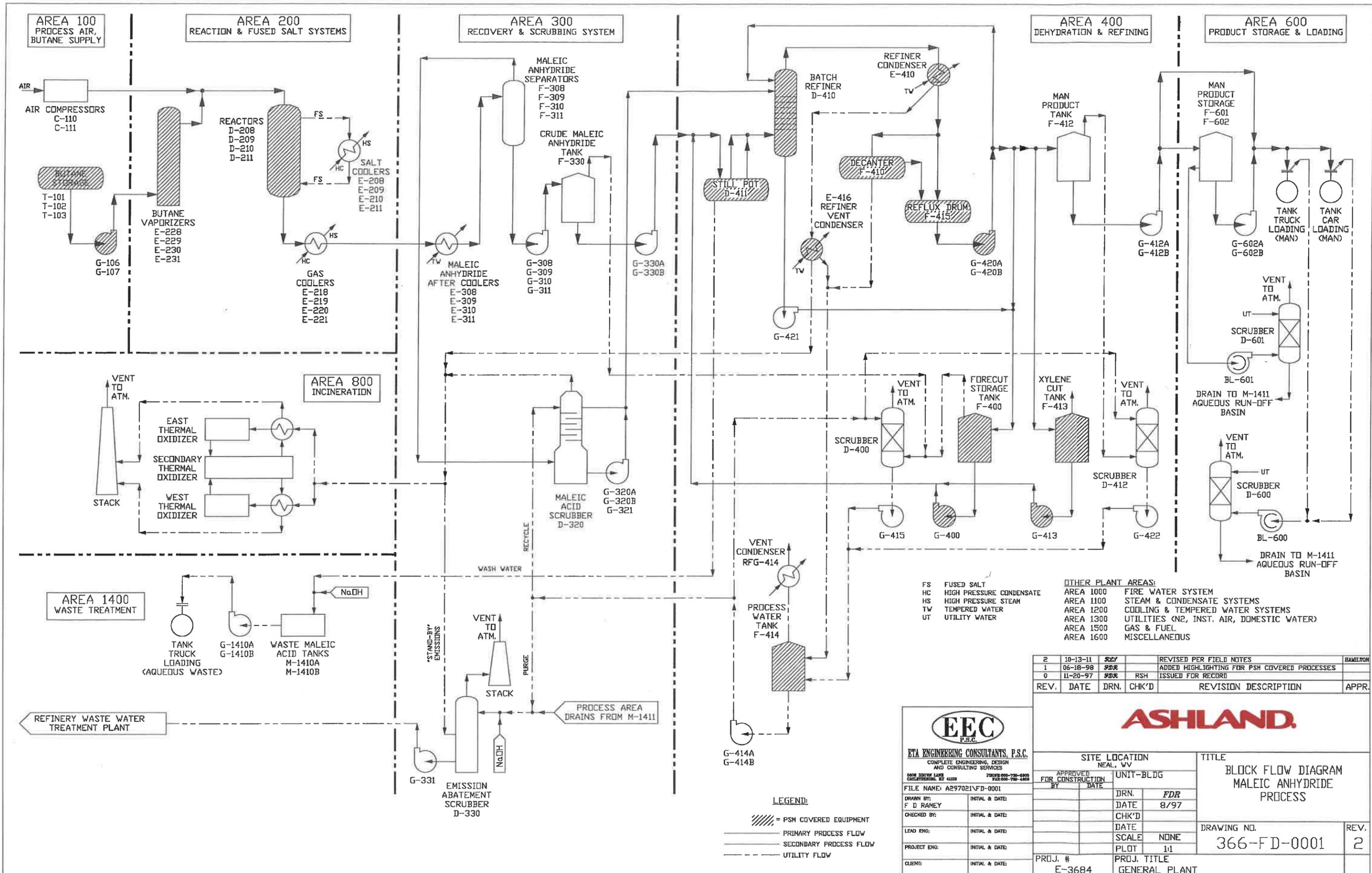


Attachment B

Figure 2 - Site Plot Plan

Attachment C

Figure 3 - Process Flow Diagram



ATTACHMENT D - Title V Equipment Table					
(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)					
Emission Point ID ¹	Control Device ¹	Emission Unit ID ¹	Emission Unit Description	Design Capacity	Year Installed/ Modified
11E / 011	Thermal Oxidizer B-800	001-02	Maleic Anhydride Reactor D-208	141 Million pounds per year of Maleic Anhydride	12/30/1993 / 1998
		001-03	Maleic Anhydride Reactor D-209		01/05/1988 / 1998
		001-04	Maleic Anhydride Reactor D-210		09/30/1976 / 1998
		001-05	Maleic Anhydride Reactor D-211		09/30/1976 / 1998
		001-06	Maleic Acid Scrubber D-320		1975 / 2001
		002-01	Batch Maleic Anhydride Refiner D-410		09/30/1976 / 1998
13E / 010	Abatement Scrubber D-330	001-02	Maleic Anhydride Reactor D-208	141 Million pounds per year of Maleic Anhydride	12/30/1993 / 1998
		001-03	Maleic Anhydride Reactor D-209		01/05/1988 / 1998
		001-04	Maleic Anhydride Reactor D-210		09/30/1976 / 1998
		001-05	Maleic Anhydride Reactor D-211		1993
		001-06	Maleic Acid Scrubber D-320		1975 / 2001
		002-01	Batch Maleic Anhydride Refiner D-410		09/30/1976 / 1998
1E / 001	Scrubber D-400	003-01	Forecut Tank F-400	2,500,000 gal/yr	01/10/2008
		003-04	Crude MAN Tank F-330	9,000,000 gal/yr	10/02/1994 / 1998
2E / 002	None	003-02	Xylene Cut Tank F-413	4,400,000 gal/yr	09/30/1976 / 1998
3E / 003	Scrubber D-412	003-03	MAN Product Tank F-412	28,500,000 gal/yr	09/30/1976 / 1998
5E / 005	None	003-05	Waste Maleic Acid Tank M-1410A	1,500,000 gal/yr	09/30/1976 / 1998
6E / 006	None	003-06	Waste Maleic Acid Tank M-1410B	1,500,000 gal/yr	09/30/1976 / 1998

7E / 007	Vent Condenser RFG-414	003-07	Process Water Tank F-414	14,000,000 gal/yr	09/30/1976 / 1998
10E / 010	Scrubber D-600	005-01,02	MAN Truck and Rail Loading	17,750,000 gal/yr	09/30/1976 / 1998
15E / 015	Scrubber D-601	003-08	MAN Product Storage Tank F-601	11,000,000 gal/yr	10/31/2014 / NA
		003-09	MAN Product Storage Tank F-602	11,000,000 gal/yr	09/30/1976 / 1998
None	LDAR	004-01	Pressurized Butane Tank TK-101	31,900 gal	09/30/1976 / 1998
			Pressurized Butane Tank TK-102	31,900 gal	09/30/1976 / 1998
			Pressurized Butane Tank TK-103	44,500 gal	1982 / 1998
None	Full Enclosure ("Dog House")	005-03	Reactors Catalyst Exchanges Fugitive Emissions	Not rated	1975
None	LDAR	006-01	Fuel Gas System Fugitive Emissions	Not rated	03/05/1988 / 1998
None	LDAR	007-01	Process Fugitive Emissions	Not rated	1976 / 1998

¹For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

ATTACHMENT E - Emission Unit Form			
<i>Emission Unit Description</i>			
Emission unit ID number: 005-01,02	Emission unit name: MAN Truck and Rail Loading	List any control devices associated with this emission unit. Scrubber D-600	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Loading of product into truck and railcars			
Manufacturer: Not Applicable	Model number: Not Applicable	Serial number: Not Applicable	
Construction date: 1976	Installation date: 09/30/1976	Modification date(s): 1998	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 17,750,000 gal/yr			
Maximum Hourly Throughput: 2,540 gal/hr	Maximum Annual Throughput: 17,750,000 gal/yr	Maximum Operating Schedule: 8,760 hr/yr	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
Does this emission unit combust fuel? ___ Yes <u>X</u> No		If yes, is it? ___ Indirect Fired ___ Direct Fired	
Maximum design heat input and/or maximum horsepower rating: Not Applicable		Type and Btu/hr rating of burners: Not Applicable	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Not Applicable			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Not Applicable			

Emissions Data		
Criteria Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)	---	0.21
Hazardous Air Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Maleic Anhydride	---	0.21
Regulated Pollutants other than Criteria and HAP	Potential Emissions (After Control)	
	PPH	TPY
None	---	---
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>US EPA AP-42 Equation for Loading Losses.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-09900009-2012-MM02: 5.1.7.; R14-0008: A.10.
2. Operational Limits – R30-09900009-2012-MM02: 5.1.7., 5.1.15., 5.1.9, 5.1.10; R14-0008: A.13., A.14., A.20.
3. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

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For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Emission Limits – R30-09900009-2012-MM02: 5.4.1.c.; R14-0008: B.1.j.
2. Operational Limits – R30-09900009-2012-MM02: 5.4.1.c., 5.4.1.a.; R14-0008: B.1.e.
3. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 001-02	Emission unit name: Maleic Anhydride Reactor D-208	List any control devices associated with this emission unit. Thermal Oxidizer B-800 Abatement Scrubber D-330
---	---	---

Provide a description of the emission unit (type, method of operation, design parameters, etc.): n-butane and air are reacted together in exothermic reaction to form maleic anhydride.

Manufacturer: Nooter Construction	Model number: None	Serial number: 931625
---	------------------------------	---------------------------------

Construction date: 1993	Installation date: 12/30/1993	Modification date(s): 1998
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
35.25 MM lb/yr

Maximum Hourly Throughput: 4,280 lb/hr	Maximum Annual Throughput: 35.25 MM lb/yr	Maximum Operating Schedule: 8,760 hr/yr
--	---	---

Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? ___ Yes ___ <input checked="" type="checkbox"/> No	If yes, is it? ___ Indirect Fired ___ Direct Fired
---	--

Maximum design heat input and/or maximum horsepower rating: Not Applicable	Type and Btu/hr rating of burners: Not Applicable
--	---

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Not Applicable

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Not Applicable			

Emissions Data		
Criteria Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Carbon Monoxide (CO)	111.25	149.5
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM _{2.5})	0	0
Particulate Matter (PM ₁₀)	0	0
Total Particulate Matter (TSP)	0	0
Sulfur Dioxide (SO ₂)	1.37	2.4
Volatile Organic Compounds (VOC)	6.55	17.25
Hazardous Air Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Acrylic Acid	0.29	1.35
Benzene	0.03	0.05
Regulated Pollutants other than Criteria and HAP	Potential Emissions (After Control)	
	PPH	TPY
None	---	---
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Stack Test results (Thermal Oxidizer) from December 2005. VOC and acrylic emission calculations are based on the stack test. Butane, Refinery Fuel Gas and natural gas sulfur analysis.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-09900009-2012-MM02: 4.1., 4.1.7., 4.1.8.; R14-0008: A.2., B.3., B.12.
2. Opacity Limits – R30-09900009-2012-MM02: 4.1.6.; R14-0008: B.12
3. Operational Limits – R30-09900009-2012-MM02: 4.1.5., 5.1.15., 4.1.2., 4.1.3., 4.1.4.; R14-0008: A.2., A.12., A.18.,
4. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.
5. Air Oxidation Unit Processes Program – R30-09900009-2012-MM02: 3.1.13.; R14-0008: B.10.

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For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Emission Limits – R30-09900009-2012-MM02: 4.2.1., 4.2.2., 4.4.1., 4.4.2., 4.2.3., 4.4.2.a., 4.4.3., 4.2.4.; R14-0008: A.3., A.19., B.1., B.2., B.4., B.5., B.7.
2. Opacity Limits – R30-09900009-2012-MM02: 4.5.1.
3. Operational Limits – R30-09900009-2012-MM02: 4.4.1., 4.4.2.; R14-0008: B.1., B.2.
4. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.
5. Air Oxidation Unit Processes Program – R30-09900009-2012-MM02: 3.1.13.; R14-0008: B.10., B.11.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 001-03	Emission unit name: Maleic Anhydride Reactor D-209	List any control devices associated with this emission unit. Thermal Oxidizer B-800 Abatement Scrubber D-330
---	---	---

Provide a description of the emission unit (type, method of operation, design parameters, etc.): n-butane and air are reacted together in exothermic reaction to form maleic anhydride.

Manufacturer: Nooter Construction	Model number: Reactor 150-144	Serial number: G-2251
---	---	---------------------------------

Construction date: 11/20/1969	Installation date: 01/05/1988	Modification date(s): 1998
---	---	--------------------------------------

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
35.25 MM lb/yr

Maximum Hourly Throughput: 4,280 lb/hr	Maximum Annual Throughput: 35.25 MM lb/yr	Maximum Operating Schedule: 8,760 hr/yr
--	---	---

Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? ___ Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___ Direct Fired
--	---

Maximum design heat input and/or maximum horsepower rating: Not Applicable	Type and Btu/hr rating of burners: Not Applicable
--	---

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Not Applicable

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Not Applicable			

Emissions Data		
Criteria Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Carbon Monoxide (CO)	111.25	149.5
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM _{2.5})	0	0
Particulate Matter (PM ₁₀)	0	0
Total Particulate Matter (TSP)	0	0
Sulfur Dioxide (SO ₂)	1.37	2.4
Volatile Organic Compounds (VOC)	6.55	17.25
Hazardous Air Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Acrylic Acid	0.29	1.35
Benzene	0.03	0.05
Regulated Pollutants other than Criteria and HAP	Potential Emissions (After Control)	
	PPH	TPY
None	---	---
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Stack Test results (Thermal Oxidizer) from December 2005. VOC and acrylic emission calculations are based on the stack test. Butane, Refinery Fuel Gas and natural gas sulfur analysis.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-09900009-2012-MM02: 4.1., 4.1.7., 4.1.8.; R14-0008: A.2., B.3., B.12.
2. Opacity Limits – R30-09900009-2012-MM02: 4.1.6.; R14-0008: B.12
3. Operational Limits – R30-09900009-2012-MM02: 4.1.5., 5.1.15., 4.1.2., 4.1.3., 4.1.4.; R14-0008: A.2., A.12., A.18.,
4. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.
5. Air Oxidation Unit Processes Program – R30-09900009-2012-MM02: 3.1.13.; R14-0008: B.10

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For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Emission Limits – R30-09900009-2012-MM02: 4.2.1., 4.2.2., 4.4.1., 4.4.2., 4.2.3., 4.4.2.a., 4.4.3., 4.2.4.; R14-0008: A.3., A.19., B.1., B.2., B.4., B.5., B.7.
2. Opacity Limits – R30-09900009-2012-MM02: 4.5.1.
3. Operational Limits – R30-09900009-2012-MM02: 4.4.1., 4.4.2.; R14-0008: B.1., B.2.
4. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.
5. Air Oxidation Unit Processes Program – R30-09900009-2012-MM02: 3.1.13.; R14-0008: B.10., B.11.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 001-04	Emission unit name: Maleic Anhydride Reactor D-210	List any control devices associated with this emission unit. Thermal Oxidizer B-800 Abatement Scrubber D-330
---	---	---

Provide a description of the emission unit (type, method of operation, design parameters, etc.): n-butane and air are reacted together in exothermic reaction to form maleic anhydride.

Manufacturer: DWE	Model number: None	Serial number: 63 7957 10
-----------------------------	------------------------------	-------------------------------------

Construction date: 10/27/1975	Installation date: 09/30/1976	Modification date(s): 1998
---	---	--------------------------------------

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 35.25 MM lb/year

Maximum Hourly Throughput: 4,280 lb/hr	Maximum Annual Throughput: 35.25 MM lb/yr	Maximum Operating Schedule: 8,760 hr/yr
--	---	---

Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? ___ Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___ Direct Fired
--	---

Maximum design heat input and/or maximum horsepower rating: Not Applicable	Type and Btu/hr rating of burners: Not Applicable
--	---

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
 Not Applicable

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Not Applicable			

Emissions Data		
Criteria Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Carbon Monoxide (CO)	111.25	149.5
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM _{2.5})	0	0
Particulate Matter (PM ₁₀)	0	0
Total Particulate Matter (TSP)	0	0
Sulfur Dioxide (SO ₂)	1.37	2.4
Volatile Organic Compounds (VOC)	6.55	17.25
Hazardous Air Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Acrylic Acid	0.29	1.35
Benzene	0.03	0.05
Regulated Pollutants other than Criteria and HAP	Potential Emissions (After Control)	
	PPH	TPY
None	---	---
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Stack Test results (Thermal Oxidizer) from December 2005. VOC and acrylic emission calculations are based on the stack test. Butane, Refinery Fuel Gas and natural gas sulfur analysis.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-09900009-2012-MM02: 4.1., 4.1.7., 4.1.8.; R14-0008: A.2., B.3., B.12.
2. Opacity Limits – R30-09900009-2012-MM02: 4.1.6.; R14-0008: B.12
3. Operational Limits – R30-09900009-2012-MM02: 4.1.5., 5.1.15., 4.1.2., 4.1.3., 4.1.4.; R14-0008: A.2., A.12., A.18.,
4. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.
5. Air Oxidation Unit Processes Program – R30-09900009-2012-MM02: 3.1.13.; R14-0008: B.10.

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For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Emission Limits – R30-09900009-2012-MM02: 4.2.1., 4.2.2., 4.4.1., 4.4.2., 4.2.3., 4.4.2.a., 4.4.3., 4.2.4.; R14-0008: A.3., A.19., B.1., B.2., B.4., B.5., B.7.
2. Opacity Limits – R30-09900009-2012-MM02: 4.5.1.
3. Operational Limits – R30-09900009-2012-MM02: 4.4.1., 4.4.2.; R14-0008: B.1., B.2.
4. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.
5. Air Oxidation Unit Processes Program – R30-09900009-2012-MM02: 3.1.13.; R14-0008: B.10., B.11.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 001-05	Emission unit name: Maleic Anhydride Reactor D-211	List any control devices associated with this emission unit. Thermal Oxidizer B-800 Abatement Scrubber D-330
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Provide a description of the emission unit (type, method of operation, design parameters, etc.): n-butane and air are reacted together in exothermic reaction to form maleic anhydride.

Manufacturer: DWE	Model number:	Serial number: 69 980/ 100
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Construction date: 04/20/1993	Installation date: 1993	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 35.25 MM lb/yr

Maximum Hourly Throughput: 4,280 lb/hr	Maximum Annual Throughput: 35.25 MM lb/yr	Maximum Operating Schedule: 8,760 hr/yr
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? ___ Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___ Direct Fired
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Maximum design heat input and/or maximum horsepower rating: Not Applicable	Type and Btu/hr rating of burners: Not Applicable
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
 Not Applicable

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Not Applicable			

Emissions Data		
Criteria Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Carbon Monoxide (CO)	111.25	149.5
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM _{2.5})	0	0
Particulate Matter (PM ₁₀)	0	0
Total Particulate Matter (TSP)	0	0
Sulfur Dioxide (SO ₂)	1.37	2.4
Volatile Organic Compounds (VOC)	6.55	17.25
Hazardous Air Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Acrylic Acid	0.29	1.35
Benzene	0.03	0.05
Regulated Pollutants other than Criteria and HAP	Potential Emissions (After Control)	
	PPH	TPY
None	---	---
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Stack Test results (Thermal Oxidizer) from December 2005. VOC and acrylic emission calculations are based on the stack test. Butane, Refinery Fuel Gas and natural gas sulfur analysis.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-09900009-2012-MM02: 4.1., 4.1.7., 4.1.8.; R14-0008: A.2., B.3., B.12.
2. Opacity Limits – R30-09900009-2012-MM02: 4.1.6.; R14-0008: B.12
3. Operational Limits – R30-09900009-2012-MM02: 4.1.5., 5.1.15., 4.1.2., 4.1.3., 4.1.4.; R14-0008: A.2., A.12., A.18.,
4. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.
5. Air Oxidation Unit Processes Program – R30-09900009-2012-MM02: 3.1.13.; R14-0008: B.10.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Emission Limits – R30-09900009-2012-MM02: 4.2.1., 4.2.2., 4.4.1., 4.4.2., 4.2.3., 4.4.2.a., 4.4.3., 4.2.4.; R14-0008: A.3., A.19., B.1., B.2., B.4., B.5., B.7.
2. Opacity Limits – R30-09900009-2012-MM02: 4.5.1.
3. Operational Limits – R30-09900009-2012-MM02: 4.4.1., 4.4.2.; R14-0008: B.1., B.2.
4. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.
5. Air Oxidation Unit Processes Program – R30-09900009-2012-MM02: 3.1.13.; R14-0008: B.10., B.11.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form			
<i>Emission Unit Description</i>			
Emission unit ID number: 002-01	Emission unit name: Batch Maleic Anhydride Refiner D-410	List any control devices associated with this emission unit. Thermal Oxidizer B-800 Abatement Scrubber D-330	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): 			
Manufacturer: Nooter Construction	Model number: None	Serial number: M8792	
Construction date: 10/15/1975	Installation date: 09/30/1976	Modification date(s): 1998	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 141 MM lb/yr			
Maximum Hourly Throughput: 17,125 lb/hr	Maximum Annual Throughput: 141 MM lb/yr	Maximum Operating Schedule: 8,760 hr/yr	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
Does this emission unit combust fuel? ___ Yes <u>X</u> No		If yes, is it? ___ Indirect Fired ___ Direct Fired	
Maximum design heat input and/or maximum horsepower rating: Not Applicable		Type and Btu/hr rating of burners: Not Applicable	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Not Applicable			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Not Applicable			

Emissions Data **NOTE:** Other than Xylene, emissions included with the 4 reactors.

Criteria Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Xylene	0.36	5.59
Regulated Pollutants other than Criteria and HAP	Potential Emissions (After Control)	
	PPH	TPY
None	---	---

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Xylene emissions are based on a material balance.

All other air emissions included with the 4 reactors D-208, D-209, D-210 and D-211.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-09900009-2012-MM02: 4.1., 4.1.7., 4.1.8.; R14-0008: A.2., B.3., B.12.
2. Opacity Limits – R30-09900009-2012-MM02: 4.1.6.; 45CSR6-4.3; R14-0008, B.12
3. Operational Limits – R30-09900009-2012-MM02: 4.1.5., 5.1.15., 4.1.2., 4.1.3., 4.1.4.; R14-0008: A.2., A.12., A.18., A.20.
4. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.
5. Air Oxidation Unit Processes Program – R30-09900009-2012-MM02: 3.1.13.; R14-0008: B.10., B.11.

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For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Emission Limits – R30-09900009-2012-MM02: 4.2.1., 4.2.2., 4.4.1., 4.4.2., 4.2.3., 4.4.2.a., 4.4.3., 4.2.4.; R14-0008: A.3., A.19., B.1., B.2., B.4., B.5., B.7.
2. Opacity Limits – R30-09900009-2012-MM02: 4.5.1.
3. Operational Limits – R30-09900009-2012-MM02: 4.4.1., 4.4.2.; R14-0008: B.1., B.2.
4. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.
5. Air Oxidation Unit Processes Program – R30-09900009-2012-MM02: 3.1.13.; R14-0008: B.10.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 001-06	Emission unit name: Maleic Acid Scrubber D-320	List any control devices associated with this emission unit. Thermal Oxidizer B-800 Abatement Scrubber D-330
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 12 tray scrubber. The scrubber operates in the range of 124 to 140F and 1.5 to 3.5 psig.

Manufacturer: Nooter Construction	Model number: NA	Serial number: 500200
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Construction date: 2001	Installation date: 1975	Modification date(s): 2001
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 141 MM lb/yr

Maximum Hourly Throughput: 17,125 lb/hr	Maximum Annual Throughput: 141 MM lb/yr	Maximum Operating Schedule: 8,760 hr/yr
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? ___ Yes ___ <input checked="" type="checkbox"/> No	If yes, is it? ___ Indirect Fired ___ Direct Fired
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Maximum design heat input and/or maximum horsepower rating: Not Applicable	Type and Btu/hr rating of burners: Not Applicable
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
 Not Applicable

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Not Applicable			

Emissions Data <i>NOTE: Emissions included with the 4 reactors.</i>		
Criteria Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions (After Control)	
	PPH	TPY
None	---	---
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Emissions included with the 4 reactors D-208, D-209, D-210 and D-211.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-09900009-2012-MM02: 4.1., 4.1.7., 4.1.8.; R14-0008: A.2., B.3., B.12.
2. Opacity Limits – R30-09900009-2012-MM02: 4.1.6.; 45CSR6-4.3; R14-0008, B.12
3. Operational Limits – R30-09900009-2012-MM02: 4.1.5., 5.1.15., 4.1.2., 4.1.3., 4.1.4.; R14-0008: A.2., A.12., A.18., A.20.
4. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.
5. Air Oxidation Unit Processes Program – R30-09900009-2012-MM02: 3.1.13.; R14-0008: B.10., B.11.

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For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Emission Limits – R30-09900009-2012-MM02: 4.2.1., 4.2.2., 4.4.1., 4.4.2., 4.2.3., 4.4.2.a., 4.4.3., 4.2.4.; R14-0008: A.3., A.19., B.1., B.2., B.4., B.5., B.7.
2. Opacity Limits – R30-09900009-2012-MM02: 4.5.1.
3. Operational Limits – R30-09900009-2012-MM02: 4.4.1., 4.4.2.; R14-0008: B.1., B.2.
4. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.
5. Air Oxidation Unit Processes Program – R30-09900009-2012-MM02: 3.1.13.; R14-0008: B.10.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form			
<i>Emission Unit Description</i>			
Emission unit ID number: 003-04	Emission unit name: Crude MAN Tank F-330	List any control devices associated with this emission unit. Scrubber D-400	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Storage Tank			
Manufacturer: Nooter	Model number: None	Serial number: 701494	
Construction date: 1994	Installation date: 10/02/1994	Modification date(s): 1998	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 51,700 gal			
Maximum Hourly Throughput: 1,200 gal/hr	Maximum Annual Throughput: 9,000,000 gal/yr	Maximum Operating Schedule: 8,760 hr/yr	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
Does this emission unit combust fuel? ___ Yes <u>X</u> No		If yes, is it? ___ Indirect Fired ___ Direct Fired	
Maximum design heat input and/or maximum horsepower rating: Not Applicable		Type and Btu/hr rating of burners: Not Applicable	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Not Applicable			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Not Applicable			

Emissions Data		
Criteria Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)	0.52	0.11
Hazardous Air Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Maleic Anhydride	0.52	0.11
Regulated Pollutants other than Criteria and HAP	Potential Emissions (After Control)	
	PPH	TPY
None	---	---
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>TANKS 4.0</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-09900009-2012-MM02: 5.1.1.; R14-0008: A.4.
2. Operational Limits – R30-09900009-2012-MM02: 5.1.11., 5.1.15., 5.1.9.; R14-0008: A.13., A.15., A.20.
3. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Emission Limits – R30-09900009-2012-MM02: 5.1.1.; R14-0008: A.4., B.1.j
2. Operational Limits – R30-09900009-2012-MM02: 5.4.1.c, 5.4.1.a.; R14-0008: B.1.e.
3. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form			
<i>Emission Unit Description</i>			
Emission unit ID number: 003-01	Emission unit name: Forecut Tank F-400	List any control devices associated with this emission unit. Scrubber D-400	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): 			
Manufacturer: Construction Tank Services	Model number:	Serial number: CT850090	
Construction date: 2007	Installation date: 01/10/2008	Modification date(s): N/A	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 15,231 gal			
Maximum Hourly Throughput: 3,040 gal/hr	Maximum Annual Throughput: 2,500,000 gal/yr	Maximum Operating Schedule: 8,760 hr/yr	
Fuel Usage Data (fill out all applicable fields)			
Does this emission unit combust fuel? ___ Yes <u>X</u> No		If yes, is it? ___ Indirect Fired ___ Direct Fired	
Maximum design heat input and/or maximum horsepower rating: Not Applicable		Type and Btu/hr rating of burners: Not Applicable	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Not Applicable			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Not Applicable			

Emissions Data		
Criteria Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)	0.60	0.09
Hazardous Air Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Xylene	0.60	0.09
Regulated Pollutants other than Criteria and HAP	Potential Emissions (After Control)	
	PPH	TPY
None	---	---
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>TANKS 4.0</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-09900009-2012-MM02: 5.1.1.; R14-0008: A.4.
2. Operational Limits – R30-09900009-2012-MM02: 5.1.11., 5.1.15., 5.1.9.; R14-0008: A.13., A.15., A.20.
3. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Emission Limits – R30-09900009-2012-MM02: 5.1.1.; R14-0008: A.4., B.1.j
2. Operational Limits – R30-09900009-2012-MM02: 5.4.1.c, 5.4.1.a.; R14-0008: B.1.e.
3. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form			
<i>Emission Unit Description</i>			
Emission unit ID number: 003-03	Emission unit name: MAN Product Tank F-412	List any control devices associated with this emission unit. Scrubber D-412	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Field Fabricated Storage Tank			
Manufacturer: Nooter	Model number: None	Serial number: None	
Construction date: 1976	Installation date: 09/30/1976	Modification date(s): 1998	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 51,700 gal			
Maximum Hourly Throughput: 20,767 gal/hr	Maximum Annual Throughput: 28,500,000 gal/yr	Maximum Operating Schedule: 8,760 hr/yr	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
Does this emission unit combust fuel? ___ Yes <u>X</u> No		If yes, is it? ___ Indirect Fired ___ Direct Fired	
Maximum design heat input and/or maximum horsepower rating: Not Applicable		Type and Btu/hr rating of burners: Not Applicable	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Not Applicable			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Not Applicable			

Emissions Data		
Criteria Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM _{2.5})	0	0
Particulate Matter (PM ₁₀)	0	0
Total Particulate Matter (TSP)	0	0
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	---	0.05
Hazardous Air Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Maleic Anhydride	---	0.05
Regulated Pollutants other than Criteria and HAP	Potential Emissions (After Control)	
	PPH	TPY
None	---	---
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>TANKS 4.0</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-09900009-2012-MM02: 5.1.3.; R14-0008: A.6.
2. Operational Limits – R30-09900009-2012-MM02: 5.1.12., 5.1.15., 5.1.9.; R14-0008: A.13., A.16., A.20.
3. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Emission Limits – R30-09900009-2012-MM02: 4.2.2.a.1.; R14-0008: B.1.j.
2. Operational Limits – R30-09900009-2012-MM02: 5.4.1.c, 5.4.1.a.; R14-0008: B.1.e., B.1.j
3. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

Emissions Data		
Criteria Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM _{2.5})	0	0
Particulate Matter (PM ₁₀)	0	0
Total Particulate Matter (TSP)	0	0
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	---	0.05
Hazardous Air Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Maleic Anhydride	---	0.05
Regulated Pollutants other than Criteria and HAP	Potential Emissions (After Control)	
	PPH	TPY
None	---	---
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>TANKS 4.0</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-09900009-2012-MM02: 5.1.3.; R14-0008: A.6.
2. Operational Limits – R30-09900009-2012-MM02: 5.1.12., 5.1.15., 5.1.9.; R14-0008: A.13., A.16., A.20.
3. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Emission Limits – R30-09900009-2012-MM02: 4.2.2.a.1.; R14-0008: B.1.j.
2. Operational Limits – R30-09900009-2012-MM02: 5.4.1.c, 5.4.1.a.; R14-0008: B.1.e., B.1.j
3. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form			
<i>Emission Unit Description</i>			
Emission unit ID number: 003-02	Emission unit name: Xylene Cut Tank F-413	List any control devices associated with this emission unit. None	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Storage Tank			
Manufacturer: Putnam	Model number: None	Serial number: F-1837	
Construction date: 1976	Installation date: 09/30/1976	Modification date(s): 1998	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 16,900 gal			
Maximum Hourly Throughput: 6,412 gal/hr	Maximum Annual Throughput: 4,400,000 gal/yr	Maximum Operating Schedule: 8,760 hr/yr	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
Does this emission unit combust fuel? ___ Yes <u>X</u> No		If yes, is it? ___ Indirect Fired ___ Direct Fired	
Maximum design heat input and/or maximum horsepower rating: Not Applicable		Type and Btu/hr rating of burners: Not Applicable	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Not Applicable			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Not Applicable			

Emissions Data		
Criteria Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)	15.2	1.48
Hazardous Air Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Xylene	15.2	1.48
Regulated Pollutants other than Criteria and HAP	Potential Emissions (After Control)	
	PPH	TPY
None	---	---
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>TANKS 4.0</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-09900009-2012-MM02: 5.1.2.; R14-0008: A.5.
2. Operational Limits – R30-09900009-2012-MM02: 5.1.9.; R14-0008: A.13.
3. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

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For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Emission Limits – R30-09900009-2012-MM02: 5.4.1.c.; R14-0008: B.1.j.
2. Operational Limits – R30-09900009-2012-MM02: 5.4.1.c.
3. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form			
<i>Emission Unit Description</i>			
Emission unit ID number: 003-07	Emission unit name: Process Water Tank F-414	List any control devices associated with this emission unit. Vent Condenser RFG-414	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Field Fabricated storage tank			
Manufacturer: Nooter	Model number: None	Serial number: None	
Construction date: 1976	Installation date: 09/30/1976	Modification date(s): 1998	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 62,500 gal			
Maximum Hourly Throughput: 4,250 gal/hr	Maximum Annual Throughput: 14,000,000 gal/yr	Maximum Operating Schedule: 8,760 hr/yr	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
Does this emission unit combust fuel? ___ Yes <u>X</u> No		If yes, is it? ___ Indirect Fired ___ Direct Fired	
Maximum design heat input and/or maximum horsepower rating: Not Applicable		Type and Btu/hr rating of burners: Not Applicable	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Not Applicable			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Not Applicable			

Emissions Data		
Criteria Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)	---	0.2
Hazardous Air Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Xylene	---	0.2
Regulated Pollutants other than Criteria and HAP	Potential Emissions (After Control)	
	PPH	TPY
None	---	---
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>TANKS 4.0</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-09900009-2012-MM02: 5.1.6.; R14-0008: A.9.
2. Operational Limits – R30-09900009-2012-MM02: 5.1.14., 5.1.15., 5.1.9.; R14-0008: A.13., A.17., A.20.
3. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

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For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Emission Limits – R30-09900009-2012-MM02: 5.4.1.c.; R14-0008: B.1.j.
2. Operational Limits – R30-09900009-2012-MM02: 5.4.1.a.; R14-0008: B.1.e.
3. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form			
<i>Emission Unit Description</i>			
Emission unit ID number: 003-08	Emission unit name: MAN Product Storage Tank F-601	List any control devices associated with this emission unit. Scrubber D-601	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Field Fabricated storage tank			
Manufacturer: Pittsburg Tank	Model number: None	Serial number: 6906	
Construction date: 10/31/2014	Installation date: 10/31/2014	Modification date(s): NA	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 156,100 gal			
Maximum Hourly Throughput: 20,100 gal/hr	Maximum Annual Throughput: 11,000,000 gal/yr	Maximum Operating Schedule: 8,760 hr/yr	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
Does this emission unit combust fuel? ___ Yes ___ <input checked="" type="checkbox"/> No		If yes, is it? ___ Indirect Fired ___ Direct Fired	
Maximum design heat input and/or maximum horsepower rating: Not Applicable		Type and Btu/hr rating of burners: Not Applicable	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Not Applicable			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Not Applicable			

Emissions Data		
Criteria Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		0.47
Hazardous Air Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Maleic Anhydride		0.47
Regulated Pollutants other than Criteria and HAP	Potential Emissions (After Control)	
	PPH	TPY
None	---	---
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>TANKS 4.0</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-09900009-2012-MM02: 5.1.8., 5.1.13.; R14-0008: A.11.
2. Operational Limits – R30-09900009-2012-MM02: 5.1.12., 5.1.15., 5.1.9.; R14-0008: A.13., A.16., A.20.
3. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

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For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Emission Limits – R30-09900009-2012-MM02: 5.4.1.c.; R14-0008: B.1.j.
2. Operational Limits – R30-09900009-2012-MM02: 5.4.1.c, 5.4.1.a.; R14-0008: B.1.e., B.1.j
3. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form			
<i>Emission Unit Description</i>			
Emission unit ID number: 003-09	Emission unit name: MAN Product Storage Tank F-602	List any control devices associated with this emission unit. Scrubber D-601	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Field Fabricated Storage Tank			
Manufacturer: Nooter	Model number: None	Serial number: None	
Construction date: 1976	Installation date: 09/30/1976	Modification date(s): 1998	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 156,100 gal			
Maximum Hourly Throughput: 20,100 gal/hr	Maximum Annual Throughput: 11,000,000 gal/yr	Maximum Operating Schedule: 8,760 hr/yr	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
Does this emission unit combust fuel? ___ Yes ___ <input checked="" type="checkbox"/> No		If yes, is it? ___ Indirect Fired ___ Direct Fired	
Maximum design heat input and/or maximum horsepower rating: Not Applicable		Type and Btu/hr rating of burners: Not Applicable	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Not Applicable			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Not Applicable			

Emissions Data		
Criteria Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		0.47
Hazardous Air Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Maleic Anhydride		0.47
Regulated Pollutants other than Criteria and HAP	Potential Emissions (After Control)	
	PPH	TPY
None	---	---
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>TANKS 4.0</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-09900009-2012-MM02: 5.1.8., 5.1.13.; R14-0008: A.11.
2. Operational Limits – R30-09900009-2012-MM02: 5.1.12., 5.1.15., 5.1.9.; R14-0008: A.13., A.16., A.20.
3. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

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For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Emission Limits – R30-09900009-2012-MM02: 5.4.1.c.; R14-0008: B.1.j.
2. Operational Limits – R30-09900009-2012-MM02: 5.4.1.c, 5.4.1.a.; R14-0008: B.1.e., B.1.j
3. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form			
<i>Emission Unit Description</i>			
Emission unit ID number: 003-05	Emission unit name: Waste Maleic Acid Tank M-1410A	List any control devices associated with this emission unit. None	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Vertical Tank			
Manufacturer: Putnam Fabricating	Model number: None	Serial number: None	
Construction date: 1976	Installation date: 09/30/1976	Modification date(s): 1998	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 18,000 gal			
Maximum Hourly Throughput: 8,200 gal/hr	Maximum Annual Throughput: 1,500,000 gal/yr	Maximum Operating Schedule: 8,760 hr/yr	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
Does this emission unit combust fuel? ___ Yes <u>X</u> No		If yes, is it? ___ Indirect Fired ___ Direct Fired	
Maximum design heat input and/or maximum horsepower rating: Not Applicable		Type and Btu/hr rating of burners: Not Applicable	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Not Applicable			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Not Applicable			

Emissions Data		
Criteria Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)	---	1.0
Hazardous Air Pollutants	Potential Emissions (After Control)	
	PPH	TPY
None		
Regulated Pollutants other than Criteria and HAP	Potential Emissions (After Control)	
	PPH	TPY
None	---	---
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>TANKS 4.0</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-09900009-2012-MM02: 5.1.4.; R14-0008: A.7.
2. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

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For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Emission Limits – R30-09900009-2012-MM02: 5.4.1.c.; R14-0008: B.1.j.
2. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form			
<i>Emission Unit Description</i>			
Emission unit ID number: 003-06	Emission unit name: Waste Maleic Acid Tank M-1410B	List any control devices associated with this emission unit. None	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Vertical Tank			
Manufacturer: Putnam Fabricating	Model number: None	Serial number: None	
Construction date: 1976	Installation date: 09/30/1976	Modification date(s): 1998	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 18,000 gal			
Maximum Hourly Throughput: 8,200 gal/hr	Maximum Annual Throughput: 1,500,000 gal/yr	Maximum Operating Schedule: 8,760 hr/yr	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
Does this emission unit combust fuel? ___ Yes <u>X</u> No		If yes, is it? ___ Indirect Fired ___ Direct Fired	
Maximum design heat input and/or maximum horsepower rating: Not Applicable		Type and Btu/hr rating of burners: Not Applicable	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Not Applicable			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Not Applicable			

Emissions Data		
Criteria Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)	---	1.0
Hazardous Air Pollutants	Potential Emissions (After Control)	
	PPH	TPY
None		
Regulated Pollutants other than Criteria and HAP	Potential Emissions (After Control)	
	PPH	TPY
None	---	---

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

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Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-09900009-2012-MM02: 5.1.4.; R14-0008: A.7.
2. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

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For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Emission Limits – R30-09900009-2012-MM02: 5.4.1.c.; R14-0008: B.1.j.
2. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form			
<i>Emission Unit Description</i>			
Emission unit ID number: 004-01	Emission unit name: Pressurized Butane Tank TK-101	List any control devices associated with this emission unit. None (LDAR)	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Horizontal Pressurized tank			
Manufacturer: Buffalo Tank	Model number: None	Serial number: BSCo. 780	
Construction date: 1947	Installation date: 09/30/1976	Modification date(s): 1998	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 31,900 gal			
Maximum Hourly Throughput: Not rated	Maximum Annual Throughput: Not rated	Maximum Operating Schedule: 8,760 hr/yr	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
Does this emission unit combust fuel? ___ Yes ___ <input checked="" type="checkbox"/> No		If yes, is it? ___ Indirect Fired ___ Direct Fired	
Maximum design heat input and/or maximum horsepower rating: Not Applicable		Type and Btu/hr rating of burners: Not Applicable	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Not Applicable			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Not Applicable			

Emissions Data – No Point Source Emissions		
Criteria Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions (After Control)	
	PPH	TPY
None		
Regulated Pollutants other than Criteria and HAP	Potential Emissions (After Control)	
	PPH	TPY
None	---	---
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Fugitive Emissions Only determined by LDAR.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

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For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form			
<i>Emission Unit Description</i>			
Emission unit ID number: 004-01	Emission unit name: Pressurized Butane Tank TK-102	List any control devices associated with this emission unit. None (LDAR)	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Horizontal Pressurized Tank			
Manufacturer: Buffalo Tank	Model number: None	Serial number: BSCo. 952	
Construction date: 1948	Installation date: 09/30/1976	Modification date(s): 1998	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 31,900 gal			
Maximum Hourly Throughput: Not rated	Maximum Annual Throughput: Not rated	Maximum Operating Schedule: 8,760 hr/yr	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
Does this emission unit combust fuel? ___ Yes ___ <input checked="" type="checkbox"/> No		If yes, is it? ___ Indirect Fired ___ Direct Fired	
Maximum design heat input and/or maximum horsepower rating: Not Applicable		Type and Btu/hr rating of burners: Not Applicable	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Not Applicable			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Not Applicable			

Emissions Data – No Point source emissions		
Criteria Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions (After Control)	
	PPH	TPY
None	---	---
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Fugitive Emissions only – determined by LDAR.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form			
<i>Emission Unit Description</i>			
Emission unit ID number: 004-01	Emission unit name: Pressurized Butane Tank TK-103	List any control devices associated with this emission unit. None (LDAR)	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Horizontal Pressurized Tank			
Manufacturer: Buffalo Tank	Model number: None	Serial number: 191887-01	
Construction date: 1982	Installation date: 1982	Modification date(s): 1998	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 44,500 gal			
Maximum Hourly Throughput: Not rated	Maximum Annual Throughput: Not rated	Maximum Operating Schedule: 8,760 hr/yr	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
Does this emission unit combust fuel? ___ Yes ___ <input checked="" type="checkbox"/> No		If yes, is it? ___ Indirect Fired ___ Direct Fired	
Maximum design heat input and/or maximum horsepower rating: Not Applicable		Type and Btu/hr rating of burners: Not Applicable	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Not Applicable			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Not Applicable			

Emissions Data – No Point Source Emissions		
Criteria Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions (After Control)	
	PPH	TPY
None		
Regulated Pollutants other than Criteria and HAP	Potential Emissions (After Control)	
	PPH	TPY
None	---	---
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Fugitive Emissions Only determined by LDAR.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 0001	Emission unit name: Thermal Oxidizer B-800	List any control devices associated with this emission unit. None
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Combustion by-products from thermal incineration control device.

Manufacturer: John Zink	Model number: NA	Serial number: TG-S55681
Construction date: 1988	Installation date: 1988	Modification date(s): 1993

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 30 MMBTU/hr

Maximum Hourly Throughput: 130,000 dscf/hr	Maximum Annual Throughput: 1,140 MM dscf/yr	Maximum Operating Schedule: 8,760 hr/yr
--	---	---

Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct
Maximum design heat input and/or maximum horsepower rating: 30 MMBTU/hr	Type and Btu/hr rating of burners: 2 burners 15 MMBTU/hr per burner

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
 Refinery fuel gas and natural gas

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Refinery Fuel Gas	60 ppm H ₂ S	NA	1,015 BTU/scf
Natural Gas	1,000 grains/10 ⁶ scf	NA	1,020 BTU/scf
Butane	58 ppm S	NA	1,000 BTU/scf

Emissions Data <u>NOTE: Emissions of CO, SO2, and VOC included in the reactor emissions.</u>		
Criteria Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Carbon Monoxide (CO)	445.0	598.0
Nitrogen Oxides (NO _x)	3.0	13.2
Lead (Pb)	0.0	0.0
Particulate Matter (PM _{2.5})	0.22	0.9
Particulate Matter (PM ₁₀)	0.22	0.9
Total Particulate Matter (TSP)	0.22	0.9
Sulfur Dioxide (SO ₂)	5.48	9.5
Volatile Organic Compounds (VOC)	26.2	69.0
Hazardous Air Pollutants	Potential Emissions (After Control)	
	PPH	TPY
Acrylic Acid	---	5.41
Benzene	0.12	0.22
Xylene	---	5.59
Regulated Pollutants other than Criteria and HAP	Potential Emissions (After Control)	
	PPH	TPY
None	---	---
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Stack Test results from December 2005.</p> <p>Xylene emissions are based on a material balance.</p> <p>VOC and acrylic emission calculations are based on the stack test.</p> <p>AP-42 Natural Gas combustion emission factors.</p> <p>Butane, Refinery Fuel Gas and Natural gas sulfur analysis.</p> <p>CO, SO2, VOC emissions included with Reactors D-208, D-209, D-210 and D-211 emissions.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-09900009-2012-MM02: 4.1., 4.1.7., 4.1.8.; R14-0008: A.2., B.3., B.12.
2. Opacity Limits – R30-09900009-2012-MM02: 4.1.6.; 45CSR6-4.3, 45CSR14-0008, B.12
3. Operational Limits – R30-09900009-2012-MM02: 4.1.5., 4.1.2., 4.1.3., 4.1.4.; R14-0008: A.2., A.12., A.18.
4. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.
5. Air Oxidation Unit Processes Program – R30-09900009-2012-MM02: 3.1.13.; R14-0008: B.10.

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For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Emission Limits – R30-09900009-2012-MM02: 4.2.1., 4.2.2., 4.4.1., 4.4.2., 4.2.3., 4.4.2.a., 4.4.3., 4.2.4.; R14-0008K: A.3., A.19., B.1., B.2., B.4., B.5., B.6, B.7.
2. Opacity Limits – R30-09900009-2012-MM02: 4.5.1.
3. Operational Limits – R30-09900009-2012-MM02: 4.4.1., 4.4.2.; R14-0008: B.1., B.2., B.7
4. Equipment Leak Program – R30-09900009-2012-MM02: 3.1.12.; R14-0008: B.9., B.11.
5. Air Oxidation Unit Processes Program – R30-09900009-2012-MM02: 3.1.13.; R14-0008: B.10.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: 0005 / Abatement Wet Scrubber D-330	List all emission units associated with this control device. Maleic Anhydride Reactor D-208; Maleic Anhydride Reactor D-209; Maleic Anhydride Reactor D-210; Maleic Anhydride Reactor D-211; Maleic Acid Scrubber D-320; Batch Maleic Anhydride Refiner D-410	
Manufacturer: Putnam Fabricating	Model number: NA	Installation date: 1976

Type of Air Pollution Control Device:

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input checked="" type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator		<input type="checkbox"/> Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
VOC	100	10
Maleic Anhydride	100	90

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

This scrubber only operates when the thermal oxidizer is down. It is limited by the Title V permit (sec. 7.3.) and the R14-0008K permit (sec. A.2.) to 400 hours of operation a year.

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.** See Attachment H for justification.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

This scrubber is limited to 400 hours of annual operation, and only operates when the thermal oxidizer is down.

There is a local flow meter for scrubber water flow monitoring.

ATTACHMENT G - Air Pollution Control Device Form																				
Control device ID number: 0006 / Refrigerated Vent Condenser RFG-414	List all emission units associated with this control device. Process Water Tank F-414																			
Manufacturer: Alpha Environmental	Model number: PCAH-7.5-460	Installation date: 1997																		
Type of Air Pollution Control Device:																				
<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;"><input type="checkbox"/> Baghouse/Fabric Filter</td> <td style="width: 33%;"><input type="checkbox"/> Venturi Scrubber</td> <td style="width: 33%;"><input type="checkbox"/> Multiclone</td> </tr> <tr> <td><input type="checkbox"/> Carbon Bed Adsorber</td> <td><input type="checkbox"/> Packed Tower Scrubber</td> <td><input type="checkbox"/> Single Cyclone</td> </tr> <tr> <td><input type="checkbox"/> Carbon Drum(s)</td> <td><input type="checkbox"/> Other Wet Scrubber</td> <td><input type="checkbox"/> Cyclone Bank</td> </tr> <tr> <td><input type="checkbox"/> Catalytic Incinerator</td> <td><input checked="" type="checkbox"/> Condenser</td> <td><input type="checkbox"/> Settling Chamber</td> </tr> <tr> <td><input type="checkbox"/> Thermal Incinerator</td> <td><input type="checkbox"/> Flare</td> <td><input type="checkbox"/> Other (describe) _____</td> </tr> <tr> <td><input type="checkbox"/> Wet Plate Electrostatic Precipitator</td> <td colspan="2"><input type="checkbox"/> Dry Plate Electrostatic Precipitator</td> </tr> </table>			<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone	<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone	<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank	<input type="checkbox"/> Catalytic Incinerator	<input checked="" type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber	<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____	<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	
<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone																		
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone																		
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank																		
<input type="checkbox"/> Catalytic Incinerator	<input checked="" type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber																		
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____																		
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator																			
List the pollutants for which this device is intended to control and the capture and control efficiencies.																				
Pollutant	Capture Efficiency	Control Efficiency																		
VOC	100	96																		
Xylene	100	96																		
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.). 48 M BTU/hr																				
Is this device subject to the CAM requirements of 40 C.F.R. 64? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																				
If Yes, Complete ATTACHMENT H If No, Provide justification. See Attachment H for justification.																				
Describe the parameters monitored and/or methods used to indicate performance of this control device. Monitor temperature of the coolant and compressor operation.																				

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: 0007 / Scrubber D-400	List all emission units associated with this control device. Forecut Tank F-400 Crude MAN Tank F-330	
Manufacturer: Croll-Reynolds	Model number: 12T-6H	Installation date: 1996

Type of Air Pollution Control Device:

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
VOC	100	90
Maleic Anhydride	100	90
Xylene	100	90

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

At 7 gpm scrubber water flow the approximate pressure drop is 1.6 to 2.8 inches of water.

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**
 If No, **Provide justification.** See Attachment H for justification.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

The flowrate of makeup water is monitored and recorded in the DCS system. When the flow of make-up water goes below 1.5 gpm, an alarm is sounded. An operator then does a field check to see if there is a problem.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: 0003 / Wet Scrubber D-412	List all emission units associated with this control device. MAN Product Tank F-412	
Manufacturer: Croll-Reynolds	Model number: 12T-6H	Installation date: 1995

Type of Air Pollution Control Device:

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input checked="" type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
VOC	100	90
Maleic Anhydride	100	90

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

At 7 gpm scrubber water flow the approximate pressure drop is 1.6 to 2.8 inches of water.

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**
 If No, **Provide justification.** See Attachment H for justification.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

The flow rate of makeup water is monitored and recorded in the DCS system. When the flow of make-up water goes below 1.5 gpm, an alarm is sounded. An operator then does a field check to see if there is a problem.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: 0002 / Scrubber D-600	List all emission units associated with this control device. MAN Truck and Rail Loading	
Manufacturer: Glitsch	Model number: Demister Style 431; POH-921 Pipe Orifice; BLM-461 Bed Limiter; UTS-209 Vapor injection support plate	Installation date: 1989
Type of Air Pollution Control Device: ___ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone ___ Carbon Bed Adsorber <u> X </u> Packed Tower Scrubber ___ Single Cyclone ___ Carbon Drum(s) ___ Other Wet Scrubber ___ Cyclone Bank ___ Catalytic Incinerator ___ Condenser ___ Settling Chamber ___ Thermal Incinerator ___ Flare ___ Other (describe) _____ ___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
VOC	100	90
Maleic Anhydride	100	90
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.). The packed tower scrubber controls emissions from loading operations. It only operates during loading operations.		
Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes <u> X </u> No		
If Yes, Complete ATTACHMENT H If No, Provide justification. See Attachment H for justification.		
Describe the parameters monitored and/or methods used to indicate performance of this control device. Prior to product loading operations the operators ensure that the fan is operating and the water is flowing to the scrubber.		

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: 0015 / Scrubber D-601	List all emission units associated with this control device. MAN Product Storage Tank F-601 MAN Product Storage Tank F-602	
Manufacturer: Croll-Reynolds	Model number: 12T-6H	Installation date: 1998
Type of Air Pollution Control Device: ___ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone ___ Carbon Bed Adsorber <u> X </u> Packed Tower Scrubber ___ Single Cyclone ___ Carbon Drum(s) ___ Other Wet Scrubber ___ Cyclone Bank ___ Catalytic Incinerator ___ Condenser ___ Settling Chamber ___ Thermal Incinerator ___ Flare ___ Other (describe) _____ ___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
VOC	100	90
Maleic Anhydride	100	90
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.). At 7gpm scrubber water flow the approximate pressure drop is 1.6 to 2.8 inches of water.		
Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes <u> X </u> No If Yes, Complete ATTACHMENT H If No, Provide justification. See Attachment H for justification.		
Describe the parameters monitored and/or methods used to indicate performance of this control device. The flow rate of makeup water is monitored and recorded in the DCS system. When the flow of make-up water goes below 1.5 gpm, an alarm is sounded. An operator then does a field check to see if there is a problem.		

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: 0001 / Thermal Oxidizer B-800	List all emission units associated with this control device. Maleic Anhydride Reactor D-208; Maleic Anhydride Reactor D-209; Maleic Anhydride Reactor D-210; Maleic Anhydride Reactor D-211; Maleic Acid Scrubber D-320; Batch Maleic Anhydride Refiner D-410	
Manufacturer: John Zink	Model number: TG-S55681	Installation date: 1988 / 1993

Type of Air Pollution Control Device:

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input checked="" type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Carbon Monoxide	100	97
VOC	100	98
Acrylic Acid	100	98
Benzene	100	98
Xylene	100	98

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
 30 MM BTU/hr

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**
 If No, **Provide justification.** See Attachment H for justification.

Describe the parameters monitored and/or methods used to indicate performance of this control device.
 CO emissions from the thermal oxidizer are monitored by continuous emission monitoring (CEM) equipment.
 Thermal oxidizer firebox temperature is monitored.

ATTACHMENT H - Compliance Assurance Monitoring (CAM) Plan Form

For definitions and information about the CAM rule, please refer to 40 CFR Part 64. Additional information (including guidance documents) may also be found at <http://www.epa.gov/ttn/emc/cam.html>

CAM APPLICABILITY DETERMINATION

1) Does the facility have a PSEU (Pollutant-Specific Emissions Unit considered separately with respect to **EACH** regulated air pollutant) that is subject to CAM (40 CFR Part 64), which must be addressed in this CAM plan submittal? To determine applicability, a PSEU must meet **all** of the following criteria (*If No, then the remainder of this form need not be completed*): YES NO**

- a. The PSEU is located at a major source that is required to obtain a Title V permit;
- b. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant that is **NOT** exempt;

LIST OF EXEMPT EMISSION LIMITATIONS OR STANDARDS:

- NSPS (40 CFR Part 60) or NESHAP (40 CFR Parts 61 and 63) proposed after 11/15/1990.
 - Stratospheric Ozone Protection Requirements.
 - Acid Rain Program Requirements.
 - Emission Limitations or Standards for which a WVDEP Division of Air Quality Title V permit specifies a continuous compliance determination method, as defined in 40 CFR §64.1.
 - An emission cap that meets the requirements specified in 40 CFR §70.4(b)(12).
- c. The PSEU uses an add-on control device (as defined in 40 CFR §64.1) to achieve compliance with an emission limitation or standard;
 - d. The PSEU has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than the Title V Major Source Threshold Levels; AND
 - e. The PSEU is **NOT** an exempt backup utility power emissions unit that is municipally-owned.

BASIS OF CAM SUBMITTAL

2) Mark the appropriate box below as to why this CAM plan is being submitted as part of an application for a Title V permit: **Not Applicable**

RENEWAL APPLICATION. **ALL** PSEUs for which a CAM plan has **NOT** yet been approved need to be addressed in this CAM plan submittal.

INITIAL APPLICATION (submitted after 4/20/98). **ONLY** large PSEUs (i. e., PSEUs with potential post-control device emissions of an applicable regulated air pollutant that are equal to or greater than Major Source Threshold Levels) need to be addressed in this CAM plan submittal.

SIGNIFICANT MODIFICATION TO LARGE PSEUs. **ONLY** large PSEUs being modified after 4/20/98 need to be addressed in this cam plan submittal. For large PSEUs with an approved CAM plan, **Only** address the appropriate monitoring requirements affected by the significant modification.

****Rationale for CAM Exemption:** The Ashland LLC - Neal Plant does not own or operate a subject Pollutant-Specific Emissions Unit as defined at 40 C.F.R. §64.1, because all control devices at the plant either: [1] have potential pre-control device annual emissions of applicable regulated air pollutants that are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3), or [2] are subject to a Title V permit that specifies a continuous compliance determination method, as defined in §64.1, and thus are exempt per 40 C.F.R. §64.2(b)(1)(vi).

3) ^a BACKGROUND DATA AND INFORMATION

Complete the following table for **all** PSEUs that need to be addressed in this CAM plan submittal. This section is to be used to provide background data and information for each PSEU in order to supplement the submittal requirements specified in 40 CFR §64.4. If additional space is needed, attach and label accordingly.

PSEU DESIGNATION	DESCRIPTION	POLLUTANT	CONTROL DEVICE	^b EMISSION LIMITATION or STANDARD	^c MONITORING REQUIREMENT
Not Applicable					
<u>EXAMPLE</u> Boiler No. 1	Wood-Fired Boiler	PM	Multiclone	45CSR§2-4.1.c.; 9.0 lb/hr	Monitor pressure drop across multiclone: Weekly inspection of multiclone

^a If a control device is common to more than one PSEU, one monitoring plan may be submitted for the control device with the affected PSEUs identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a). If a single PSEU is controlled by more than one control device similar in design and operation, one monitoring plan for the applicable control devices may be submitted with the applicable control devices identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a).

^b Indicate the emission limitation or standard for any applicable requirement that constitutes an emission limitation, emission standard, or standard of performance (as defined in 40 CFR §64.1).

^c Indicate the monitoring requirements for the PSEU that are required by an applicable regulation or permit condition.

CAM MONITORING APPROACH CRITERIA			
Complete this section for EACH PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide monitoring data and information for EACH indicator selected for EACH PSEU in order to meet the monitoring design criteria specified in 40 CFR §64.3 and §64.4. If more than two indicators are being selected for a PSEU or if additional space is needed, attach and label accordingly with the appropriate PSEU designation, pollutant, and indicator numbers.			
4a) PSEU Designation: Not Applicable	4b) Pollutant:	4c) ^a Indicator No. 1:	4d) ^a Indicator No. 2:
5a) GENERAL CRITERIA Describe the <u>MONITORING APPROACH</u> used to measure the indicators:			
^b Establish the appropriate <u>INDICATOR RANGE</u> or the procedures for establishing the indicator range which provides a reasonable assurance of compliance:			
5b) PERFORMANCE CRITERIA Provide the <u>SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA</u> , such as detector location, installation specifications, and minimum acceptable accuracy:			
^c For new or modified monitoring equipment, provide <u>VERIFICATION PROCEDURES</u> , including manufacturer's recommendations, <u>TO CONFIRM THE OPERATIONAL STATUS</u> of the monitoring:			
Provide <u>QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES</u> that are adequate to ensure the continuing validity of the data, (i.e., daily calibrations, visual inspections, routine maintenance, RATA, etc.):			
^d Provide the <u>MONITORING FREQUENCY</u> :			
Provide the <u>DATA COLLECTION PROCEDURES</u> that will be used:			
Provide the <u>DATA AVERAGING PERIOD</u> for the purpose of determining whether an excursion or exceedance has occurred:			

^a Describe all indicators to be monitored which satisfies 40 CFR §64.3(a). Indicators of emission control performance for the control device and associated capture system may include measured or predicted emissions (including visible emissions or opacity), process and control device operating parameters that affect control device (and capture system) efficiency or emission rates, or recorded findings of inspection and maintenance activities.

^b Indicator Ranges may be based on a single maximum or minimum value or at multiple levels that are relevant to distinctly different operating conditions, expressed as a function of process variables, expressed as maintaining the applicable indicator in a particular operational status or designated condition, or established as interdependent between more than one indicator. For CEMS, COMS, or PEMS, include the most recent certification test for the monitor.

^c The verification for operational status should include procedures for installation, calibration, and operation of the monitoring equipment, conducted in accordance with the manufacturer's recommendations, necessary to confirm the monitoring equipment is operational prior to the commencement of the required monitoring.

^d Emission units with post-control PTE ≥ 100 percent of the amount classifying the source as a major source (i.e., Large PSEU) must collect four or more values per hour to be averaged. A reduced data collection frequency may be approved in limited circumstances. Other emission units must collect data at least once per 24 hour period.

RATIONALE AND JUSTIFICATION

Complete this section for EACH PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide rationale and justification for the selection of EACH indicator and monitoring approach and EACH indicator range in order to meet the submittal requirements specified in 40 CFR §64.4.

6a) PSEU Designation:
Not Applicable

6b) Regulated Air Pollutant:

7) **INDICATORS AND THE MONITORING APPROACH:** Provide the rationale and justification for the selection of the indicators and the monitoring approach used to measure the indicators. Also provide any data supporting the rationale and justification. Explain the reasons for any differences between the verification of operational status or the quality assurance and control practices proposed, and the manufacturer's recommendations. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

8) **INDICATOR RANGES:** Provide the rationale and justification for the selection of the indicator ranges. The rationale and justification shall indicate how EACH indicator range was selected by either a COMPLIANCE OR PERFORMANCE TEST, a TEST PLAN AND SCHEDULE, or by ENGINEERING ASSESSMENTS. Depending on which method is being used for each indicator range, include the specific information required below for that specific indicator range. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

- COMPLIANCE OR PERFORMANCE TEST (Indicator ranges determined from control device operating parameter data obtained during a compliance or performance test conducted under regulatory specified conditions or under conditions representative of maximum potential emissions under anticipated operating conditions. Such data may be supplemented by engineering assessments and manufacturer's recommendations). The rationale and justification shall INCLUDE a summary of the compliance or performance test results that were used to determine the indicator range, and documentation indicating that no changes have taken place that could result in a significant change in the control system performance or the selected indicator ranges since the compliance or performance test was conducted.
- TEST PLAN AND SCHEDULE (Indicator ranges will be determined from a proposed implementation plan and schedule for installing, testing, and performing any other appropriate activities prior to use of the monitoring). The rationale and justification shall INCLUDE the proposed implementation plan and schedule that will provide for use of the monitoring as expeditiously as practicable after approval of this CAM plan, except that in no case shall the schedule for completing installation and beginning operation of the monitoring exceed 180 days after approval.
- ENGINEERING ASSESSMENTS (Indicator Ranges or the procedures for establishing indicator ranges are determined from engineering assessments and other data, such as manufacturers' design criteria and historical monitoring data, because factors specific to the type of monitoring, control device, or PSEU make compliance or performance testing unnecessary). The rationale and justification shall INCLUDE documentation demonstrating that compliance testing is not required to establish the indicator range.

RATIONALE AND JUSTIFICATION: