

**TITLE V RENEWAL APPLICATION
FOR
OPTIMA BELLE, LLC
PERMIT NO. R30-03900001**

REDACTED APPLICATION

Prepared for:

Optima Belle, LLC
901 W. DuPont Avenue
Belle, West Virginia 25015

Prepared by:

Potesta & Associates, Inc.
7012 MacCorkle Avenue, SE
Charleston, West Virginia 25304
Phone: (304) 342-1400 Fax: (304) 343-9031
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Project No. 0101-14-0162-008

November 2015

POTESTA

TABLE OF CONTENTS

Cover Document for Confidential Information	i
General Forms.....	SECTION I
Area Map	ATTACHMENT A
Plot Plan.....	ATTACHMENT B
Process Flow Diagram	ATTACHMENT C
Emission Units Table.....	ATTACHMENT D
Emission Unit Forms	ATTACHMENT E
Air Pollution Control Device Forms.....	ATTACHMENT G
Compliance Assurance Monitoring (CAM) Plan Form.....	ATTACHMENT H
Supporting Emissions Calculations	ATTACHMENT I
Process Description.....	APPENDIX I
MON Requirement Summaries.....	APPENDIX II

Cover Document for Confidential Information

Company Name	Optima Belle, LLC	Responsible Official	
Company Address	900 W. DuPont Avenue Belle, WV 25015	Confidential Information Designee in State of WV	Name J. Gene Williams
			Title President
			Address 200 Willacoochee Highway Douglas, GA 31535
Person/Title Submitting Confidential Information	J. Gene Williams President		Phone (912) 384-5101
			Fax (912) 384-6330

Reason for Submittal Of Confidential Information : Title V Renewal Application

Identification of Confidential Information	Rationale for Confidential Claim 45CSR31-4.1a-e	Confidential Treatment Time Period
<ul style="list-style-type: none"> -Equipment design and capacity information -Process descriptions -Process flow diagrams -Site Map 	<p>a. Information initially claimed confidential by E.I. Dupont De Nemours and Company, Inc. and The Chemours Company FC, LLC. Information continues to be confidential under Optima Belle, LLC. The claim has not expired by its term, or been waived or withdrawn. The confidential information should continue to be maintained as such for an indefinite time period.</p> <p>See attached for b-e</p>	Permanent

Responsible Official Signature:	
Responsible Official Title:	President
Date Signed:	11/10/2015

NOTE: Must be signed and dated in **BLUE INK**.

Rationale for Confidentiality Claim (Cont.)

- b. Information claimed confidential is not available to the general public. Within the company, Optima Belle, LLC (Optima) distribute technical information on a need-to-know basis and has used its business confidentiality policy to prevent inadvertent dissemination of information. This policy includes:
- * Marking of business confidential documents,
 - * Limited distribution of documents,
 - * Shredding of confidential documents before disposal.

Employees are aware of the competitive nature of their business and are trained in guarding confidential information.

- c. Information revealing the process technology in this submittal is not reasonably obtainable by persons other than Optima employees who need to know. To maintain the confidentiality of such information, Optima employees involved with confidential information sign a confidentiality agreement.
- d. There is no statute that has been reviewed that requires disclosure of information claimed to be confidential.
- e. Optima claims business confidentiality protection for the information submitted since disclosure would allow competent engineers within a competitor's company to determine the manner or process by which Optima produces this product and would provide competitors information without paying for technology or conducting research and development necessary to obtain the technology.

SECTION I
GENERAL FORMS



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF AIR QUALITY

601 57th Street SE

Charleston, WV 25304

Phone: (304) 926-0475

www.wvdep.org/daq

TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

1. Name of Applicant (As registered with the WV Secretary of State's Office): Optima Belle, LLC	2. Facility Name or Location: Optima Belle Plant Belle, WV
3. DAQ Plant ID No.: 0 3 9 — 0 0 6 6 3	4. Federal Employer ID No. (FEIN): 4 6 5 4 0 3 0 0 6
5. Permit Application Type: <input type="checkbox"/> Initial Permit <input checked="" type="checkbox"/> Permit Renewal <input type="checkbox"/> Update to Initial Permit Application When did operations commence? Before 1970 What is the expiration date of the existing permit? 05/12/2016	
6. Type of Business Entity: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Governmental Agency <input type="checkbox"/> Partnership <input type="checkbox"/> Limited Partnership	7. Is the Applicant the: <input type="checkbox"/> Owner <input type="checkbox"/> Operator <input checked="" type="checkbox"/> Both If the Applicant is not both the owner and operator, please provide the name and address of the other party. _____ _____ _____
8. Number of onsite employees: 10	
9. Governmental Code: <input checked="" type="checkbox"/> Privately owned and operated; 0 <input type="checkbox"/> County government owned and operated; 3 <input type="checkbox"/> Federally owned and operated; 1 <input type="checkbox"/> Municipality government owned and operated; 4 <input type="checkbox"/> State government owned and operated; 2 <input type="checkbox"/> District government owned and operated; 5	
10. Business Confidentiality Claims Does this application include confidential information (per 45CSR31)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, identify each segment of information on each page that is submitted as confidential, and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's "PRECAUTIONARY NOTICE-CLAIMS OF CONFIDENTIALITY" guidance.	

11. Mailing Address		
Street or P.O. Box: 901 W. DuPont Avenue		
City: Belle	State: WV	Zip: 25015-
Telephone Number: (912) 384-5101	Fax Number: (912) 384-6330	

12. Facility Location		
Street: 901 West DuPont Avenue	City: Belle	County: Kanawha
UTM Easting: 451.90 km	UTM Northing: 4232.60 km	Zone: <input checked="" type="checkbox"/> 17 or <input type="checkbox"/> 18
Directions: I-64 to Belle exit, Rt. 60 east to Belle exit, turn right, plant on left		
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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, name the affected state(s).	
Is facility located within 100 km of a Class I Area ¹ ? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, name the area(s).	
If no, do emissions impact a Class I Area ¹ ? <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: J. Gene Williams		Title: President
Street or P.O. Box: 200 Willacoochee Highway		
City: Douglas	State: GA	Zip: 31535-
Telephone Number: (912) 384-5101	Fax Number: (912) 384-6330	
E-mail address: gwilliams@optimachem.com		
Environmental Contact: Al Horner		Title: Environmental, Health, and Safety Manger
Street or P.O. Box: 200 Willacoochee Highway		
City: Douglas	State: GA	Zip: 31535-
Telephone Number: (912) 720-5136	Fax Number: (912) 384-6330	
E-mail address: ahorner@optimachem.com		
Application Preparer: Patrick Ward		Title: Manager of Air Permitting
Company: Potesta & Associates, Inc.		
Street or P.O. Box: 7012 MacCorkle Avenue, SE		
City: Charleston	State: WV	Zip: 25304-
Telephone Number: (304) 342-1400	Fax Number: (304) 343-9031	
E-mail address: peward@potesta.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
Acrylics	Plastic Monomers	325211	2821
Crop	Herbicides and intermediates	32520	2879
Chemicals	Glycolic Acid, VAZO, Methylamines, organic chemical intermediates	325199	2869

Provide a general description of operations.

See Attachment C – Process Flow Diagrams and Appendix I – Process Description.

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

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.”

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.

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.

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).

All Facility-wide requirements in existing permit are still applicable.

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.)

See existing permit R30-0390001

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.

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.)

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)	2.98
Nitrogen Oxides (NO _x)	19.44
Lead (Pb)	0
Particulate Matter (PM _{2.5}) ¹	0
Particulate Matter (PM ₁₀) ¹	1.18(HCl acid mist)
Total Particulate Matter (TSP)	1.18
Sulfur Dioxide (SO ₂)	0
Volatile Organic Compounds (VOC)	17.87
Hazardous Air Pollutants²	Potential Emissions
Xylene	4.05
Ethyl Chloride	3.37
Methanol	6.04
Methyl Chloride	0.04
Toluene	0.65
HCl	1.18
Regulated Pollutants other than Criteria and HAP	Potential Emissions
NH ₃	1.15
Ethanol	2.52
Ethylbenzene	1.01

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 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 type="checkbox"/>	8. Boiler water treatment operations, not including cooling towers.
<input type="checkbox"/>	9. Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
<input 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 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 type="checkbox"/>	14. Demineralized water tanks and demineralizer vents.
<input type="checkbox"/>	15. Drop hammers or hydraulic presses for forging or metalworking.
<input 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 checked="" type="checkbox"/>	<p>19. Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO_x, SO₂, 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.</p> <p>Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis:</p> <p>_____</p>

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 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 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 type="checkbox"/>	34. Indoor or outdoor kerosene heaters.
<input checked="" type="checkbox"/>	35. Internal combustion engines used for landscaping purposes.
<input type="checkbox"/>	36. Laser trimmers using dust collection to prevent fugitive emissions.
<input 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 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 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 checked="" 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 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 type="checkbox"/>	50. Space heaters operating by direct heat transfer.
<input 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 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 .
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 .
For each emission unit not in compliance with an applicable requirement, fill out a Schedule of Compliance Form as ATTACHMENT F .
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 .
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 .

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: J. Gene Williams

Title: President

Responsible official's signature:

Signature: 

Signature Date: 11/10/15

(Must be signed and dated in blue ink)

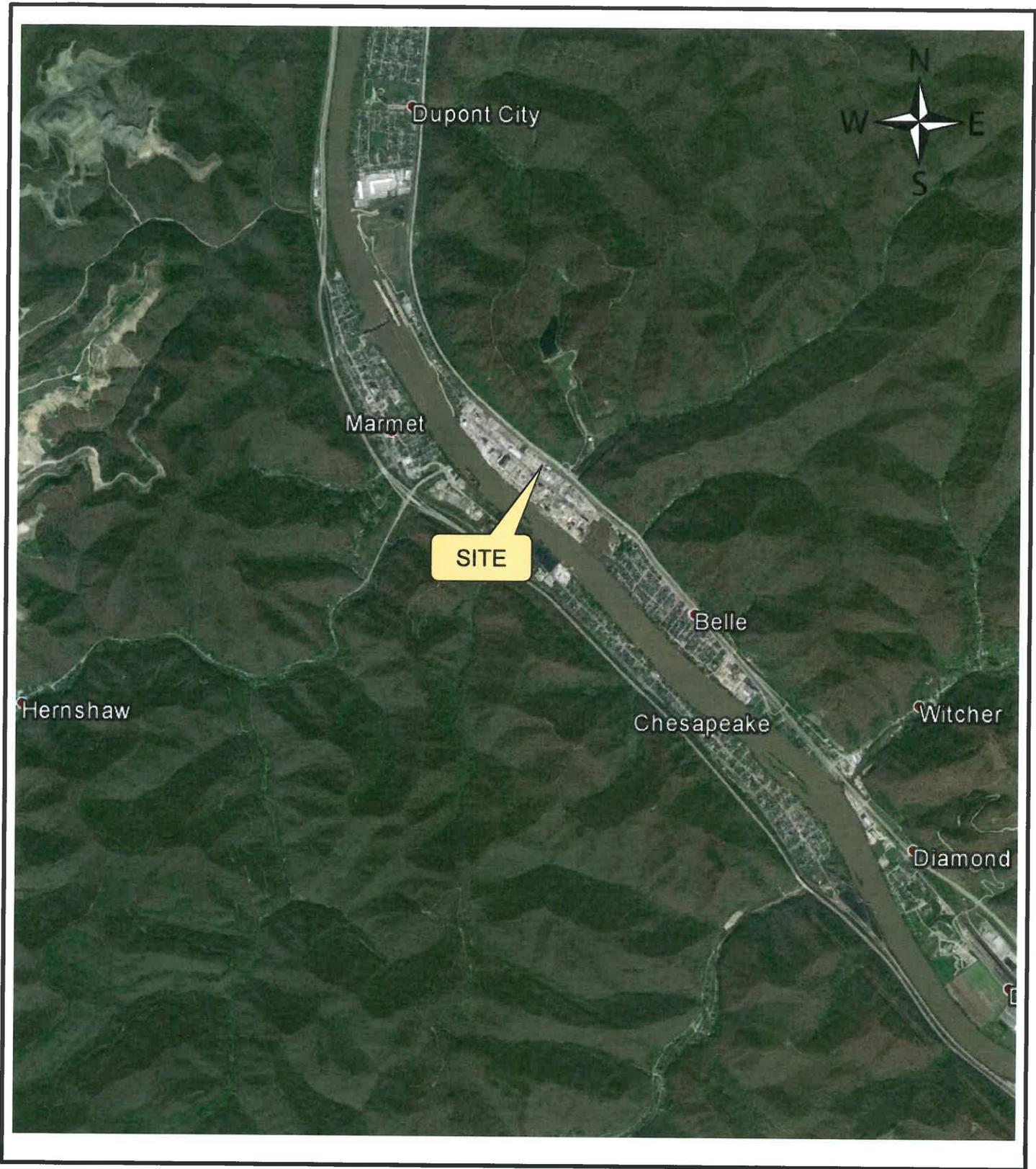
Note: Please check all applicable attachments included with this permit application:

<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.wvdep.org/dag, requested by phone (304) 926-0475, and/or obtained through the mail.

ATTACHMENT A

AREA MAP



DATE: August 2015

PROJECT NO. 0101-14-0162

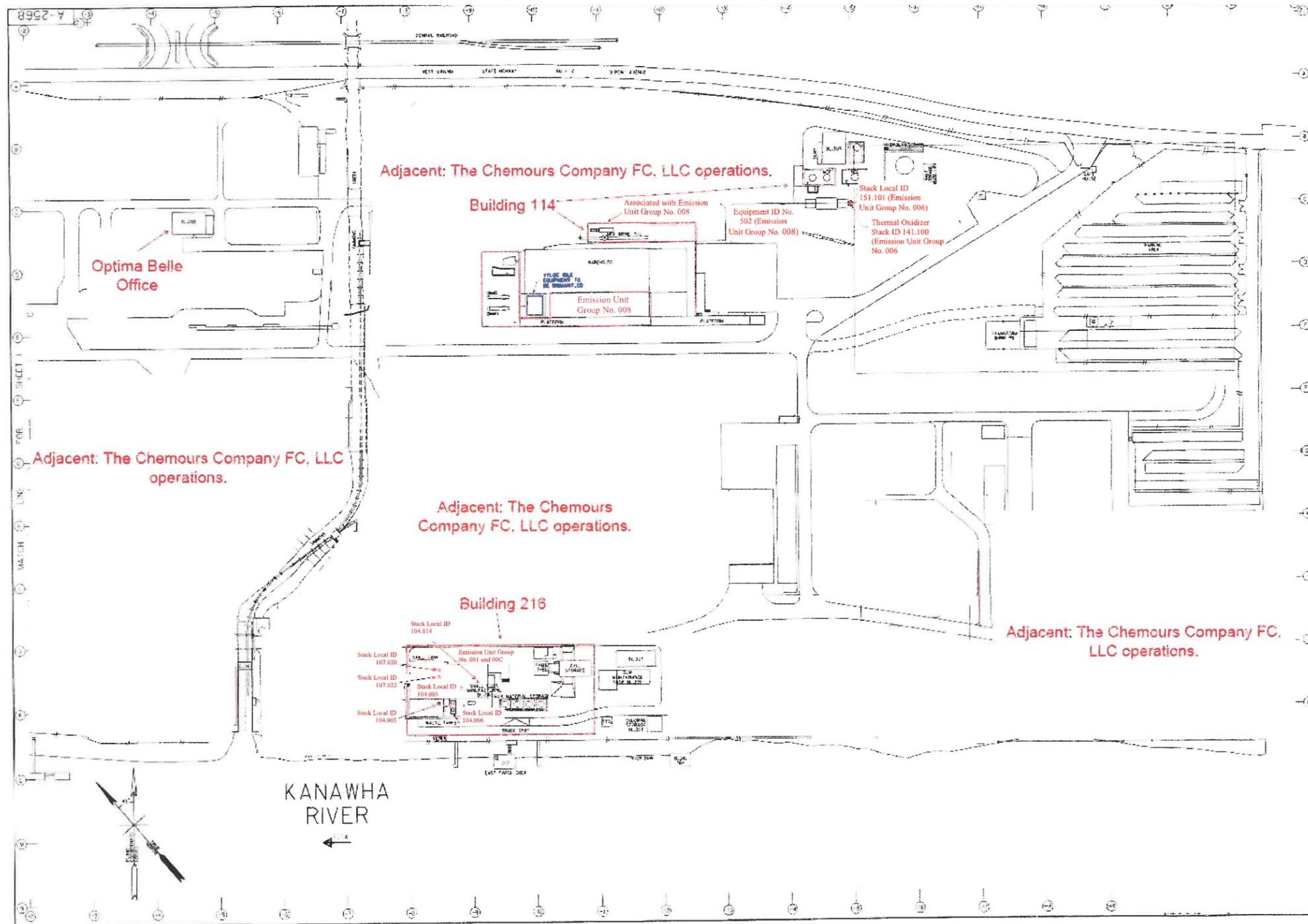
MAPPING FOR VISUAL REPRESENTATION ONLY

**SITE LOCATION MAP
OPTIMA BELLE, LLC
BELLE, KANAWHA COUNTY, WV**

NOT TO SCALE

ATTACHMENT B

PLOT PLAN



7012 MacCorkle Avenue, S.E
 Charleston, West Virginia 25304
 Phone: (304) 342-1400
 Fax: (304) 343-9031

Optima Belle, LLC
 Kanawha County, West Virginia
 Project No. 0101-14-0162-008

ATTACHMENT C
PROCESS FLOW DIAGRAM

Hydrolysis & Stripper Operation

**REDACTED COPY – CLAIM
OF CONFIDENTIALITY**

**REDACTED COPY – CLAIM
OF CONFIDENTIALITY**

AECP Process at B114

Optima Belle, LLC

F3455 Process at B114

**REDACTED COPY – CLAIM
OF CONFIDENTIALITY**

Fluridone Phase 1 (Ketone II) Process at SLM

**REDACTED COPY – CLAIM
OF CONFIDENTIALITY**

FLURIDONE Phase 2 PROCESS at SLM

**REDACTED COPY – CLAIM
OF CONFIDENTIALITY**

FLURIDONE Phase 2 at SLM WASTE TANKS

**REDACTED COPY – CLAIM
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Optima Belle, LLC

GLYPURE PROCESS AT SLM

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OF CONFIDENTIALITY**

Optima Belle, LLC

**Krovar Tech
Process at SLM**

**REDACTED COPY – CLAIM
OF CONFIDENTIALITY**

Optima Belle, LLC

U9069 at SLM - REACTION

**REDACTED COPY – CLAIM
OF CONFIDENTIALITY**

U9069 at SLM - NEUTRALIZATION

**REDACTED COPY – CLAIM
OF CONFIDENTIALITY**

U9069 at SLM[®] SEPARATION

**REDACTED COPY – CLAIM
OF CONFIDENTIALITY**

Optima Belle, LLC

U-9069 at SLM ACETONE REMOVAL

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OF CONFIDENTIALITY**

U9069 at SLM - PHENOL

**REDACTED COPY – CLAIM
OF CONFIDENTIALITY**

ATTACHMENT D
EMISSION UNITS TABLE

ATTACHMENT D - Bldg 114 Equipment List

Emission Unit ID	Emission Point ID	Equipment Description (internal 3455)	Equipment Description (internal AECF)	Emission Unit Description	Year Installed	Design Capacity	Control Device
HK004	141.004	DMS tank wagon storage	TEP tank wagon storage	Tank wagon storage	H: 1975 K: Suppliers	4,000 gal	HKCD05
HK006	141.012	ECF tank car or truck storage	MCF tank car or truck storage	Tank car or truck storage	Suppliers	20,00 gal or 5,000 gal	HKCD06
HK007	141.007	Waste brine storage tank car	Waste brine storage tank car	Tank car	1972	174789 gal ea.	NONE
HK008	141.008	Waste brine storage tank car	Waste brine storage tank car	Tank car			NONE
HK009	141.009	Aqueous cyanamide storage	not used	Storage Tank		18000 gal	NONE
HK010	141.010	Ion exchange column	not used	Column	1970	550 gal.	NONE
HK013	141.013	NaCl brine tank	not used	Tank	1978	2000 gal.	NONE
HK014	141.014	Aqueous cyanamide holdup tank	not used	Tank	1970	3950 gal.	NONE
HK015	141.015	50% NaOH storage tank	50% NaOH storage tank	Non VOC Storage tank	1987	51,000 gal.	NONE
HK016	141.016	Process water tank	Process water tank	Tank	1975	410 gal	NONE
HK101	141.001	F-3259 reactor	AECF reactor	Reactor	2003 (replacement)	4,000 gal.	HKCD03
HK102	141.100	F-3455 reactor condenser	DCMP reactor condenser	Condenser	1974	91 sq. ft.	HKCD01 HKCD02
HK103	141.100	F-3455 reactor	DCMP reactor	Reactor	1974	2,000 gal.	HKCD01 HKCD02
HK104	151.101	HCl storage tank	not used	Non VOC storage tank	2004 (replacement)	35000 gal	HKCD04
HK105		Stripper column cooler	Stripper column cooler	Column cooler	1974	70 sq ft	NONE
HK106	141.002	F-3455 loading	AECF loading	Product loading	1982	150 GPM	NONE
HK107		Fugitive source exhaust blower	Fugitive source exhaust blower	Building blower	1974	3162 cfm	NONE
HK108	141.011	not in use	amonium hydroxide tank	Non VOC Storage tank	1987	17,500 gal	HKCD10
CONTROL DEVICES							
HKCD01	141.100	Thermal oxidizer	Thermal oxidizer	Thermal oxidizer	1998	7.5 MMBtu/hr	
HKCD02	141.100	Thermal oxidizer NaOH scrubber	Thermal oxidizer NaOH scrubber	Thermal oxidizer scrubber	1998	150 gal/min	
HKCD03	141.001	not in use	Reactor system scrubber	Scrubber	1975	205 gal.	
HKCD04	151.101	HCl tank scrubber	not used	Tank scrubber	1988	300 cfm	
HKCD05	141.004	DMS scrubber	TEP scrubber	Scrubber	1974	10 gpm	
HKCD06	141.012	ECF scrubber	MCF scrubber	Scrubber	2002	25 gpm	
HKCD07	141.100	Hydrolysis tank	Hydrolysis tank	Tank	1975	160,000 gal	
HKCD08	141.100	Stripper column	Stripper column	Column	1975	15,000 lb/hr	
HKCD09	141.011	not in use	amonium hydroxide tank scrubber	Scrubber	1970	5 gpm	
HKCD10	141.012	not in use	TEP tank wagon vent carbon canister	Carbon absorber	2005		

DuPont Belle Plant SLM Title V Equipment List

Emission Unit ID	Emission Point ID	Internal Equipment Description	Emission Unit Description	Year Installed	Design Capacity	Control Device
103	104.014	BI Tank	Tank	2002 (relocated)	7400 gal	003, 009, 010
012	104.014	-20 Brine Tank	Tank	1999	3700 gal	009, 010
210	107.022	Product Packout	Packaging Unit	2005 (replacement)	825 cfh	023
116A	107.020	Dryer Charge Hopper and Dust Collector	Solids Charge Station			116A
115A	104.003	Reactor 6 Charge Hopper and Dust Collector	Solids Charge Station			115
901	104.014	Front-end Product Loading Spot	Bulk Liquid Transfer		75 gpm	009, 010
002	104.014	Dryer	Dryer		500 pph	004, 009, 010
013	104.006	-30 Brine Tank	Tank	1988	2800 gal	None
101	104.014	Xylene/Toluene Storage Tank	Tank	1980	8200 gal	009, 010
104	104.014	Methanol Tank	Tank	1988	8900 gal	009, 010
108	104.014	Flammable Waste Tank	Tank	1961	1900 gal	009, 010
108L	104.014	Flammable Waste Tank Loading	Transfer Rack	2007	N/A	Vapor Balancing
109	104.014	Extraction Tank	Tank		2000 gal	009, 010
109L	104.14	Extraction Tank Loading	Transfer Rack	1968	N/A	009
112	104.014	J Tank	Tank	1951	8000 gal	009, 010
108L	104.014	J Tank Loading	Transfer Rack	2007	N/A	009
114A	104.003	Reactor 3 Charge Hopper	Solids Charge Station	2005 (replacement)	360 cfh	114
200	104.014	Phosgene Cylinders	Gas Cylinders		900 pph	003, 009, 010
201	104.014	Centrifuge	Centrifuge		500 pph	009, 010
201A	104.014	Wet Cake Bin				*009
202	104.014	M/L Disengaging Tank	Tank	1988	900 gal	009, 010
203	104.014	3 Reactor	Reactor		2000 gal	003, 009, 010
203C	104.014	3 Reactor Condenser	Condenser	1977	N/A	009
205	104.014	1 Reactor	Reactor		750 gal	003, 009, 010
206	104.014	2 Reactor	Reactor	1977	2000 gal	003, 009, 010
208	104.014	6 Reactor	Reactor	1977	4000 gal	009, 010
208P	104.014	6 Reactor Pump	Pump		N/A	009
208C	104.014	6 Reactor Condenser	Condenser		N/A	009
209	104.014	8 Reactor	Reactor	1977	4000 gal	009, 010
219	104.014	5 Reactor	Reactor	1984	2000 gal	003, 009, 010
226	104.014	Product Storage Tank	Tank	1988	8000 gal	009, 010
227	104.014	PCF Tank	Tank	2005	8000 gal	009, 010

DuPont Belle Plant SLM Title V Equipment List

Emission Unit ID	Emission Point ID	Internal Equipment Description	Emission Unit Description	Year Installed	Design Capacity	Control Device
Control Devices						
023	107.022	Product Drum Filler Dust Collector	Dust Collector	2005 (replacement)	250 cfm	
116A	107.02	Dryer Charge Hopper Dust Collector	Dust Collector		2800 cfm	
115	104.003	6 Rx Charge Hopper Dust Collector	Dust Collector		1300 cfm	
009	104.014	Incinerator	Incinerator	1977	10 MMBTU/hr	
010	104.014	Incinerator Scrubber	Scrubber	1977	80 gpm	
003	104.014	Main Scrubber	Scrubber	2007	60 gpm	
004	104.014	Dryer Condenser	Condenser		113 cu ft	
114	104.003	Dust Collector	Dust Collector	2001	400 cfm	

ATTACHMENT E
EMISSION UNIT FORMS

ATTACHMENT E - Emission Unit Form

Emission Unit Description				Reactor			
Emission unit ID number:		Emission unit name:		List any control devices associated with this emission unit:			
HK101		F-3259/AECP Reactor		HKCD01 HKCD02			
Provide a description of the emission unit (type, method of operation, design parameters, etc.):							
ECC and F3259 reaction - Part of Equipment Train - see HKCD01 and HKCD02 for Emissions							
Manufacturer:		Model Number:		Serial Number:			
Unknown		N/A		N/A			
Construction Date:		Installation Date:		Modification Date:			
Replaced 2003		Replaced 2003		0			
Design Capacity (examples: furnaces - tons/hr, tanks - gallons):							
4,000 gal.							
Maximum Hourly Throughput:		Maximum Annual Throughput:		Maximum Operating Schedule:			
Redacted		Redacted		Redacted			
Fuel Usage Data (fill out all applicable fields)							
Does this emission unit combust fuel?				If yes, is it?			
___ Yes <input checked="" type="checkbox"/> No				___ Indirect Fired ___ Direct Fired			
Maximum design heat input and/or maximum horsepower rating:				Type and Btu/hr rating of burners:			
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.							
Describe each fuel expected to be used during the term of the permit.							
Fuel Type		Max. Sulfur Content		Max. Ash Content		BTU Value	
Redacted		Redacted		Redacted		Redacted	
Redacted		Redacted		Redacted		Redacted	
Redacted		Redacted		Redacted		Redacted	
Redacted		Redacted		Redacted		Redacted	

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Emissions Data		
Criteria Pollutants	Potential Emissions	
	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)	303	597
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Methyl Chloride	216	84
HCL	2	0.8
Methanol	80	234
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Ethyl Chloride	696	209
<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.). Emission factors</p>		

Applicable Requirements

List all applicable requirements for this emission unit. 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*). 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.

Any new requirements are reflected in the MON MACT summary in Appendix II. These were existing new requirements in the previous renewal.

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.*)

See R30-039-00001

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	
	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)	None	None
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
DMS	None	None
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
None	None	None
None	None	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.).		

Applicable Requirements

List all applicable requirements for this emission unit. 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). 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.

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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.)

See R30-039-00001

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> Tank			
Emission unit ID number:	Emission unit name:	List any control devices associated with this emission unit:	
103	B1 Tank	003, 009, 010	
Provide a description of the emission unit (type, method of operation, design parameters, etc.):			
Tank			
Manufacturer:	Model Number:	Serial Number:	
Unknown	N/A	N/A	
Construction Date:	Installation Date:	Modification Date:	
2002 (relocated)	2002 (relocated)	0	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons):			
7400 gal			
Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule:	
Redacted	Redacted	Redacted	
Fuel Usage Data (fill out all applicable fields)			
Does this emission unit combust fuel?		If yes, is it?	
___ Yes <input checked="" type="checkbox"/> No		___ Indirect Fired ___ Direct Fired	
Maximum design heat input and/or maximum horsepower rating:		Type and Btu/hr rating of burners:	
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.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
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Emissions Data		
Criteria Pollutants	Potential Emissions	
	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)	0.217	0.165
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Xylene	0.021	0.001475
HCL	0.034	0.0565
Methanol	0.026	0.097
Toluene	0.083	0.0021
Ethyl Benzene	0.005	0.00037
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
None	None	None
None	None	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.). Emission Master & Engineering Estimate		

Applicable Requirements

List all applicable requirements for this emission unit. 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*). 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.

Any new requirements are reflected in the MON MACT summary in Appendix II. These were existing new requirements in the previous renewal.

___ 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.*)

See permit R30-0390001

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> Reactor			
Emission unit ID number:	Emission unit name:	List any control devices associated with this emission unit:	
219	5 Reactor	,009,010	
Provide a description of the emission unit (type, method of operation, design parameters, etc.):			
Reactor			
Manufacturer:	Model Number:	Serial Number:	
Unknown	N/A	N/A	
Construction Date:	Installation Date:	Modification Date:	
1984	1984	0	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons):			
2000 gal			
Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule:	
Redacted	Redacted	Redacted	
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:		Type and Btu/hr rating of burners:	
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.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
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Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	250	1.5
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)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
See emission unit 103, all emissions go to 104.014 and are summed up on 103		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
None	None	None
None	None	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.). Emission Master & Engineering Estimate		

Applicable Requirements

List all applicable requirements for this emission unit. 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). 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.

Any new requirements are reflected in the MON MACT summary in Appendix II. These were existing new requirements in the previous renewal.

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
See permit R30-03900001

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		Packaging Unit
Emission unit ID number: 12	Emission unit name: -20 Brine Tank	List any control devices associated with this emission unit: 0

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

Brine Tank

Manufacturer: Unknown	Model Number: N/A	Serial Number: N/A
Construction Date: 1999	Installation Date: 1999	Modification Date: 0

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

3700 gal

Maximum Hourly Throughput: Redacted	Maximum Annual Throughput: Redacted	Maximum Operating Schedule: Redacted
---	---	--

Fuel Usage Data (fill out all applicable fields)

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

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.

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
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<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	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	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
See emission unit 103, all emissions go to 104.014 and are summed up on 103.		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
None	None	None
None	None	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.). Emission Master & Engineering Estimate		

Applicable Requirements

List all applicable requirements for this emission unit. 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*). 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.

Any new requirements are reflected in the MON MACT summary in Appendix II. These were existing new requirements in the previous renewal.

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.*)

See permit R30-03900001

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 FORMS

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: HKCD03	List all emission units associated with this control device. HK101	
Manufacturer:	Model number:	Installation date: 2008
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
Methanol		> 90%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).		
This scrubber is designed to remove methanol from a Group 1 vent per the MON.		
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. Emissions from this unit are below defined level for major source.		
Describe the parameters monitored and/or methods used to indicate performance of this control device.		
The scrubber was performance tested. Water flow rate is monitored and controlled to greater than or equal to 4000 lbs/hr.		

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: 115	List all emission units associated with this control device. 115A	
Manufacturer: Young Industries	Model number: FBD 42-8 (s/n 7674)	Installation date: 1978

Type of Air Pollution Control Device:

Baghouse/Fabric Filter
 Venturi Scrubber
 Multiclone
 Carbon Bed Adsorber
 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
PM	100	99.9

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

Control media is fabric cartridge filter

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. Emissions from this point are below defined level for major source.

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

Visual emissions monitoring is done monthly.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: 023	List all emission units associated with this control device. 210	
Manufacturer: Acrison	Model number: BV-500 (s/n BV-1-167)	Installation date:
Type of Air Pollution Control Device:		
<input checked="" 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
PM	100	99.9
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.). Control media is single fabric cartridge filter		
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. Emissions from this unit are below defined level for major source.		
Describe the parameters monitored and/or methods used to indicate performance of this control device. Visual emissions are monitored monthly		

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: 116	List all emission units associated with this control device. 116A	
Manufacturer: Young Industries	Model number:	Installation date: 1978
Type of Air Pollution Control Device:		
<input checked="" 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
PM	100	99.9
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.). Control media is fabric bags		
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. Emissions from this unit are below defined level for major source.		
Describe the parameters monitored and/or methods used to indicate performance of this control device. Visual emissions monitoring is done monthly.		

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: 004	List all emission units associated with this control device. 002	
Manufacturer: Miller Exchanger	Model number:	Installation date:
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 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
Methanol	100	95
Acetone	100	95
Toluene	100	95
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.). Shell and tube condenser with river water on shell side for cooling, condensate temperature < 40C.		
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. Emissions from this unit are below defined level for major source.		
Describe the parameters monitored and/or methods used to indicate performance of this control device. Condenser vents to control device 009 Incinerator.		

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: 003	List all emission units associated with this control device. 103, 200, 203, 205, 206, 219,	
Manufacturer: Ancer Industrial Plastics	Model number:	Installation date: 2007

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
HCL	100	98
MMA	100	98
DMA	100	98

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

Packed column with continuously circulated caustic scrubbing solution, ph>7, flow rate > 25gpm.

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. **Emissions from this unit are below defined level for major source.**

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

Scrubber solution flow and pH are monitored.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: HKCD08	List all emission units associated with this control device. HKCD07	
Manufacturer:	Model number:	Installation date: 1975
Type of Air Pollution Control Device: ___ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone ___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone ___ Carbon Drum(s) ___ Other Wet Scrubber ___ Cyclone Bank ___ Catalytic Incinerator ___ Condenser ___ Settling Chamber ___ Thermal Incinerator ___ Flare <u> X </u> Other (describe) <u> Steam Stripper </u> ___ 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
Methanol		*
VOCs		*
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.). This is a steam stripper designed to remove methanol and ethanol from wastewater. The stripper vents to a thermal oxidizer where the methanol and ethanol are combusted.		
Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes <u> X </u> No If Yes, Complete ATTACHMENT H Steam stripper is a wastewater treatment device under the MON> If No, Provide justification. Emissions from this unit are below defined level for major source.		
Describe the parameters monitored and/or methods used to indicate performance of this control device. A design evaluation was completed and determined that this stripper meets MON requirements. Parameters monitored are wastewater feed temperature and column steam feed mass flow rate to waste water feed mass flow rate ratio.		

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: 114	List all emission units associated with this control device. 114A	
Manufacturer: Flexicon	Model number:	Installation date: 2001

Type of Air Pollution Control Device:

- | | | |
|---|---|---|
| <input checked="" 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
PM	100	99.9

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

Control media is single fabric cartridge filter.

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. Emissions from this point are below defined level for major source.

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

Visual emissions are monitored monthly.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: HKCD09	List all emission units associated with this control device. HK108	
Manufacturer: Beetle Plastics	Model number:	Installation date: 1970
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
Ammonia	100%	
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.). This water scrubber is designed to control ammonia fumes and odor when the associated storage tank vents.		
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. There are no emission limits on this tank. The purpose of this scrubber is to control nuisance odors and personnel exposure. Emissions from this unit are below defined level for major source.		
Describe the parameters monitored and/or methods used to indicate performance of this control device. A flow switch causes an alarm to occur on low water flow.		

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: HKCD10	List all emission units associated with this control device. HK104	
Manufacturer: Calgon	Model number:	Installation date: 2005
Type of Air Pollution Control Device: ___ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone <u>X</u> Carbon Bed Adsorber ___ 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		
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.). The purpose of this device is to remove TEP fumes and odor when venting a container.		
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. There are no emission limits on this tank. The purpose of this device is to control nuisance odors and personnel exposure. Emissions from this unit are below defined level for major source.		
Describe the parameters monitored and/or methods used to indicate performance of this control device. The carbon bed is changed out based on the number of containers vented.		

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: HKCD05	List all emission units associated with this control device. HK004	
Manufacturer:	Model number:	Installation date: 1974
Type of Air Pollution Control Device: ___ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone ___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone ___ Carbon Drum(s) <u> X </u> 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
Dimethyl sulfate	100%	N/A
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.). This scrubber was designed to remove DMS vapors from a storage container vent.		
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. There are no emission limits on this container. The purpose of this scrubber is to control nuisance odors and personnel exposure. Emissions from this unit are below defined level for major source.		
Describe the parameters monitored and/or methods used to indicate performance of this control device. There is a water flow indicator on the scrubber that is monitored when the container is venting (during transfer into the container).		

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: HKCD04	List all emission units associated with this control device. HK104	
Manufacturer:	Model number:	Installation date: 2004
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
HCL	100%	N/A
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).		
This scrubber was designed to remove HCL from a storage tank and meets the criteria for control for a Group 1 vent under MON.		
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. This control device is subject to the monitoring requirements of the MON. Emissions from this unit are below defined level for major source.		
Describe the parameters monitored and/or methods used to indicate performance of this control device.		
The design of this scrubber was evaluated per the requirements in the MON. There is an alarm on water flow to the scrubber to ensure scrubbing available when needed.		

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: HKCD07	List all emission units associated with this control device. HK007, HK008, HK101	
Manufacturer:	Model number:	Installation date: 1975

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 checked="" type="checkbox"/> Other (describe) <u> </u> tank <u> </u>
<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
Methyl chloride		Emissions vent to TO
Ethyl chloride		Emissions vent to TO
VOCs		Emissions vent to TO

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.). This tank is designed to breakdown complex organic compounds in wastewater to methanol and ethanol which can then be stripped from the wastewater and treated in the thermal oxidizer.

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. Hydrolysis tank is wastewater treatment device under the MON.
 Emissions from this unit are below defined level for major source.

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

The level in the tank is controlled to control residence time.
 The temperature and pH are controlled to ensure hydrolysis occurs.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: 010	List all emission units associated with this control device. 103, 012, 901, 002, 101, 104, 108, 108L, 109, 109L, 112, 200, 201, 201A, 202, 203, 203C 205, 206, 208, 208C, 208P, 209, 226, 227	
Manufacturer: XerxesMfg Co/HCL Process Eq	Model number: 733-X-SPCL	Installation date: 1977

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
HCL	100	99

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.). Packed column using caustic solution as scrubbing medium

Packed column with continuously circulated caustic solution, pH > 7, flow rate >25gpm.

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. Emissions from this unit are below defined level for major source.

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

Scrubber solution pH and flow are monitored.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: 009	List all emission units associated with this control device. 103, 012, 901, 002, 101, 104, 108, 108L, 109, 109L, 112, 200, 201, 201A, 202, 203, 203C 205, 206, 208, 208C, 208P, 209, 226,
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Manufacturer: North American	Model number: 6514-8	Installation date: 1977
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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
Xylene	100	99.9
Acetone	100	99.9
Methanol	100	99.9
Xylene	100	99.9
Ethly Benzene	100	99.9
Toluene	100	99.9
Ethanol	100	99.9
Acetic Acid	100	99.9
DMFDMA	100	99.9
MonoMethylAmine	100	99.9

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

Chamber temperature is controlled by natural gas flow, air flow > 8 inches of water column per pressure switch setting, temperature between 1800F and 2200F.

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. Emissions from this unit are below defined level for major source.

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

Chamber temperature and pressure are controlled continuously.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: HKCD06	List all emission units associated with this control device. HK006	
Manufacturer:	Model number:	Installation date: 2002

Type of Air Pollution Control Device:

<input type="checkbox"/> Baghouse/Fabric Filter	<input checked="" 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
VOCs		

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

This scrubber is designed to control fumes and odor when the associated storage container vents.

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. **There are no emission limits on this container. The purpose of this scrubber is to control nuisance odors and personnel exposure. Emissions from this unit are below defined level for major source.**

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

The scrubber uses a caustic solution which is regenerated after a set number of batches.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: HKCD02	List all emission units associated with this control device. HKCD01, HK101, HK102, HK103, HKCD07, HKCD08																			
Manufacturer:	Model number:	Installation date: 1998																		
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 checked="" 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 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></td> <td><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 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
<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																		
HCl	100%	>99%																		
Chlorine	100%	>99%																		
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).																				
This caustic scrubber was designed to control halogenated emissions from the associated thermal oxidizer.																				
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. This control device is subject to the monitoring requirements of the MON. Emissions from this unit are below defined level for major source.																				
Describe the parameters monitored and/or methods used to indicate performance of this control device.																				
This scrubber was performance tested. The pH is maintained to a minimum average of 7.2																				

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: HKCD01	List all emission units associated with this control device. HK101, HK102, HK103, HKCD07, HKCD08	
Manufacturer:	Model number:	Installation date: 1998

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
VOCs	100%	>98%
Methyl chloride	100%	>98%
Ethyl chloride	100%	>98%
Methanol	100%	>98%

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

This thermal oxidizer is designed to control organic HAPs and VOC emissions from Group 1 vents.

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. **This control device is subject to the monitoring requirements of the MON. Emissions from this unit are below defined level for major source.**

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

This incinerator was performance tested.

Control parameters are:

- Air flow rate – designed (physical parameters) to be less than or equal to 2,800 scfm.
- Residence time – designed (physical parameters) to be at least 1 second in the reducing zone and 0.75 seconds in the oxidizing zone.
- Temperature – controlled at greater than or equal to 1,400 deg F in the oxidizing zone.

ATTACHMENT H

COMPLIANCE ASSURANCE MONITORING (CAM)
PLAN FORM

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:

- 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.

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
<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:	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:

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:

ATTACHMENT I

SUPPORTING EMISSIONS CALCULATIONS

Emission Unit ID	Emission Point ID	Equipment Description (internal)	Emission Unit Description	Design Capacity	Year Installed	Control Device	Emission Unit ID	Emission Unit Description	Emission Unit Name	Assoc. Control Devices	Description
Hexazinone Intermediate		F3455/AECP		781	1974 +						
			7700	10399	7.3						
			5485	8760	3163						
HK004	141.004	DMS/TEP tank wagon storage	Tank wagon storage	H: 4,300 gal K: 590	H: 1989 K: Suppliers	HKCD05	HK004	Tank truck	DMS/TEP tank wagon storage	HKCD05	Tank wagon to transport and store DMS/Storage Tank - see HKCD05 for emissions
HK006	141.012	ECF/MCF tank car or truck storage	Tank car or truck storage	20,000 gal or 5,000 gal	Suppliers	HKCD06	HK006	Tank car	ECF/MCF tank car or truck storage	HKCD06	Shipping container vented to scrubber before disconnection - see HKCD06 for emissions
HK007	141.007	F3455 brine storage tank car	Tank car	173,248 lbs of water	Replaced 2005	NONE	HK007	Tank car	F3455 brine storage tank car	NONE	Tank car vents to atmosphere
HK008	141.008	F3455 brine storage tank car	Tank car	173,273 lbs of water	Replaced 2005	NONE	HK008	Tank car	F3455 brine storage tank car	NONE	Tank car vents to atmosphere
HK009	141.009	Aqueous cyanamide storage/not used	Storage Tank	18000 gal	1947	NONE	HK009	Storage Tank	Aqueous cyanamide storage/not used	NONE	Tank vents to atmosphere through conservation vent location without pallet
HK010	141.010	Ion exchange column/not used	Column	550 gal.	1970	NONE	HK010	Column	Ion exchange column/not used	NONE	Vent stack to atmosphere above roof
HK013	141.013	NaCl brine tank/not used	Tank	2000 gal.	1978	NONE	HK013	Tank	NaCl brine tank/not used	NONE	Open port on tank vents to atmosphere
HK014	141.014	Aqueous cyanamide holdup tank/not used	Tank	3950 gal.	1970	NONE	HK014	Tank	Aqueous cyanamide holdup tank/not used	NONE	Storage tank vents through stack to atmosphere
HK015	141.015	50% NaOH storage tank	Non VOC Storage tank	51,000 gal.	1987	NONE	HK015	Non VOC Storage tank	50% NaOH storage tank	NONE	Caustic storage tank, vents to atmosphere
HK016	141.016	Process water tank	Tank	410 gal	1975	NONE	HK016	Tank	Process water tank	NONE	Water storage tank, vents to atmosphere
HK101	141.001	F-3259/AECP reactor	Reactor	4,000 gal.	Replaced 2003	HKCD01 HKCD02	HK101	Reactor	F-3259/AECP reactor	HKCD01 HKCD02	ECC and F3259 reaction - Part of Equipment Train - see HKCD01 and HKCD02 for Emissions
HK102	141.100	F-3455/DCMP reactor condenser	Condenser	91 sq. ft.	1974	HKCD01 HKCD02	HK102	Condenser	F-3455/DCMP reactor condenser	HKCD01 HKCD02	Part of Equipment Train - see HKCD01 and HKCD02 for Emissions
HK103	141.100	F-3455/DCMP reactor	Reactor	2,000 gal.	1974	HKCD01 HKCD02	HK103	Reactor	F-3455/DCMP reactor	HKCD01 HKCD02	DMA, HCl and F3455 reaction - Part of Equipment Train - see HKCD01 and HKCD02 for Emissions
HK104	151.101	HCl storage tank (WB0243) /not used	Non VOC storage tank	35000 gal	Replaced 2004	HKCD04	HK104	Non VOC storage tank	HCl storage tank (WB0243) /not used	HKCD04	Raw material handling - Storage Tank - see HKCD04 for Emissions
HK105		Stripper column cooler	Column cooler	70 sq ft	1974	NONE	HK105	Column cooler	Stripper column cooler	NONE	Stripper tails handling - cooler - process material vents to atmosphere during route to WWTP
HK106	141.002	F-3455/AECP loading	Product loading	150 GPM	1982	NONE	HK106	Collection Basin	F-3455/AECP loading	NONE	Finished F3455 product Loading to Tank Cars - Material Loading process - vented to atmosphere
HK107		Fugitive source exhaust blower	Building blower	3162 cfm	1974	NONE	HK107	Collection Basin	Fugitive source exhaust blower	NONE	Fugative emissions from various locations in process area are collected and vented to atmosphere through the blower.
HK108	141.011	storage tank in use during F3455/ammonium hydroxide tank	Non VOC Storage tank	17,500 gal	1987	HKCD10	HK108	Non VOC Storage tank	storage tank in use during F3455/ammonium hydroxide	HKCD10	Ammonium hydroxide storage tank, not used in F3455 - see HKCD09 for Emissions

Emission Unit ID	Emission Point ID	Equipment Description (internal)	Maximum Hourly Throughput, lbs	Maximum Annual Throughput, lbs	Maximum Operating Schedule, hrs/week	Fuel Usage? Y/N	Fired? Dir/Indir	Maximum Design Heat Input and/or Horsepower	Type of Burners	Burners BTU Rating	Type	Maximum Hourly Usage
Hexazinone Intermediate		F3455/AECP		5,441,246								
HK004	141.004	DMS/TEP tank wagon storage	6600	57,657,600	168	No						
HK006	141.012	ECF/MCF tank car or truck storage	4500	39,312,000	168	No						
HK007	141.007	F3455 brine storage tank car	21260	185,727,360	168	No						
HK008	141.008	F3455 brine storage tank car	21260	185,727,360	168	No						
HK009	141.009	Aqueous cyanamide storage/not used	4000	3,124,000	168	No						
HK010	141.010	Ion exchange column/not used	4000	34,944,000	168	No						
HK013	141.013	NaCl brine tank/not used	1637	14,300,832	168	No						
HK014	141.014	Aqueous cyanamide holdup tank/not used	9459	82,633,824	168	No						
HK015	141.015	50% NaOH storage tank	7650	66,830,400	168	No						
HK016	141.016	Process water tank	750	6,552,000	168	No						
HK101	141.001	F-3259/AECP reactor	2,274	19,865,425	168	No						
HK102	141.100	F-3455/DCMP reactor condenser	280	2,446,080	168	No						
HK103	141.100	F-3455/DCMP reactor	2192	19,147,397	168	No						
HK104	151.101	HCl storage tank (WB0243)/not used	6600	5,154,600	168	No						
HK105		Stripper column cooler	16756	146,380,416	168	No						
HK106	141.002	F-3455/AECP loading	16000	139,776,000	168	No						
HK107		Fugitive source exhaust blower	15326	133,884,189	168	No						
HK108	141.011	storage tank in use during F3455/ammonium hydroxide tank				No						

APPENDIX I

PROCESS DESCRIPTION

**REDACTED COPY – CLAIM
OF CONFIDENTIALITY**

AECP at B114

F3455 at B114

F-3259 Reaction Steps

**REDACTED COPY – CLAIM
OF CONFIDENTIALITY**

F-3455 Reaction Steps

**REDACTED COPY – CLAIM
OF CONFIDENTIALITY**

Fluridone Process at SLM

Campaign I Ketone II

**REDACTED COPY – CLAIM
OF CONFIDENTIALITY**

Campaign II

**REDACTED COPY – CLAIM
OF CONFIDENTIALITY**

Glypure Process at SLM

Krovar Tech Process at SLM

U9069 Process at SLM

APPENDIX II

MON REQUIREMENT SUMMARIES

MON Requirement Summary for Title V Permit

Section 5.0 Building 114 AECPP Process

AECPP is an active pesticide compound and per 63.1360, Subpart MMM applies. However, per 63.2535 (1) the primary product of the Building 114 PUG is as described in 63.2435, therefore Subpart FFFF applies for equipment in the AECPP process.

Equipment ID	Equipment Name	MON Equipment Type	MON Citations	Comments
HK102	DCMP Reactor Condenser	Group 1 batch process vent	63.2550 63.2460	Designated as Group 1; controlled via thermal oxidizer and scrubber.
HK101	AECPP Reactor	Group 1 batch process vent	63.2550 63.2460	Designated as Group 1; controlled via thermal oxidizer and scrubber.
HKCD03WW	AECPP Reactor Scrubber Discharge	Group 1 wastewater stream	63.2550 63.2485	Controlled by stripper
HK007 & HK008	Waste Brine Storage Railcars	Group 1 wastewater tanks	63.133(a)(1)	Contain Group 1 wastewater therefore require fixed roof.
HKCD07	Hydrolysis Tank	Wastewater tank	63.133(a)(2)	Vents to thermal oxidizer and scrubber
HKCD08	Stripping Column	Wastewater treatment device	63.138(e)	Vents to thermal oxidizer and scrubber.

MON Requirement Summary for Title V Permit

Section 5.0 Building 114 F3455 Process

Equipment ID	Equipment Name	MON Equipment Type	MON Citations	Comments
HK104	HCL Storage Tank	Group 1 Storage Tank	63.2550 63.2470	Contains HAP; maximum true vapor pressure 4 psia, therefore Group 1
HK014	Cyanamide Hold-up Tank	Group 2 Bottoms Receiver	63.2550 63.2450(r)	Capacity < 10,000 gallons and maximum true vapor pressure of total HAP < 1 psia, therefore Group 2 with no work practice standards
HK101	F-3259 Reactor	Group 1 batch process vent	63.2550 63.2460	Designated as Group 1; controlled via thermal oxidizer and scrubber.
HK103	F-3455 Reactor Condenser	Group 1 batch process vent	63.2550 63.2460	Designated as Group 1; controlled via thermal oxidizer and scrubber.
HK103WW	F-3259 Reactor Aqueous waste	Group 1 wastewater stream	63.2550 63.2485	Contains HAP > 1000ppm and flow rate > 1L/m, therefore Group 1
HK007 & HK008	Waste Brine Storage Railcars	Group 1 wastewater tanks	63.133(a)(1)	Contain Group 1 wastewater therefore require fixed roof.
HKCD07	Hydrolysis Tank	Wastewater treatment device with exothermic reaction	63.133(a)(2)	Vents to thermal oxidizer and scrubber
HKCD08	Stripping Column	Wastewater treatment device	63.138(e)	Vents to thermal oxidizer and scrubber.

MON Requirement Summary for Title V Permit

Section 4.0 Small Lots Manufacturing (SLM) Fluridone Process

Fluridone is an active pesticide compound and per 63.1360, Subpart MMM applies. However, per 63.2535 (1) the primary product of the SLM PUG is as described in 63.2435, therefore Subpart FFFF applies for equipment in the fluridone process.

Equipment ID	Equipment Name	MON Equipment Type	MON Citations	Comments
226	Ketone Intermediate Storage (iso container)	Group 2 Storage Vessel	63.2550 63.2470	Contains HAP (Toluene); isotaner capacity is <19813 gallons therefore Group 2
101	Toluene Storage	Group 2 Storage Vessel	63.2550 63.2470	Contains HAP (Toluene); tank capacity is <10000 gallons therefore Group 2
108	Flammable Waste Tank	Group 2 Storage Vessel	63.2550 63.2470	Contains HAP (Methanol); tank capacity is <10000 gallons therefore Group 2
112	J Tank	Group 2 Storage Vessel	63.2550 63.2470	Contains HAP (Toluene); tank capacity is <10000 gallons therefore Group 2
109	Extraction Tank	Group 2 Storage Vessel	63.2550 63.2470	Contains HAP; tank capacity is <10000 gallons therefore Group 2
205	Reactor 1	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1. HAPs controlled to 98% efficiency by thermal oxidizer.
206	Reactor 2	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1. HAPs controlled to 98% efficiency by thermal oxidizer.
219	Reactor 5	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1. HAPs controlled to 98% efficiency by thermal oxidizer.
208	Reactor 6	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1. HAPs controlled to 98% efficiency by thermal oxidizer.
209	Reactor 8	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1. HAPs controlled to 98% efficiency by thermal oxidizer.

MON Requirement Summary for Title V Permit

Section 4.0 Small Lots Manufacturing (SLM) Fluridone Process

Fluridone is an active pesticide compound and per 63.1360, Subpart MMM applies. However, per 63.2535 (1) the primary product of the SLM PUG is as described in 63.2435, therefore Subpart FFFF applies for equipment in the fluridone process.

201	Centrifuge	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1. HAPs controlled to 98% efficiency by thermal oxidizer.
002	Vacuum Dryer	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1. HAPs controlled to 98% efficiency by thermal oxidizer.
003 WW	Main Scrubber Discharge	Group 2 Wastewater	63.2550 63.2485	HAP (toluene) concentration < 1000ppm

MON Requirement Summary for Title V Permit

Section 4.0 Small Lots Manufacturing (SLM) Glypure® Process

Equipment ID	Equipment Name	MON Equipment Type	MON Citations	Comments
112	J Tank	Group 2 Storage Tank	63.2550 63.2470	Capacity < 10,000 gallons, therefore Group 2
108	Flammable Waste Tank	Group 2 Storage Tank	63.2550 63.2470	Capacity < 10,000 gallons, therefore Group 2
	Blend Tank	Group 2 Storage Tank	63.2550 63.2470	Capacity < 10,000 gallons, therefore Group 2
112L	J Tank Loading	Group 2 transfer rack	63.2550 63.2475	Rack weighted average partial pressure of HAP is 0.01psia, therefore Group 2
108L	Flammable Waste Tank Loading	Group 2 transfer rack	63.2550 63.2475	Rack weighted average partial pressure of HAP is 0.01psia, therefore Group 2

MON Requirement Summary for Title V Permit

Section 4.0 Small Lots Manufacturing Ketone Intermediate Process

Equipment ID	Equipment Name	MON Equipment Type	MON Citations	Comments
227	Sodium Methoxide Tank	Group 2 Storage Tank	63.2550 63.2470	Contains HAP; tank capacity is <10000 gallons therefore Group 2
108	Flammable Waste Tank	Group 2 Storage Tank	63.2550 63.2470	Contains HAP (Methanol); isotaner capacity is <19813 gallons therefore Group 2
112	J Tank	Group 2 Storage Tank	63.2550 63.2470	Designated as Group 1 Contains HAP; tank capacity is <10000 gallons therefore Group 2
101	Toluene Storage	Group 2 Storage Tank	63.2550 63.2470	Contains HAP; tank capacity is <10000 gallons therefore Group 2
205	Reactor 1	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled with thermal oxidizer
206	Reactor 2	Group 1 Batch Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled with thermal oxidizer
203c	Reactor 3 Condenser	Group 1 Batch Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled with thermal oxidizer
103	ISO Storage Tank	Group 2 Storage Tank	63.2550 63.2470	Contains HAP; tank capacity is <10000 gallons therefore Group 2
219	Reactor 5	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled with thermal oxidizer
208p	Reactor 6 Vacuum Pump	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled with thermal oxidizer
208c	Reactor 6 Condenser	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled with thermal oxidizer

MON Requirement Summary for Title V Permit

Section 4.0 Small Lots Manufacturing Ketone Intermediate Process

Equipment ID	Equipment Name	MON Equipment Type	MON Citations	Comments
208WW1	Reactor 6 Wastewater (cut 1)	Group 1 Wastewater	63.2550 63.2485	Designated as group 1, sent offsite for disposal
208WW2	Reactor 6 Wastewater (cut 2 and 3)	Group 2 Wastewater	63.2550 63.2485	Toluene range 500-600ppm therefore Group 2
109	Extraction Tank	Wastewater management unit	63.2550 63.2485	Fixed roof
WWL	Wastewater Loading	Wastewater management unit	63.2550 63.2485	Fixed roof

MON Requirement Summary for Title V Permit

Section 4.0 Small Lots Manufacturing (SLM) U9069 Process

Equipment ID	Equipment Name	MON Equipment Type	MON Citations	Comments
202	ML Disengaging Tank	Group 2 Storage Tank	63.2550 63.2470	Contains HAP; tank capacity is <10000 gallons therefore Group 2
108	Flammable Waste Tank	Group 2 Storage Tank	63.2550 63.2470	Contains HAP (Methanol); isotaner capacity is <19813 gallons therefore Group 2
112	J Tank	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled by thermal oxidizer
109	Extraction Tank	Group 2 Storage Tank	63.2550 63.2470	Contains HAP; tank capacity is <10000 gallons therefore Group 2
205	Reactor 1	Group 1 Continuous Process Vent	63.2550 63.2455	Designated as Group 1; HAPs controlled by thermal oxidizer
206	Reactor 2	Group 1 Continuous Process Vent	63.2550 63.2455	Designated as Group 1; HAPs controlled by thermal oxidizer
219	Reactor 5	Group 1 Continuous Process Vent	63.2550 63.2455	Designated as Group 1; HAPs controlled by thermal oxidizer
208	Reactor 6	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled by thermal oxidizer
209	Reactor 8	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled by thermal oxidizer
201	Centrifuge	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled by thermal oxidizer

MON Requirement Summary for Title V Permit

Section 4.0 Small Lots Manufacturing (SLM) U9069 Process

002	Vacuum Dryer	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled by thermal oxidizer
003WW	Main Scrubber Discharge	Group 2 Wastewater	63.2550 63.2845	HAP (toluene) concentration < 1000ppm
201A	Wet Cake Bin	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled by thermal oxidizer
108L	Flammable Waste Tank Loading	Group 1 Transfer Rack	63.2550 63.2475	Uses vapor balancing
109WW	Extraction Tank Waste Loading	Group 2 Transfer Rack	63.2550 63.2475	Vapor pressure of phenol <0.02psia therefore group 2