

**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  
Email: [potesta@potesta.com](mailto:potesta@potesta.com)

Project No. 0101-14-0162-008

November 2015

**POTESTA**

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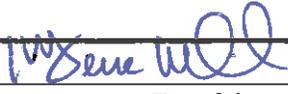
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## Cover Document for Confidential Information

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

<b>Reason for Submittal Of Confidential Information : Title V Renewal Application</b>
---------------------------------------------------------------------------------------

Identification of Confidential Information	Rationale for Confidential Claim 45CSR31-4.1a-e	Confidential Treatment Time Period
<ul style="list-style-type: none"> <li>-Equipment design and capacity information</li> <li>-Process descriptions</li> <li>-Process flow diagrams</li> <li>-Site Map</li> </ul>	<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 The claim has not expired by its term, or been waived or withdrawn.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 style="text-align: right;">See attached for b-e</p>	Permanent

<b>Responsible Official Signature:</b>	
<b>Responsible Official Title:</b>	President
<b>Date Signed:</b>	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

Form with 10 numbered sections: 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.: 039-00663; 4. Federal Employer ID No. (FEIN): 465403006; 5. Permit Application Type: [X] Permit Renewal; 6. Type of Business Entity: [X] Corporation; 7. Is the Applicant the: [X] Both; 8. Number of onsite employees: 10; 9. Governmental Code: [X] Privately owned and operated; 0; 10. Business Confidentiality Claims: [X] Yes.

<b>11. Mailing Address</b>		
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	

<b>12. Facility Location</b>		
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 <sup>1</sup> ? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, name the area(s).	
If no, do emissions impact a Class I Area <sup>1</sup> ? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
<sup>1</sup> 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.		

<b>13. Contact Information</b>		
<b>Responsible Official:</b> J. Gene Williams		<b>Title:</b> President
<b>Street or P.O. Box:</b> 200 Willacoochee Highway		
<b>City:</b> Douglas	<b>State:</b> GA	<b>Zip:</b> 31535-
<b>Telephone Number:</b> (912) 384-5101	<b>Fax Number:</b> (912) 384-6330	
<b>E-mail address:</b> gwilliams@optimachem.com		
<b>Environmental Contact:</b> Al Horner		<b>Title:</b> Environmental, Health, and Safety Manger
<b>Street or P.O. Box:</b> 200 Willacoochee Highway		
<b>City:</b> Douglas	<b>State:</b> GA	<b>Zip:</b> 31535-
<b>Telephone Number:</b> (912) 720-5136	<b>Fax Number:</b> (912) 384-6330	
<b>E-mail address:</b> ahorner@optimachem.com		
<b>Application Preparer:</b> Patrick Ward		<b>Title:</b> Manager of Air Permitting
<b>Company:</b> Potesta & Associates, Inc.		
<b>Street or P.O. Box:</b> 7012 MacCorkle Avenue, SE		
<b>City:</b> Charleston	<b>State:</b> WV	<b>Zip:</b> 25304-
<b>Telephone Number:</b> (304) 342-1400	<b>Fax Number:</b> (304) 343-9031	
<b>E-mail address:</b> 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 R30-03900001

**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.



**22. Inactive Permits/Obsolete Permit Conditions**

Permit Number	Date of Issuance	Permit Condition Number
None		
	/ /	
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**Section 3: Facility-Wide Emissions**

<b>23. Facility-Wide Emissions Summary [Tons per Year]</b>	
<b>Criteria Pollutants</b>	<b>Potential Emissions</b>
Carbon Monoxide (CO)	2.98
Nitrogen Oxides (NO <sub>x</sub> )	19.44
Lead (Pb)	0
Particulate Matter (PM <sub>2.5</sub> ) <sup>1</sup>	0
Particulate Matter (PM <sub>10</sub> ) <sup>1</sup>	1.18(HCl acid mist)
Total Particulate Matter (TSP)	1.18
Sulfur Dioxide (SO <sub>2</sub> )	0
Volatile Organic Compounds (VOC)	17.87
<b>Hazardous Air Pollutants<sup>2</sup></b>	<b>Potential Emissions</b>
Xylene	4.05
Ethyl Chloride	3.37
Methanol	6.04
Methyl Chloride	0.04
Toluene	0.65
HCl	1.18
<b>Regulated Pollutants other than Criteria and HAP</b>	<b>Potential Emissions</b>
NH <sub>3</sub>	1.15
Ethanol	2.52
Ethylbenzene	1.01

<sup>1</sup>PM<sub>2.5</sub> and PM<sub>10</sub> are components of TSP.  
<sup>2</sup>For 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**

<b>24. Insignificant Activities (Check all that apply)</b>	
<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 <sub>2</sub> 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"/>	19. Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO <sub>x</sub> , SO <sub>2</sub> , VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units.  Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis:  _____ _____ _____ _____ _____ _____ _____ _____ _____

24. Insignificant Activities (Check all that apply)	
<input type="checkbox"/>	<p>20. Emission units which do not have any applicable requirements and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27.</p> <p>Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
<input 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

<b>24. Insignificant Activities (Check all that apply)</b>	
	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**

<b>25. Equipment Table</b>
Fill out the <b>Title V Equipment Table</b> and provide it as <b>ATTACHMENT D</b> .
<b>26. Emission Units</b>
For each emission unit listed in the <b>Title V Equipment Table</b> , fill out and provide an <b>Emission Unit Form</b> as <b>ATTACHMENT E</b> .
For each emission unit not in compliance with an applicable requirement, fill out a <b>Schedule of Compliance Form</b> as <b>ATTACHMENT F</b> .
<b>27. Control Devices</b>
For each control device listed in the <b>Title V Equipment Table</b> , fill out and provide an <b>Air Pollution Control Device Form</b> as <b>ATTACHMENT G</b> .
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 <b>Compliance Assurance Monitoring (CAM) Form(s)</b> for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as <b>ATTACHMENT H</b> .

**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.

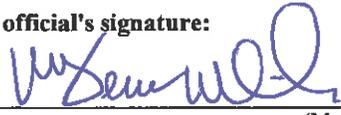
**b. Compliance Certification**

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)

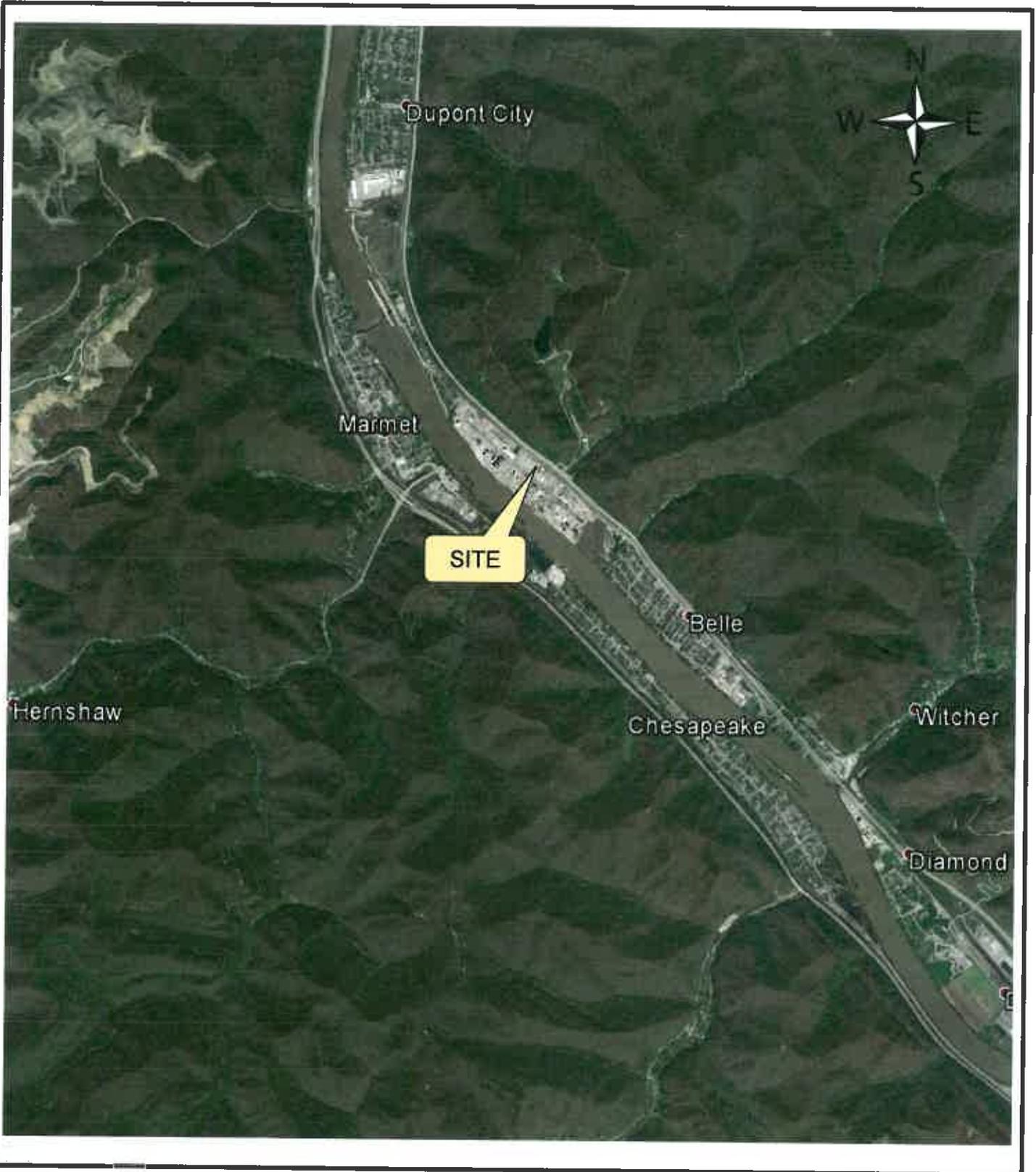
**Note: Please check all applicable attachments included with this permit application:**

<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](http://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**

**REDACTED COPY**  
**CLAIM OF CONFIDENTIALITY**

CUSTOMER'S NAME	
TITLE	
COMPANY	
DATE	BY
APPROVED BY	DATE
RECEIVED	
DATE	
BY	

**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  
OF CONFIDENTIALITY**

**GLYPURE PROCESS AT SLM**

**REDACTED COPY – CLAIM  
OF CONFIDENTIALITY**

**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**

**U-9069 at SLM ACETONE REMOVAL**

**REDACTED COPY – CLAIM  
OF CONFIDENTIALITY**

**U9069 at SLM - PHENOL**

**REDACTED COPY – CLAIM  
OF CONFIDENTIALITY**

**ATTACHMENT D**  
**EMISSION UNITS TABLE**

Attachment D - Bldg 114 Equipment List Redacted (14-0162-008)-jjd

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	REDACTED	REDACTED	Tank wagon storage	H: 1975	REDACTED	HKCD05
HK006	141.012	REDACTED	REDACTED	Tank car or truck storage	K: Suppliers	REDACTED	HKCD06
HK007	141.007	REDACTED	REDACTED	Tank car	Suppliers	REDACTED	NONE
HK008	141.008	REDACTED	REDACTED	Tank car	1972	REDACTED	NONE
HK009	141.009	REDACTED	REDACTED	Storage Tank		REDACTED	NONE
HK010	141.010	REDACTED	REDACTED	Column	1970	REDACTED	NONE
HK013	141.013	REDACTED	REDACTED	Tank	1978	REDACTED	NONE
HK014	141.014	REDACTED	REDACTED	Tank	1970	REDACTED	NONE
HK015	141.015	REDACTED	REDACTED	Non VOC Storage tank	1987	REDACTED	NONE
HK016	141.016	REDACTED	REDACTED	Tank	1975	REDACTED	NONE
HK101	141.001	REDACTED	REDACTED	Reactor	2003 (replacement)	REDACTED	HKCD03
HK102	141.100	REDACTED	REDACTED	Condenser	1974	REDACTED	HKCD01 HKCD02
HK103	141.100	REDACTED	REDACTED	Reactor	1974	REDACTED	HKCD01 HKCD02
HK104	151.101	REDACTED	REDACTED	Non VOC storage tank	2004 (replacement)	REDACTED	HKCD04
HK105		REDACTED	REDACTED	Column cooler	1974	REDACTED	NONE
HK106	141.002	REDACTED	REDACTED	Product loading	1982	REDACTED	NONE
HK107		REDACTED	REDACTED	Building blower	1974	REDACTED	NONE
HK108	141.011	REDACTED	REDACTED	Non VOC Storage tank	1987	REDACTED	HKCD10
<b>CONTROL DEVICES</b>		REDACTED	REDACTED			REDACTED	
HKCD01	141.100	REDACTED	REDACTED	Thermal oxidizer	1998	REDACTED	
HKCD02	141.100	REDACTED	REDACTED	Thermal oxidizer scrubber	1998	REDACTED	
HKCD03	141.001	REDACTED	REDACTED	Scrubber	1975	REDACTED	
HKCD04	151.101	REDACTED	REDACTED	Tank scrubber	1988	REDACTED	
HKCD05	141.004	REDACTED	REDACTED	Scrubber	1974	REDACTED	
HKCD06	141.012	REDACTED	REDACTED	Scrubber	2002	REDACTED	
HKCD07	141.100	REDACTED	REDACTED	Tank	1975	REDACTED	
HKCD08	141.100	REDACTED	REDACTED	Column	1975	REDACTED	
HKCD09	141.011	REDACTED	REDACTED	Scrubber	1970	REDACTED	
HKCD10	141.012	REDACTED	REDACTED	Carbon absorber	2005	REDACTED	

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Optima Belle, LLC 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	Redacted	Tank	2002 (relocated)	Redacted	003, 009, 010
012	104.014	Redacted	Tank	1999	Redacted	009, 010
210	107.022	Redacted	Packaging Unit	2005 (replacement)	Redacted	023
116A	107.020	Redacted	Solids Charge Station		Redacted	116A
115A	104.003	Redacted	Solids Charge Station		Redacted	115
901	104.014	Redacted	Bulk Liquid Transfer		Redacted	009, 010
002	104.014	Redacted	Dryer		Redacted	004, 009, 010
013	104.006	Redacted	Tank	1988	Redacted	None
101	104.014	Redacted	Tank	1980	Redacted	009, 010
104	104.014	Redacted	Tank	1988	Redacted	009, 010
108	104.014	Redacted	Tank	1961	Redacted	009, 010
108L	104.014	Redacted	Transfer Rack	2007	Redacted	Vapor Balancing
109	104.014	Redacted	Tank		Redacted	009, 010
109L	104.14	Redacted	Transfer Rack	1968	Redacted	009
112	104.014	Redacted	Tank	1951	Redacted	009, 010
108L	104.014	Redacted	Transfer Rack	2007	Redacted	009
114A	104.003	Redacted	Solids Charge Station	2005 (replacement)	Redacted	114
201A	104.014	Redacted			Redacted	009
202	104.014	Redacted	Tank	1988	Redacted	009, 010
203	104.014	Redacted	Reactor		Redacted	003, 009, 010
203C	104.014	Redacted	Condenser	1977	Redacted	009
205	104.014	Redacted	Reactor		Redacted	003, 009, 010
206	104.014	Redacted	Reactor	1977	Redacted	003, 009, 010
208	104.014	Redacted	Reactor	1977	Redacted	009, 010
208P	104.014	Redacted	Pump		Redacted	009
208C	104.014	Redacted	Condenser		Redacted	009
209	104.014	Redacted	Reactor	1977	Redacted	009, 010
219	104.014	Redacted	Reactor	1984	Redacted	003, 009, 010
226	104.014	Redacted	Tank	1988	Redacted	009, 010
227	104.014	Redacted	Tank	2005	Redacted	009, 010

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Optima Belle, LLC SLM Title V Equipment List

Emission Unit ID	Emission Point ID	Internal Equipment Description	Emission Unit Description	Year Installed	Design Capacity	Control Device
<b>Control Devices</b>						
023	107.022	Redacted	Dust Collector	2005 (replacement)	Redacted	
116A	107.02	Redacted	Dust Collector		Redacted	
115	104.003	Redacted	Dust Collector		Redacted	
009	104.014	Redacted	Incinerator	1977	Redacted	
010	104.014	Redacted	Scrubber	1977	Redacted	
003	104.014	Redacted	Scrubber	2007	Redacted	
004	104.014	Redacted	Condenser		Redacted	
114	104.003	Redacted	Dust Collector	2001	Redacted	

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**ATTACHMENT E**  
**EMISSION UNIT FORMS**

## ATTACHMENT E - Emission Unit Form

<b>Emission Unit Description</b> Tank truck		
<b>Emission unit ID number:</b>  HK004	<b>Emission unit name:</b>  Tank wagon	<b>List any control devices associated with this emission unit:</b>  HKCD05

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

Redacted

<b>Manufacturer:</b>  Unknown	<b>Model Number:</b>  N/A	<b>Serial Number:</b>  N/A
<b>Construction Date:</b> H: 1989 K: Suppliers	<b>Installation Date:</b> H: 1989 K: Suppliers	<b>Modification Date:</b> 0

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

Redacted

<b>Maximum Hourly Throughput:</b>  Redacted	<b>Maximum Annual Throughput:</b>  Redacted	<b>Maximum Operating Schedule:</b>  Redacted
---------------------------------------------------	---------------------------------------------------	----------------------------------------------------

**Fuel Usage Data (fill out all applicable fields)**

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

**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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<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	Redacted	Redacted
Nitrogen Oxides (NO <sub>x</sub> )	Redacted	Redacted
Lead (Pb)	Redacted	Redacted
Particulate Matter (PM <sub>2.5</sub> )	Redacted	Redacted
Particulate Matter (PM <sub>10</sub> )	Redacted	Redacted
Total Particulate Matter (TSP)	Redacted	Redacted
Sulfur Dioxide (SO <sub>2</sub> )	Redacted	Redacted
Volatile Organic Compounds (VOC)	Redacted	Redacted
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Redacted	Redacted	Redacted
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Redacted	Redacted	Redacted
Redacted	Redacted	Redacted
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p>		
<p><b>REDACTED COPY – CLAIM OF CONFIDENTIALITY</b></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.



<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	Redacted	Redacted
Nitrogen Oxides (NO <sub>x</sub> )	Redacted	Redacted
Lead (Pb)	Redacted	Redacted
Particulate Matter (PM <sub>2.5</sub> )	Redacted	Redacted
Particulate Matter (PM <sub>10</sub> )	Redacted	Redacted
Total Particulate Matter (TSP)	Redacted	Redacted
Sulfur Dioxide (SO <sub>2</sub> )	Redacted	Redacted
Volatile Organic Compounds (VOC)	Redacted	Redacted
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Redacted	Redacted	Redacted
Redacted	Redacted	Redacted
Redacted	Redacted	Redacted
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Redacted	Redacted	Redacted
Redacted	Redacted	Redacted
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Emission factors</p>		
<p><b>REDACTED COPY – CLAIM OF CONFIDENTIALITY</b></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.

## ATTACHMENT E - Emission Unit Form

<b>Emission Unit Description</b>				Tank			
<b>Emission unit ID number:</b>		<b>Emission unit name:</b>		<b>List any control devices associated with this emission unit:</b>			
103		Tank		003, 009, 010			
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b>							
Tank							
<b>Manufacturer:</b>		<b>Model Number:</b>		<b>Serial Number:</b>			
Unknown		N/A		N/A			
<b>Construction Date:</b>		<b>Installation Date:</b>		<b>Modification Date:</b>			
2002 (relocated)		2002 (relocated)		0			
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b>							
Redacted							
<b>Maximum Hourly Throughput:</b>		<b>Maximum Annual Throughput:</b>		<b>Maximum Operating Schedule:</b>			
Redacted		Redacted		Redacted			
<b>Fuel Usage Data (fill out all applicable fields)</b>							
<b>Does this emission unit combust fuel?</b>				__ Yes __X_ No		<b>If yes, is it?</b>	
						__ Indirect Fired __ Direct Fired	
<b>Maximum design heat input and/or maximum horsepower rating:</b>				<b>Type and Btu/hr rating of burners:</b>			
<b>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.</b>							
<b>Describe each fuel expected to be used during the term of the permit.</b>							
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)	Redacted	Redacted
Nitrogen Oxides (NO <sub>x</sub> )	Redacted	Redacted
Lead (Pb)	Redacted	Redacted
Particulate Matter (PM <sub>2.5</sub> )	Redacted	Redacted
Particulate Matter (PM <sub>10</sub> )	Redacted	Redacted
Total Particulate Matter (TSP)	Redacted	Redacted
Sulfur Dioxide (SO <sub>2</sub> )	Redacted	Redacted
Volatile Organic Compounds (VOC)	Redacted	Redacted
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Redacted	Redacted	Redacted
HCL	Redacted	Redacted
Methanol	Redacted	Redacted
Toluene	Redacted	Redacted
Ethyl Benzene	Redacted	Redacted
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
None	Redacted	Redacted
None	Redacted	Redacted
<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 Master &amp; Engineering Estimate</p>		
<p><b>REDACTED COPY – CLAIM OF CONFIDENTIALITY</b></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* 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

<b>Emission Unit Description</b>				Reactor			
Emission unit ID number:		Emission unit name:		List any control devices associated with this emission unit:			
219		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):							
Redacted							
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? <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	
		<b>REDACTED COPY - CLAIM</b>					
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<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	Redacted	Redacted
Nitrogen Oxides (NO <sub>x</sub> )	Redacted	Redacted
Lead (Pb)	Redacted	Redacted
Particulate Matter (PM <sub>2.5</sub> )	Redacted	Redacted
Particulate Matter (PM <sub>10</sub> )	Redacted	Redacted
Total Particulate Matter (TSP)	Redacted	Redacted
Sulfur Dioxide (SO <sub>2</sub> )	Redacted	Redacted
Volatile Organic Compounds (VOC)	Redacted	Redacted
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Redacted	Redacted	Redacted
Redacted	Redacted	Redacted
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
None	Redacted	Redacted
None	Redacted	Redacted
<p><b>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.).</b>  Emission Master &amp; Engineering Estimate</p> <p style="text-align: center;"><b>REDACTED COPY – CLAIM OF CONFIDENTIALITY</b></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 used.)  
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

<i>Emission Unit Description</i>		Packaging Unit
Emission unit ID number:	Emission unit name:	List any control devices associated with this emission unit:
12	Tank	0

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:
1999	1999	0

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

Redacted

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? <span style="float: right;">___ Yes    <input checked="" type="checkbox"/> No</span>	If yes, is it? <span style="float: right;">___ Indirect Fired    ___ Direct Fired</span>
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)	Redacted	Redacted
Nitrogen Oxides (NO <sub>x</sub> )	Redacted	Redacted
Lead (Pb)	Redacted	Redacted
Particulate Matter (PM <sub>2.5</sub> )	Redacted	Redacted
Particulate Matter (PM <sub>10</sub> )	Redacted	Redacted
Total Particulate Matter (TSP)	Redacted	Redacted
Sulfur Dioxide (SO <sub>2</sub> )	Redacted	Redacted
Volatile Organic Compounds (VOC)	Redacted	Redacted
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Redacted	Redacted	Redacted
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Redacted	Redacted	Redacted
Redacted	Redacted	Redacted
<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 Master &amp; Engineering Estimate</p>		
<p><b>REDACTED COPY – CLAIM OF CONFIDENTIALITY</b></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 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

<b>Control device ID number:</b> HKCD03	<b>List all emission units associated with this control device.</b> HK101	
<b>Manufacturer:</b>	<b>Model number:</b>	<b>Installation date:</b> 2008
<b>Type of Air Pollution Control Device:</b> <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		
<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
Methanol		> 90%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b>  This scrubber is designed to remove methanol from a Group 1 vent per the MON.		
<b>Is this device subject to the CAM requirements of 40 C.F.R. 64?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>If Yes, Complete ATTACHMENT H</b> <b>If No, Provide justification.    Emissions from this unit are below defined level for major source.</b>		
<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b>  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

<b>Control device ID number:</b> 115	<b>List all emission units associated with this control device.</b> 115A																			
<b>Manufacturer:</b> Young Industries	<b>Model number:</b> FBD 42-8 (s/n 7674)	<b>Installation date:</b> 1978																		
<b>Type of Air Pollution Control Device:</b>																				
<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;"><input checked="" type="checkbox"/> Baghouse/Fabric Filter</td> <td style="width: 33%;"><input type="checkbox"/> Venturi Scrubber</td> <td style="width: 33%;"><input type="checkbox"/> Multiclone</td> </tr> <tr> <td><input type="checkbox"/> Carbon Bed Adsorber</td> <td><input type="checkbox"/> Packed Tower Scrubber</td> <td><input type="checkbox"/> Single Cyclone</td> </tr> <tr> <td><input type="checkbox"/> Carbon Drum(s)</td> <td><input type="checkbox"/> Other Wet Scrubber</td> <td><input type="checkbox"/> Cyclone Bank</td> </tr> <tr> <td><input type="checkbox"/> Catalytic Incinerator</td> <td><input 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 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
<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																		
<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>																				
Pollutant	Capture Efficiency	Control Efficiency																		
PM	100	99.9																		
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b>																				
Control media is fabric cartridge filter																				
<b>Is this device subject to the CAM requirements of 40 C.F.R. 64?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																				
If Yes, Complete ATTACHMENT H																				
If No, Provide justification. Emissions from this point are below defined level for major source.																				
<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b>																				
Visual emissions monitoring is done monthly.																				

## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> 023	<b>List all emission units associated with this control device.</b> 210	
<b>Manufacturer:</b> Acrison	<b>Model number:</b> BV-500 (s/n BV-1-167)	<b>Installation date:</b>
<b>Type of Air Pollution Control Device:</b>		
<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	
<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
PM	100	99.9
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b>		
Control media is single fabric cartridge filter		
<b>Is this device subject to the CAM requirements of 40 C.F.R. 64?</b> <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.		
<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b>		
Visual emissions are monitored monthly		

## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> 116	<b>List all emission units associated with this control device.</b> 116A	
<b>Manufacturer:</b> Young Industries	<b>Model number:</b>	<b>Installation date:</b> 1978
<b>Type of Air Pollution Control Device:</b>		
<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
<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
<b>Pollutant</b>	<b>Capture Efficiency</b>	<b>Control Efficiency</b>
PM	100	99.9
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b>		
Control media is fabric bags		
<b>Is this device subject to the CAM requirements of 40 C.F.R. 64?</b> <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.		
<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b>		
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?**  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.**

Condenser vents to control device 009 Incinerator.

## ATTACHMENT G - Air Pollution Control Device Form

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

<b>Control device ID number:</b> HKCD08	<b>List all emission units associated with this control device.</b> HKCD07	
<b>Manufacturer:</b>	<b>Model number:</b>	<b>Installation date:</b> 1975
<b>Type of Air Pollution Control Device:</b>		
<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>Steam Stripper</u>
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	
<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
Methanol		*
VOCs		*
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.		
<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> 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

<b>Control device ID number:</b> 114	<b>List all emission units associated with this control device.</b> 114A	
<b>Manufacturer:</b> Flexicon	<b>Model number:</b> _____	<b>Installation date:</b> 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

<b>Control device ID number:</b> HKCD09	<b>List all emission units associated with this control device.</b> HK108	
<b>Manufacturer:</b> Beetle Plastics	<b>Model number:</b>	<b>Installation date:</b> 1970
<b>Type of Air Pollution Control Device:</b>		
<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		
<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
Ammonia	100%	
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> This water scrubber is designed to control ammonia fumes and odor when the associated storage tank vents.		
<b>Is this device subject to the CAM requirements of 40 C.F.R. 64?</b> <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.		
<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> A flow switch causes an alarm to occur on low water flow.		

**ATTACHMENT G - Air Pollution Control Device Form**

<b>Control device ID number:</b> HKCD10	<b>List all emission units associated with this control device.</b> HK104	
<b>Manufacturer:</b> Calgon	<b>Model number:</b>	<b>Installation date:</b> 2005

**Type of Air Pollution Control Device:**

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

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

Pollutant	Capture Efficiency	Control Efficiency
VOC		

**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  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

<b>Control device ID number:</b> HKCD05	<b>List all emission units associated with this control device.</b> HK004	
<b>Manufacturer:</b>	<b>Model number:</b>	<b>Installation date:</b> 1974

**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 checked="" 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
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  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?**  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.**

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

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

<b>Control device ID number:</b> 009	<b>List all emission units associated with this control device.</b> 103, 012, 901, 002, 101, 104, 108, 108L, 109, 109L, 112, 200, 201, 201A, 202, 203, 203C 205, 206, 208, 208C, 208P, 209, 226,
-----------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<b>Manufacturer:</b> North American	<b>Model number:</b> 6514-8	<b>Installation date:</b> 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 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

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

<b>Control device ID number:</b> HKCD02	<b>List all emission units associated with this control device.</b> HKCD01, HK101, HK102, HK103, HKCD07, HKCD08	
<b>Manufacturer:</b>	<b>Model number:</b>	<b>Installation date:</b> 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 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?**  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 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.htm>

### 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) <sup>a</sup> 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	<sup>b</sup> EMISSION LIMITATION or STANDARD	<sup>c</sup> 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

<sup>a</sup> 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).

<sup>b</sup> 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).

<sup>c</sup> 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) <sup>a</sup> Indicator No. 1:	4d) <sup>a</sup> Indicator No. 2:
<b>5a) GENERAL CRITERIA</b> Describe the <u>MONITORING APPROACH</u> used to measure the indicators:			
<sup>b</sup> Establish the appropriate <u>INDICATOR RANGE</u> or the procedures for establishing the indicator range which provides a reasonable assurance of compliance:			
<b>5b) PERFORMANCE CRITERIA</b> Provide the <u>SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA</u> , such as detector location, installation specifications, and minimum acceptable accuracy:			
<sup>c</sup> 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.):			
<sup>d</sup> 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:			

<sup>a</sup> 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.

<sup>b</sup> 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.

<sup>c</sup> 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.

<sup>d</sup> 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 +						
HK004	141.004	Tank wagon	Tank wagon storage	Redacted	H: 1989 K: Suppliers	HKCD05	HK004	Tank truck	Tank wagon	HKCD05	Redacted
HK006	141.012	Tank car	Tank car or truck storage	Redacted	Suppliers	HKCD06	HK006	Tank car	Tank car	HKCD06	Redacted
HK007	141.007	Tank car	Tank car	Redacted	Replaced 2005	NONE	HK007	Tank car	Tank car	NONE	Redacted
HK008	141.008	Tank car	Tank car	Redacted	Replaced 2005	NONE	HK008	Tank car	Tank car	NONE	Redacted
HK009	141.009	tank	Storage Tank	Redacted	1947	NONE	HK009	Storage Tank	tank	NONE	Redacted
HK010	141.010	Column/not used	Column	Redacted	1970	NONE	HK010	Column	Column/not used	NONE	Redacted
HK013	141.013	Tank/not used	Tank	Redacted	1978	NONE	HK013	Tank	Tank/not used	NONE	Redacted
HK014	141.014	Tank/not used	Tank	Redacted	1970	NONE	HK014	Tank	Tank/not used	NONE	Redacted
HK015	141.015	Tank	Non VOC Storage tank	Redacted	1987	NONE	HK015	Non VOC Storage tank	Tank	NONE	Redacted
HK016	141.016	Tank	Tank	Redacted	1975	NONE	HK016	Tank	Tank	NONE	Redacted
HK101	141.001	Reactor	Reactor	Redacted	Replaced 2003	HKCD01 HKCD02	HK101	Reactor	Reactor	HKCD01 HKCD02	Redacted
HK102	141.100	Condenser	Condenser	Redacted	1974	HKCD01 HKCD02	HK102	Condenser	Condenser	HKCD01 HKCD02	Redacted
HK103	141.100	Reactor	Reactor	Redacted	1974	HKCD01 HKCD02	HK103	Reactor	Reactor	HKCD01 HKCD02	Redacted
HK104	151.101	Tank/not used	Non VOC storage tank	Redacted	Replaced 2004	HKCD04	HK104	Non VOC storage tank	Tank/not used	HKCD04	Redacted
HK105		Stripper column cooler	Column cooler	Redacted	1974	NONE	HK105	Column cooler	Stripper column cooler	NONE	Redacted
HK106	141.002	Product Loading	Product loading	Redacted	1982	NONE	HK106	Collection Basin	Product Loading	NONE	Redacted
HK107		Fugitive source exhaust blower	Building blower	Redacted	1974	NONE	HK107	Collection Basin	Fugitive source exhaust blower	NONE	Redacted
HK108	141.011	Tank	Non VOC Storage tank	Redacted	1987	HKCD10	HK108	Non VOC Storage tank	Tank	HKCD10	Redacted
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Emission Unit ID	Emission Point ID	Equipment Description (Internal)	Manufacturer	Model Number	Serial Number	Construction Date	Installation Date	Modification Date	Design Capacity
Hexazinone Intermediate		F3455/AECP							
HK004	141.004	Tank wagon	Unknown	N/A	N/A	H: 1989 K: Suppliers	H: 1989 K: Suppliers		Redacted
HK006	141.012	Tank car	Unknown	N/A	N/A	Suppliers	Suppliers		Redacted
HK007	141.007	Tank car	Unknown	N/A	N/A	1974	Replaced 2005		Redacted
HK008	141.008	Tank car	Unknown	N/A	N/A	1974	Replaced 2005		Redacted
HK009	141.009	tank	Unknown	Unknown	N/A	1947	1947	2001	Redacted
HK010	141.010	Column/not used	Unknown	N/A	N/A	1970	1970		Redacted
HK013	141.013	Tank/not used	Unknown	N/A	N/A	1978	1978		Redacted
HK014	141.014	Tank/not used	Unknown	N/A	N/A	1970	1970		Redacted
HK015	141.015	Tank	Unknown	N/A	N/A	1987	1987		Redacted
HK016	141.016	Tank	Unknown	N/A	N/A	1975	1975		Redacted
HK101	141.001	Reactor	Unknown	N/A	N/A	Replaced 2003	Replaced 2003		Redacted
HK102	141.100	Condenser	Unknown	N/A	N/A	1974	1974		Redacted
HK103	141.100	Reactor	Unknown	N/A	N/A	1974	1974		Redacted
HK104	151.101	Tank/not used	Unknown	N/A	N/A	Replaced 2004	Replaced 2004		Redacted
HK105		Stripper column cooler	Unknown	N/A	N/A	1974	1974		Redacted
HK106	141.002	Product Loading	Unknown	N/A	N/A	1982	1982		Redacted
HK107		Fugitive source exhaust blower	Unknown	N/A	N/A	1974	1974		Redacted
HK108	141.011	Tank	Unknown	N/A	N/A	1987	1987		Redacted
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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/Andlr	Maximum Design Heat Input and/or Horsepower	Type of Burners	Burners BTU Rating	Type	Maximum Hourly Usage
Hexazinone Intermediate		F3455/AECP										
HK004	141.004	Tank wagon	Redacted	Redacted	Redacted	No						
HK006	141.012	Tank car	Redacted	Redacted	Redacted	No						
HK007	141.007	Tank car	Redacted	Redacted	Redacted	No						
HK008	141.008	Tank car	Redacted	Redacted	Redacted	No						
HK009	141.009	tank	Redacted	Redacted	Redacted	No						
HK010	141.010	Column/not used	Redacted	Redacted	Redacted	No						
HK013	141.013	Tank/not used	Redacted	Redacted	Redacted	No						
HK014	141.014	Tank/not used	Redacted	Redacted	Redacted	No						
HK015	141.015	Tank	Redacted	Redacted	Redacted	No						
HK016	141.016	Tank	Redacted	Redacted	Redacted	No						
HK101	141.001	Reactor	Redacted	Redacted	Redacted	No						
HK102	141.100	Condenser	Redacted	Redacted	Redacted	No						
HK103	141.100	Reactor	Redacted	Redacted	Redacted	No						
HK104	151.101	Tank/not used	Redacted	Redacted	Redacted	No						
HK105		Stripper column cooler	Redacted	Redacted	Redacted	No						
HK108	141.002	Product Loading	Redacted	Redacted	Redacted	No						
HK107		Fugitive source exhaust blower	Redacted	Redacted	Redacted	No						
HK108	141.011	Tank	Redacted	Redacted	Redacted	No						
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Emission Unit ID	Emission Point ID	Equipment Description (internal)	Maximum Annual Usage	Type (or None)	Maximum Hourly Usage	Maximum Annual Usage	Fuel 1 Type	Fuel 1 Max Sulfur Content	Fuel 1 Max Ash Content	Fuel 1 BTU Value	Fuel 2 Type	Fuel 2 Max Sulfur Content	Fuel 2 Max Ash Content	Fuel 2 BTU Value	CO Carbon Monoxide lb/hr
Hexazine Intermediate		F3455/AECP													
HK004	141.004	Tank wagon													Redacted
HK006	141.012	Tank car													Redacted
HK007	141.007	Tank car													Redacted
HK008	141.008	Tank car													Redacted
HK009	141.009	tank													Redacted
HK010	141.010	Column/not used													Redacted
HK013	141.013	Tank/not used													Redacted
HK014	141.014	Tank/not used													Redacted
HK015	141.015	Tank													Redacted
HK016	141.016	Tank													Redacted
HK101	141.001	Reactor													Redacted
HK102	141.100	Condenser													Redacted
HK103	141.100	Reactor													Redacted
HK104	151.101	Tank/not used													Redacted
HK105		Stripper column cooler													Redacted
HK106	141.002	Product Loading													Redacted
HK107		Fugitive source exhaust blower													Redacted
HK108	141.011	Tank													Redacted
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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 Device	Description	Manufacturer	Model Number	Serial Number	Construction Date	Installation Date
103	104.014	Tank	Tank	Redacted	2002 (relocated)	003, 009, 010	103.000	Tank	Tank		Tank	Unknown	N/A	N/A	2002 (relocated)	2002 (relocated)
012	104.014	Tank	Tank	Redacted	1989	009, 010	12.000	Packaging Unit	Tank		Tank	Unknown	N/A	N/A	1989	1989
210	107.022	Product Packout	Packaging Unit	Redacted	2005 (replacement)	023	210.000	Solids Charge Station	Product Packout	23	Product Packout	Unknown	N/A	N/A	2005 (replacement)	2005 (replacement)
118A	107.020	hopper and dust collector	Solids Charge Station	Redacted	1986	118	118A	Solids Charge Station	hopper and dust collector		hopper and dust collector	Unknown	N/A	N/A	1986	1986
115A	104.003	Reactor	Solids Charge Station	Redacted	1989	115	115A	Solids Charge Station	Reactor	115	Reactor	Ingersoll Rand	Unknown	N/A	1989	1989
901	104.014	Loading spot	Bulk Liquid Transfer	Redacted	1981	009, 010	801.000	Bulk Liquid Transfer	Loading spot	009, 010	Loading spot	Unknown	N/A	N/A	1981	1981
002	104.014	Driver	Driver	Redacted	1977	004, 009, 010	2.000	Dryer	Driver	004, 009, 010	Driver	Unknown	N/A	N/A	1977	1977
013	104.009	Tank	Tank	Redacted	1977	None	13.000	Tank	Tank	None	Tank	Unknown	N/A	N/A	1977	1977
101	104.014	Tank	Tank	Redacted	1980	009, 010	101.000	Tank	Tank	009, 010	Tank	Unknown	N/A	N/A	1980	1980
104	104.014	Tank	Tank	Redacted	2005	009, 010	104.000	Tank	Tank	009, 010	Tank	Unknown	N/A	N/A	2005	2005
108	104.014	bank	Tank	Redacted	1961	009, 010	108.000	Tank	bank	009, 010	bank	Unknown	N/A	N/A	1961	1961
108L	104.014	Loading spot	Transfer Rack	Redacted	2007	009	108L	Transfer Rack	Loading spot	009	Loading spot	Unknown	N/A	N/A	2007	2007
109	104.014	bank	Tank	Redacted	1988	009, 010	109.000	Tank	bank	009, 010	bank	Unknown	N/A	N/A	1988	1988
108L	104.014	Loading spot	Transfer Rack	Redacted	2007	009	108L	Transfer Rack	Loading spot	009	Loading spot				2007	2007
112	104.014	bank	Tank	Redacted	1951	009, 010	112.000	Tank	bank	009, 010	bank	Unknown	N/A	N/A	1951	1951
114A	104.003	hopper	Solids Charge Station	Redacted	2005 (replacement)		114	Solids Charge Station	hopper	114	hopper	Unknown	N/A	N/A	2005 (replacement)	2005 (replacement)
201	104.014	Centrifuge	Centrifuge	Redacted	1981	009, 010	201.000	Centrifuge	Centrifuge	009, 010	Centrifuge	Unknown	N/A	N/A	1981	1981
201A	104.014	bin	Bin	Redacted	009		201A	Bin	bin	009	bin					
202	104.014	bank	Tank	Redacted	1989	009, 010	202.000	Tank	bank	009, 010	bank	Unknown	N/A	N/A	1989	1989
203	104.014	Reactor	Reactor	Redacted	2003	003, 009, 010	203.000	Reactor	Reactor	003, 009, 010	Reactor	Unknown	N/A	N/A	2003	2003
203C	104.014	Reactor	Condenser	Redacted	1977	009	203C	Condenser	Reactor	009	Reactor				1977	1977
205	104.014	Reactor	Reactor	Redacted	1989	003, 009, 010	205.000	Reactor	Reactor	009, 010	Reactor	Unknown	N/A	N/A	1989	1989
206	104.014	Reactor	Reactor	Redacted	1977	003, 009, 010	206.000	Reactor	Reactor	009, 010	Reactor	Unknown	N/A	N/A	1977	1977
209	104.014	Reactor	Reactor	Redacted	1977	009, 010	209.000	Reactor	Reactor	115, 009, 010	Reactor	Unknown	N/A	N/A	1977	1977
208C	104.014	condenser	Condenser	Redacted	009		208C	Condenser	condenser	009	condenser					
208F	104.014	pump	Pump	Redacted	009		208F	Pump	pump	009	pump					
209	104.014	Reactor	Reactor	Redacted	1977	009, 010	209.000	Reactor	Reactor	009, 010	Reactor	Unknown	N/A	N/A	1977	1977
218	104.014	Reactor	Reactor	Redacted	1984	003, 009, 010	218.000	Reactor	Reactor	009, 010	Reactor	Unknown	N/A	N/A	1984	1984
228	104.014	Tank	Tank	Redacted	1974	009, 010	228.000	Tank	Tank	009, 010	Tank	Unknown	N/A	N/A	1974	1974
104.014	104.014	Scrubber Stack														

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Emission Unit ID	Emission Point ID	Equipment Description (Internal)	Modification Date	Design Capacity	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	Maximum Annual Usage	Type for Name	Maximum Hourly Usage	Maximum Annual Usage	Fuel Type	Fuel 1 Max Sulfur Content	Fuel 1 Max Ash Content
103	104.014	Tank		Redacted	Redacted	Redacted	Redacted	No													
012	104.014	Tank		Redacted	Redacted	Redacted	Redacted	No													
210	107.022	Product Packout		Redacted	Redacted	Redacted	Redacted	No													
116A	107.020	hopper and dust collector		Redacted	Redacted	Redacted	Redacted	No													
115A	104.009	Reactor		Redacted	Redacted	Redacted	Redacted	No													
801	104.014	Loading spot		Redacted	Redacted	Redacted	Redacted	No													
002	104.014	Dryer		Redacted	Redacted	Redacted	Redacted	No													
013	104.006	Tank		Redacted	Redacted	Redacted	Redacted	No													
101	104.014	Tank		Redacted	Redacted	Redacted	Redacted	No													
104	104.014	Tank		Redacted	Redacted	Redacted	Redacted	No													
108	104.014	Tank		Redacted	Redacted	Redacted	Redacted	No													
108L	104.014	Loading spot		Redacted	Redacted	Redacted	Redacted	No													
109	104.014	tank		Redacted	Redacted	Redacted	Redacted	No													
108L	104.014	Loading spot		Redacted	Redacted	Redacted	Redacted	No													
112	104.014	tank		Redacted	Redacted	Redacted	Redacted	No													
114A	104.003	hopper		Redacted	Redacted	Redacted	Redacted	No													
201	104.014	Cartridge		Redacted	Redacted	Redacted	Redacted	No													
201A	104.014	air		Redacted	Redacted	Redacted	Redacted	No													
202	104.014	tank		Redacted	Redacted	Redacted	Redacted	No													
203	104.014	Reactor		Redacted	Redacted	Redacted	Redacted	No													
203C	104.014	Reactor		Redacted	Redacted	Redacted	Redacted	No													
205	104.014	Reactor		Redacted	Redacted	Redacted	Redacted	No													
206	104.014	Reactor		Redacted	Redacted	Redacted	Redacted	No													
208	104.014	Reactor		Redacted	Redacted	Redacted	Redacted	No													
208C	104.014	Reactor		Redacted	Redacted	Redacted	Redacted	No													
208P	104.014	Reactor		Redacted	Redacted	Redacted	Redacted	No													
209	104.014	Reactor		Redacted	Redacted	Redacted	Redacted	No													
218	104.014	Reactor		Redacted	Redacted	Redacted	Redacted	No													
228	104.014	Tank		Redacted	Redacted	Redacted	Redacted	No													
104.014		Scrubber Stack																			

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Emission Unit ID	Emission Point ID	Equipment Description (Internal)	Fuel 1 BTU Value	Fuel 2 Type	Fuel 2 Max Sulfur Content	Fuel 2 Max Ash Content	Fuel 2 BTU Value	CO Carbon Monoxide lb/hr	CO Carbon Monoxide tons/year	NOx Nitrogen oxides lb/hr	NOx Nitrogen oxides tons/year	Lead lb/hr	Lead tons/year	Particulates (PM2.5) lb/hr	Particulates (PM2.5) tons/year	Particulates (PM10) lb/hr	Particulates (PM10) tons/year	Total Particulates TSP lb/hr	Total Particulates TSP tons/year	SO2 Sulfur Dioxide lb/hr	SO2 Sulfur Dioxide tons/year
103	104.014	Tank						0	0	0	0	0	0	0	0	0	0	0	0	0	0
012	104.014	Tank						0	0	0	0	0	0	0	0	0	0	0	0	0	0
210	107.022	Product Packag						0	0	0	0	0	0	0	0	0	0	0	0	0	0
118A	107.020	hooper and dust collector						0	0	0	0	0	0	0	0	0	0	0	0	0	0
115A	104.003	Reactor						0	0	0	0	0	0	0	0	0	0	0	0	0	0
801	104.014	Leach/ing spon						0	0	0	0	0	0	0	0	0	0	0	0	0	0
002	104.014							0	0	0	0	0	0	0	0	0	0	0	0	0	0
013	104.008	Tank						0	0	0	0	0	0	0	0	0	0	0	0	0	0
101	104.014	Tank						0	0	0	0	0	0	0	0	0	0	0	0	0	0
104	104.016	Tank						0	0	0	0	0	0	0	0	0	0	0	0	0	0
108	104.014							0	0	0	0	0	0	0	0	0	0	0	0	0	0
108L	104.014	Leach/ing spon						0	0	0	0	0	0	0	0	0	0	0	0	0	0
108	104.016	Tank						0	0	0	0	0	0	0	0	0	0	0	0	0	0
108L	104.014	Leach/ing spon						0	0	0	0	0	0	0	0	0	0	0	0	0	0
112	104.014	Tank						0	0	0	0	0	0	0	0	0	0	0	0	0	0
114A	104.003	Reactor						0	0	0	0	0	0	0	0	0	0	0	0	0	0
201	104.014	Centrifuge						0	0	0	0	0	0	0	0	0	0	0	0	0	0
201A	104.014	Reactor						0	0	0	0	0	0	0	0	0	0	0	0	0	0
202	104.014	Tank						0	0	0	0	0	0	0	0	0	0	0	0	0	0
203	104.014	Reactor						0	0	0	0	0	0	0	0	0	0	0	0	0	0
203C	104.014	Reactor						0	0	0	0	0	0	0	0	0	0	0	0	0	0
205	104.014	Reactor						0	0	0	0	0	0	0	0	0	0	0	0	0	0
206	104.014	Reactor						0	0	0	0	0	0	0	0	0	0	0	0	0	0
208	104.014	Reactor						0	0	0	0	0	0	0	0	0	0	0	0	0	0
208C	104.014	Reactor						0	0	0	0	0	0	0	0	0	0	0	0	0	0
208P	104.014	Reactor						0	0	0	0	0	0	0	0	0	0	0	0	0	0
209	104.014	Reactor						0	0	0	0	0	0	0	0	0	0	0	0	0	0
218	104.014	Reactor						250	1.5	0	0	0	0	0	0	0	0	0	0	0	0
228	104.014	Tank						0	0	0	0	0	0	0	0	0	0	0	0	0	0
	104.014	Scrubber Stack						250	1.5	0	0	0	0	0	0	0	0	0	0	0	0

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**APPENDIX I**  
**PROCESS DESCRIPTION**

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**AECP at B114**

**F3455 at B114**

**F-3259 Reaction Steps**

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**F-3455 Reaction Steps**

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**Fluridone Process at SLM**

**Campaign I Ketone II**

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**Campaign II**

**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 AECF Process

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

Equipment ID	Equipment Name	MON Equipment Type	MON Citations	Comments
HK102	Reactor Condenser	Group 1 batch process vent	63.2550 63.2460	Designated as Group 1; controlled via thermal oxidizer and scrubber.
HK101	Reactor	Group 1 batch process vent	63.2550 63.2460	Designated as Group 1; controlled via thermal oxidizer and scrubber.
HKCD03WW	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.

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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	Storage Tank	Group 1 Storage Tank	63.2550 63.2470	Contains HAP; maximum true vapor pressure 4 psia, therefore Group 1
HK014	Hold-up Tank	Group 2 Bottoms Receiver	63.2550 63.2450(f)	Capacity < 10,000 gallons and maximum true vapor pressure of total HAP < 1psia, therefore Group 2 with no work practice standards
HK101	Reactor	Group 1 batch process vent	63.2550 63.2460	Designated as Group 1; controlled via thermal oxidizer and scrubber.
HK103	Reactor Condenser	Group 1 batch process vent	63.2550 63.2460	Designated as Group 1; controlled via thermal oxidizer and scrubber.
HK103 WW	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.

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## 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 (l) 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	Storage (iso container)	Group 2 Storage Vessel	63.2550 63.2470	Contains HAP (Toluene); isotaner capacity is <19813 gallons therefore Group 2
101	Storage	Group 2 Storage Vessel	63.2550 63.2470	Contains HAP (Toluene); tank capacity is <10000 gallons therefore Group 2
108	Waste Tank	Group 2 Storage Vessel	63.2550 63.2470	Contains HAP (Methanol); tank capacity is <10000 gallons therefore Group 2
112	Tank	Group 2 Storage Vessel	63.2550 63.2470	Contains HAP (Toluene); tank capacity is <10000 gallons therefore Group 2
109	Tank	Group 2 Storage Vessel	63.2550 63.2470	Contains HAP; tank capacity is <10000 gallons therefore Group 2
205	Reactor	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1. HAPs controlled to 98% efficiency by thermal oxidizer.
206	Reactor	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1. HAPs controlled to 98% efficiency by thermal oxidizer.
219	Reactor	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1. HAPs controlled to 98% efficiency by thermal oxidizer.
208	Reactor	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1. HAPs controlled to 98% efficiency by thermal oxidizer.
209	Reactor	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1. HAPs controlled to 98% efficiency by thermal oxidizer.

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

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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	Tank	Group 2 Storage Tank	63.2550 63.2470	Capacity < 10,000 gallons, therefore Group 2
108	Waste Tank	Group 2 Storage Tank	63.2550 63.2470	Capacity < 10,000 gallons, therefore Group 2
	Tank	Group 2 Storage Tank	63.2550 63.2470	Capacity < 10,000 gallons, therefore Group 2
112L	Tank Loading	Group 2 transfer rack	63.2550 63.2475	Rack weighted average partial pressure of HAP is 0.01psia, therefore Group 2
108L	Waste Tank Loading	Group 2 transfer rack	63.2550 63.2475	Rack weighted average partial pressure of HAP is 0.01psia, therefore Group 2

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## 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	Tank	Group 2 Storage Tank	63.2550 63.2470	Contains HAP; tank capacity is <10000 gallons therefore Group 2
108	Waste Tank	Group 2 Storage Tank	63.2550 63.2470	Contains HAP (Methanol); isotaner capacity is <19813 gallons therefore Group 2
112	Tank	Group 2 Storage Tank	63.2550 63.2470	Designated as Group 1 Contains HAP; tank capacity is <10000 gallons therefore Group 2
101	Storage	Group 2 Storage Tank	63.2550 63.2470	Contains HAP; tank capacity is <10000 gallons therefore Group 2
205	Reactor	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled with thermal oxidizer
206	Reactor	Group 1 Batch Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled with thermal oxidizer
203c	Reactor Condenser	Group 1 Batch Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled with thermal oxidizer
103	Storage Tank	Group 2 Storage Tank	63.2550 63.2470	Contains HAP; tank capacity is <10000 gallons therefore Group 2
219	Reactor	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled with thermal oxidizer
208p	Reactor Vacuum Pump	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled with thermal oxidizer
208c	Reactor Condenser	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled with thermal oxidizer

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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 Wastewater (cut 1)	Group 1 Wastewater	63.2550 63.2485	Designated as group 1, sent offsite for disposal
208WW2	Reactor Wastewater (cut 2 and 3)	Group 2 Wastewater	63.2550 63.2485	Toluene range 500-600ppm therefore Group 2
109	Tank	Wastewater management unit	63.2550 63.2485	Fixed roof
WWL	Wastewater Loading	Wastewater management unit	63.2550 63.2485	Fixed roof

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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	Waste Tank	Group 2 Storage Tank	63.2550 63.2470	Contains HAP (Methanol); isotaner capacity is <19813 gallons therefore Group 2
112	Tank	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled by thermal oxidizer
109	Tank	Group 2 Storage Tank	63.2550 63.2470	Contains HAP; tank capacity is <10000 gallons therefore Group 2
205	Reactor	Group 1 Continuous Process Vent	63.2550 63.2455	Designated as Group 1; HAPs controlled by thermal oxidizer
206	Reactor	Group 1 Continuous Process Vent	63.2550 63.2455	Designated as Group 1; HAPs controlled by thermal oxidizer
219	Reactor	Group 1 Continuous Process Vent	63.2550 63.2455	Designated as Group 1; HAPs controlled by thermal oxidizer
208	Reactor	Group 1 Batch Process Vent	63.2550 63.2460	Designated as Group 1; HAPs controlled by thermal oxidizer
209	Reactor	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

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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	Waste Tank Loading	Group 1 Transfer Rack	63.2550 63.2475	Uses vapor balancing
109WW	Tank Waste Loading	Group 2 Transfer Rack	63.2550 63.2475	Vapor pressure of phenol <0.02psia therefore group 2

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